RELEASE ABATEMENT MEASURE (RAM) STATUS REPORT No. 1

Proposed Riverwalk Park
179 Bridge Street
Lowell, Massachusetts
RTN 3-32312

Prepared for:

Carol R Johnson Associates Inc.
115 Broad Street
Boston Massachusetts 02110

On behalf of:

City of Lowell
375 Merrimack Street
Lowell, Massachusetts 01852

Prepared by:

TRC Environmental Corporation
Wannalancit Mills
650 Suffolk Street
Lowell, Massachusetts 01854

September 2015

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

1.1 Site Description 1-1
1.2 Identification of Potentially Responsible Party and Licensed Site Professional 1-1
1.3 Sensitive Receptors 1-2
1.4 RAM Objectives 1-2

2.0 DESCRIPTION OF PRIOR WORK 2-1

2.1 Geophysical Survey 2-1
2.2 Soil Boring Advancement 2-1
2.3 Soil Sampling 2-1
2.4 Subsurface Soils 2-2
2.5 Soil Sampling Results 2-2
2.5.1 Volatile Organic Compounds 2-2
2.5.2 Semi-Volatile Organic Compounds 2-3
2.5.3 Total Petroleum Hydrocarbons 2-3
2.5.4 PCBs and Metals 2-3
2.5.5 Waste Characterization Samples 2-3
2.6 120-Day Reporting Requirement 2-4

3.0 RECENT RAM ACTIVITY 3-1

3.1 Site Preparation for Remediation Activities 3-1
3.2 Soil Excavation and Management 3-1
3.3 Soil Transport and Disposal 3-1
3.4 Supplemental Soil Sampling 3-1
3.5 Environmental Monitoring 3-2
3.6 Reporting and Schedule 3-2

4.0 REFERENCES 4-1

5.0 LIMITATIONS 5-1

FIGURES

Figure 1: Site Location Map
Figure 2: Aerial Photograph
Figure 3: 21E Site Scoring Plan
Figure 4: Sample Location Plan

TABLES

Table 1: Summary of Analytical Results for Soil Samples vs MCP Standards - April 2014 and May 2015
Table 2: Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015

APPENDICES

Appendix A Photographic Log
Appendix B Disposal Documentation
Appendix C Laboratory Reports

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this Release Abatement Measure (RAM) Status Report No. 1, on behalf of our client, Carol R. Johnson Associates (CRJA), in accordance with 310 CMR 40.0445 of the Massachusetts Contingency Plan (MCP) to support the redevelopment of the Site into the proposed Riverwalk Park located at 179 Bridge Street in Lowell, Massachusetts (the Site). This document provides background on the Site, a description of the recently conducted field work and a summary of the results. The BWSC-106 – RAM Bureau of Waste Site Cleanup Transmittal form associated with this submittal can be found on the Massachusetts Department of Environmental Protection (MassDEP) website.

1.1 Site Description

The Site is an approximate 0.16-acre (approximately 6,900 square feet) lot located at 179 Bridge Street in the City of Lowell, Middlesex County, Massachusetts (see figures 1 and 2). The northern portion of the Site was formerly developed with an electrical substation enclosure with the remaining portion consisting of landscaped area. Access to the substation portion of the Site was restricted by a chain-link fence. The substation and associated equipment was removed from the Site in 2013 and the Site is currently vacant. Access to the Site is currently restricted by concrete wall to the north, a temporary chain link fence to the south and west, and a building wall to the east. Access to the Site is available from Bridge Street to the northwest and an open parking lot to southwest.

According to the Lowell Assessor's Office, the Site is identified as Parcel 0780-179. The Site was previously owned by Massachusetts Electric Company (National Grid) and is currently owned by the City of Lowell.

Based on a review of historical sources, in 1892 through at least 1907 the Site was occupied by a cotton manufacturer identified as Massachusetts Cotton Mills, at which time the Site was the location of the mill complex boiler house. By 1950, the Site was redeveloped with a small commercial building through at least 1957. In 1963, Massachusetts Electric Company (National Grid) purchased the property from Boott Mills Corporation to install an electric substation. The substation was reportedly in-use until the mid-1970s and was removed from the Site in 2013.

1.2 Identification of Potentially Responsible Party and Licensed Site Professional

Information regarding the Potentially Responsible Party (PRP) and Licensed Site Professional (LSP) is provided below.

The party assuming responsibility is the City of Lowell, represented by:

City of Lowell
375 Merrimack Street
Lowell, Massachusetts 01852
(978) 674-1445

The Licensed Site Professional (LSP) for this Site is:

Mr. Matthew E. Robbins, PG
LSP License Number: 9495
TRC Environmental Corporation
650 Suffolk Street
Lowell, Massachusetts 01854
(978) 656-3549

1.3 Sensitive Receptors

Based on Site reconnaissance, no wetlands are on the Site. According to data maintained on the Massachusetts Geographic Information System website (http://www.mass.gov/mgis/), there are no public drinking water supplies (i.e., Zone II, Interim Well Head Protection Areas (IWPAs) or Potentially Productive Aquifers [PPAs]) located within ½ mile radius of the Site. No groundwater aquifers are identified within ½ mile of the Site and no Protected Open Space or Areas of Critical Environmental Concern are present within 500 feet of the Site. Additionally, there are no wetlands adjacent to the Site. The Site is located in a FEMA 100-year floodplain and within 500 feet of a Natural Heritage Estimated Rare Wetland Wildlife Habitat of the Merrimack River. The Merrimack River is considered a Priority Habitat. See Figure 3.

1.4 RAM Objectives

Site assessment activities were conducted by TRC in April 2014 including a geophysical investigation and the advancement of seven soil borings. Soil sample analysis indicated one volatile organic compound (VOC) and several semi-volatile organic compounds (SVOCs) which exceeded the RCS-1 and/or MCP Method 1 soil cleanup standards in one or more soil samples. Additionally, total petroleum hydrocarbons (TPH) were detected in soil samples from two soil borings which exceeded the RCS-1 standard. Thus, a past release of oil and hazardous materials to soil was reported to the MassDEP by the City on July 11, 2014. MassDEP assigned Release Tracking Number (RTN) 3-32312 to the Site.

A RAM Plan was submitted to MassDEP on May 26, 2015 (TRC, 2015a) with the objective of removing up to 2,000 tons of SVOC and TPH-impacted soil to achieve the proposed grades for the proposed Riverwalk Park. The work will be conducted in two stages. Approximately 274.65 tons of soil was removed May 27 and 28, 2015 and the remainder will be removed during the development of the parcel into a park. Following the completion of soil transport off-site, loam and hardscape will be installed as part of development activities.

2.0 DESCRIPTION OF PRIOR WORK

2.1 Geophysical Survey

Hager GeoScience, Inc. (HGI) performed a geophysical investigation of the Site on April 3, 2014. The purpose of the investigation was to locate and identify potential subsurface utilities that would interfere with drilling advancement and to estimate the depth of the historic tailrace and waste way structures. HGI conducted a multi-method geophysical investigation using ground penetrating radar (GPR) methods as well as Precision Utility Locator technology. The Site was mapped on a grid pattern with five foot spacing and a several traverses were conducted utilizing different GPR antennae.

The 400-MHz antennae was capable of scanning to a depth of 5 to 7 feet and the 200-MHz scanned to a depth of 10 to 15 feet. An additional survey was conducted using a 100-MHz antennae which reached an effective depth of 25 to 30 feet which successfully located the tailrace and waste way structures. The orientation of the waste way structure was found to curve toward Bridge Street which is consistent with historical documents. The geophysical report is attached to the MCP Phase I Initial Site Investigation Report submitted to MassDEP in July 2015 (TRC, 2015b).

2.2 Soil Boring Advancement

Between April 21 and April 23, 2014, TRC supervised the advancement of seven soil (SB-1 through SB-7) to assess potential subsurface impacts to soil resulting from historical operations at the Site. Two of the soil borings (SB-1 and SB-2) required eight drilling attempts to facilitate reaching the target depth (natural soil). Auger refusal was encountered several times at in both SB-1 and SB-2 borings due to the presence of concrete in the subsurface. SB-1 through SB-3 were advanced using a CME 75 drill rig using hollow stem augers and continuous split spoon sampling with an auto-hammer for environmental testing and evaluation of geotechnical properties. Soil borings SB-4 through SB-7 were advanced using a truck mounted vacuum rig to refusal (10 feet) in order to identify the top of the tail race structure. No environmental or geotechnical testing of soil was conducted at SB-4 through SB-7. No groundwater monitoring wells were installed as part of this scope of work. Soil boring locations are depicted on Figure 4. Soil boring logs are attached to the MCP Phase I Report (TRC, 2015b).

2.3 Soil Sampling

Soil samples were collected from SB-1 through SB-3 using visual/olfactory observations and photoionization detector (PID) field screening results to select four discrete soil samples from borings laboratory analysis of for VOCs. Composite soil samples were also collected from borings SB-2 and SB-3 from the surface to approximately 14 feet below grade for landfill reuse/disposal criteria analysis as outlined in MassDEP Policy # COMM-97-001: *Reuse & Disposal of Contaminated Soil at Massachusetts Landfills*, for hazardous waste characterization purposes. Additionally, two composite soil samples were collected from SB-1; one from 0-3 feet and a second from 3-14 feet below grade surface (BGS).

The four soil samples described above were submitted to Alpha Analytical of Westborough, Massachusetts and analyzed for the following parameters:

- VOCs via Method 8260B;
- SVOCs via Method 8270D;
- TPH via Method 8015C;
- Polychlorinated biphenyls (PCBs) via Method 8082A;
- Resource Conservation and Recovery Act (RCRA) 8 Metals via Methods 6010B and 7471B;
- Conductivity;
- Reactive Sulfide & Reactive Cyanide;
- Ignitability; and
- Corrosivity (pH).

Additionally, one soil sample was collected from SB-3 (14'-18') and analyzed for RCRA 8 metals due to observations of anthropogenic fill in the sample. The objective for this analysis was to evaluate the material which will be present at or near grade when the park construction is complete.

As indicated above, no soil samples were collected from soil borings SB-4 through SB-7 for laboratory analysis and no monitoring wells were installed in any of the soil borings.

2.4 Subsurface Soils

The majority of the soil encountered to a depth of 14 feet below grade is a brown, fine to medium sand with little to some silt, gravel, cobbles and trace boulders. As mentioned previously, concrete was encountered at several boring locations and attributed to auger refusal. Sections of concrete material greater than a foot in thickness were encountered and were most commonly located in a zone between 10 and 15 feet below grade. Anthropogenic fill materials were encountered greater than 14 feet below grade in SB-3 including ash, cinders and slag to a depth of approximately 29 feet. A rock core barrel was advanced between 30 and 35 feet BGS in SB-3; however, only one seven inch section of schist was recovered. A clay-rich silt is present under the cored block and likely extends to the interpreted bedrock surface at 68 feet BGS. Soil boring logs are attached to the MCP Phase I Report (TRC, 2015b).

2.5 Soil Sampling Results

2.5.1 Volatile Organic Compounds

Naphthalene was the only VOC detected above laboratory reporting limits in samples collected. Naphthalene was detected in sample SB-3 (0-14') at 33 milligrams per kilogram (mg/kg), which is above the RCS-1 standard of 4 mg/kg and the MCP Method 1 S-1 standard of 20 mg/kg. Naphthalene was also detected in SB-1 (3'-14') and SB-2 (0-14') but at concentrations below the RCS-1 standard. See Table 1 for a summary of the results compared to MCP standards.

2.5.2 Semi-Volatile Organic Compounds

Several SVOCs were detected above laboratory reporting limits. The following exceeded the RCS-1 standard in one or more soil samples:

- Acenaphthene
- Naphthalene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Acenaphthylene
- Phenanthrene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)Pyrene
- 2-Methylnaphthalene

In addition to exceeding the RCS-1 standard, the following compounds exceeded the MCP Method 1 soil cleanup standards:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)Pyrene

2.5.3 Total Petroleum Hydrocarbons

The TPH analytical results from soil samples SB-2 and SB-3 exceed the RCS-1 standard of 1,000 mg/kg. There were no exceedances of TPH in samples collected from SB-1.

2.5.4 PCBs and Metals

No PCBs were detected above laboratory detection limits. As a result, off-site disposal of soil will not be subject to the Toxic Substances Control Act (TSCA) regulations that regulate PCBs.

No RCRA 8 metals were detected above the RCS-1 standards. One sample [SB-3 (0-14')] contained lead at 150 mg/kg. The composite soil sample SB-3 (0-14') was also analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure (TCLP) method (6010C) as the total lead results was greater than the "20X TCLP" limit of 100 mg/kg. Leachable lead results for this soil sample were less than the TCLP limit of 5.0 milligrams per liter. Therefore, this soil is not classified as characteristic hazardous waste due to the presence of lead.

2.5.5 Waste Characterization Samples

Four soil samples were collected to pre-characterize soil for off-Site disposal and evaluate MCP compliance. Table 2 compares the analytical results to MCP standards and to disposal facility

acceptance criteria, respectively. Because the Site will be for recreational open space, the applicable MCP criteria to determine if the results trigger a reportable condition under the MCP and if cleanup is necessary are the Reportable Concentration for Soil Category 1 (RCS-1) and the Method 1 S-1 standards, respectively. The soil samples were also analyzed for characteristics which would categorize the soil as "Characteristic Hazardous Waste" including pH, Ignitability, reactive sulfide and reactive cyanide. The results indicate the material is not a characteristic hazardous waste.

2.6 120-Day Reporting Requirement

Site assessment activities conducted in April 2014 indicated a past release of oil and hazardous materials to soil, in which several contaminants of concern were detected which exceed the RCS-1 standard, triggering a 120-day reporting requirement to MassDEP. The release was reported to the MassDEP by the City of Lowell on July 11, 2014. MassDEP subsequently assigned RTN 3-32312 to the Site. MassDEP issued a Notice of Responsibility (NOR) identifying the City of Lowell as the Potentially Responsible Party on August 1, 2014.

3.0 RECENT RAM ACTIVITY

The following sections summarizes RAM activity conducted during this reporting period between from May 26, 2015 (RAM Plan submittal) through September 1, 2015.

3.1 Site Preparation for Remediation Activities

On May 27 2015, prior to initiation of remedial activities; a 170-foot long by six foot high temporary chain-link-fence was erected around the parcel for Site control. Catch basins on the adjacent Massachusetts Mills parcel have been protected from siltation via installation of a geotextile fabric.

3.2 Soil Excavation and Management

Soil was removed from the subsurface by Enpro, Inc. (Enpro) of Newburyport, Massachusetts using a Caterpillar 329D excavator via live loading into tractor trailers for off-site transportation and disposal. The soil removal was conducted by excavating a trench approximately 10-feet deep by six feet wide and 80 feet long. Upon completion of this phase of soil excavation the excavation was partially backfilled for worker safety using surrounding soils. Segregation of soil using a PID was not necessary as the material did not generate strong odors or contain soil staining (which was not expected). The location of the excavation work is depicted on Figure 4. A photographic log depicting this portion of the remedial activities is attached in Appendix A.

No groundwater was encountered during soil excavation activities.

3.3 Soil Transport and Disposal

On May 27 and 28, 2015, approximately 274.65 tons of soil was removed, live-loaded into tractor trailers, and transported to ESMI New Hampshire's Loudon, NH facility for treatment via thermal desorption. The soil was transported utilizing a MassDEP Bill of Lading. Disposal documentation is included in Appendix B.

3.4 Supplemental Soil Sampling

During the soil excavation activities on May 27 and 28, 2015, TRC personnel collected soil samples from the open trench to facilitate additional soil disposal. These samples were analyzed for the following parameters:

- VOCs via Method 8260B;
- SVOCs via Method 8270D;
- TPH via Method 8015C;
- PCBs via Method 8082A;
- RCRA 8 Metals via Methods 6010B and 7471B;
- TCLP lead;
- Conductivity;
- Reactive Sulfide & Reactive Cyanide;

- Ignitability; and
- Corrosivity (pH).

The results are summarized as Table 1 and the laboratory data report is included in Appendix C. The sampling intervals for each analysis are also presented on this table as samples were homogenized over different depth intervals. The results of the sampling indicate the material in the upper nine feet are acceptable for reuse at an unlined landfill pursuant to that the MassDEP Policy # COMM-97-001: *Reuse & Disposal of Contaminated Soil at Massachusetts Landfills*.

3.5 Environmental Monitoring

A photoionization detector was used to monitor the ambient breathing air for VOC on and around the Site during remedial activities. No health and safety concerns were encountered relative to VOCs in the breathing zone. No nuisance odors or dust that would affect the surrounding population was generated by the remedial activities conducted to date.

3.6 Reporting and Schedule

The schedule for proposed park construction is not known at this time, therefore RAM Status reports will be submitted every six months following Status Report No. 1. A RAM Completion Report will be submitted within sixty (60) days following the completion of the proposed remedial action in accordance with 310 CMR 40.0446. The RAM Completion Report will include a description of soil removal activities, a summary of environmental monitoring and the analytical results of soil sampling.

4.0 REFERENCES

MassDEP, 2014. Massachusetts Contingency Plan, 310 CMR 40.0000. Effective April 25, 2014.

TRC, 2012. Phase I Environmental Site Assessment Report, Proposed Riverwalk Property, 179 Bridge Street, Lowell, Massachusetts. October 2012.

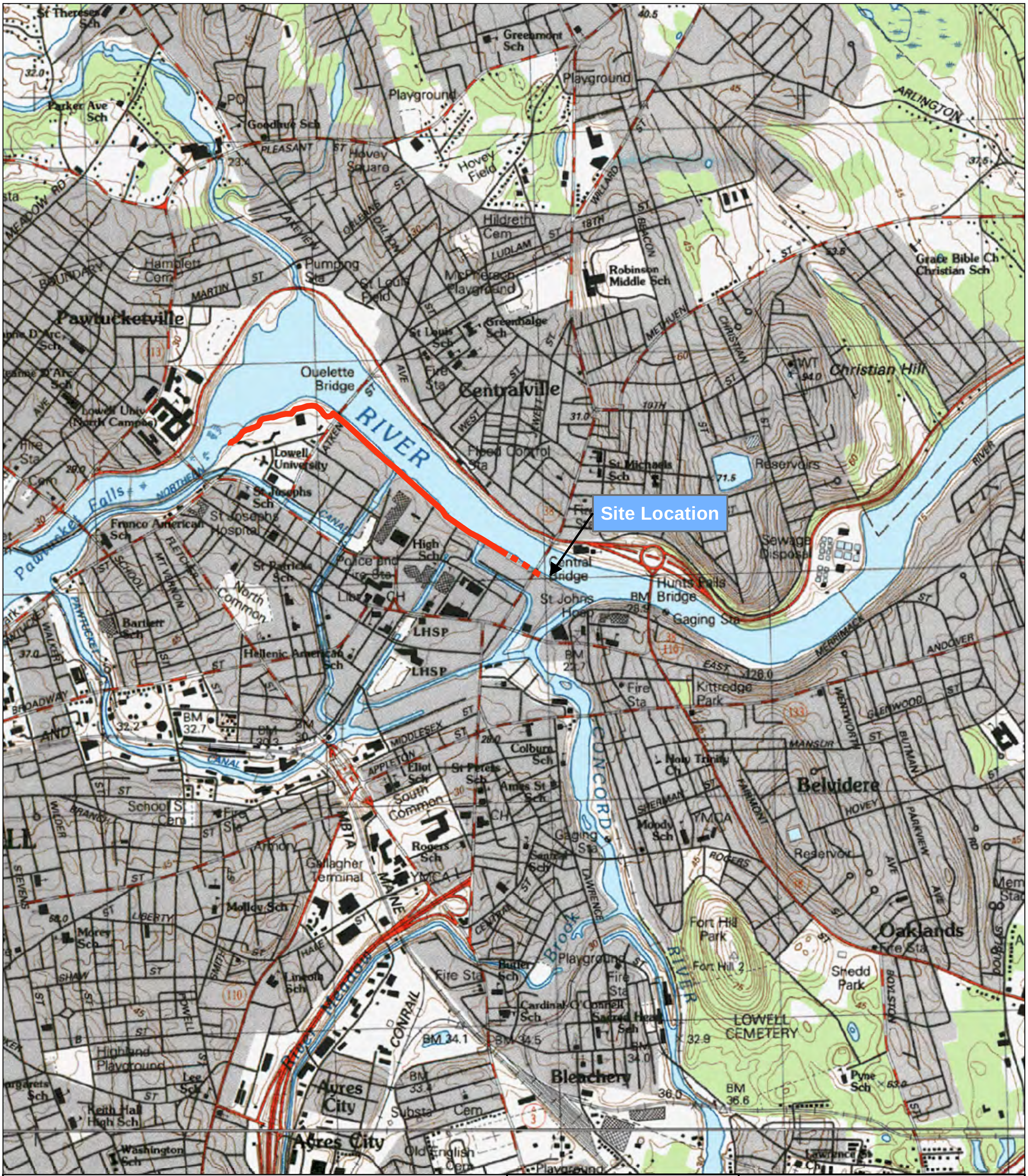
TRC, 2015a. Release Abatement Measure Plan RTN 3-32312, Proposed Riverwalk Property, 179 Bridge Street, Lowell, Massachusetts. May 2015.

TRC, 2015b. MCP Phase I Environmental Site Assessment Report RTN 3-32312, Proposed Riverwalk Property, 179 Bridge Street, Lowell, Massachusetts. June 2015.

5.0 LIMITATIONS

This report was prepared by TRC exclusively for Carol R. Johnson Associates. The conclusions presented in this report are based solely on the information reported in this document. Additional information regarding the site, which was not available to TRC, may result in a modification of the findings above. The report has been prepared in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area. No other warranty, expressed or implied, is made.

FIGURES



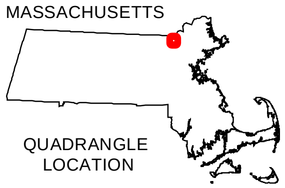
Billerica and Lowell 7.5-Minute USGS Topographic Quadrangles.

Riverwalk Phase I (completed in 1999)

Riverwalk Phase II (to be constructed)

0 1,000 2,000 Feet

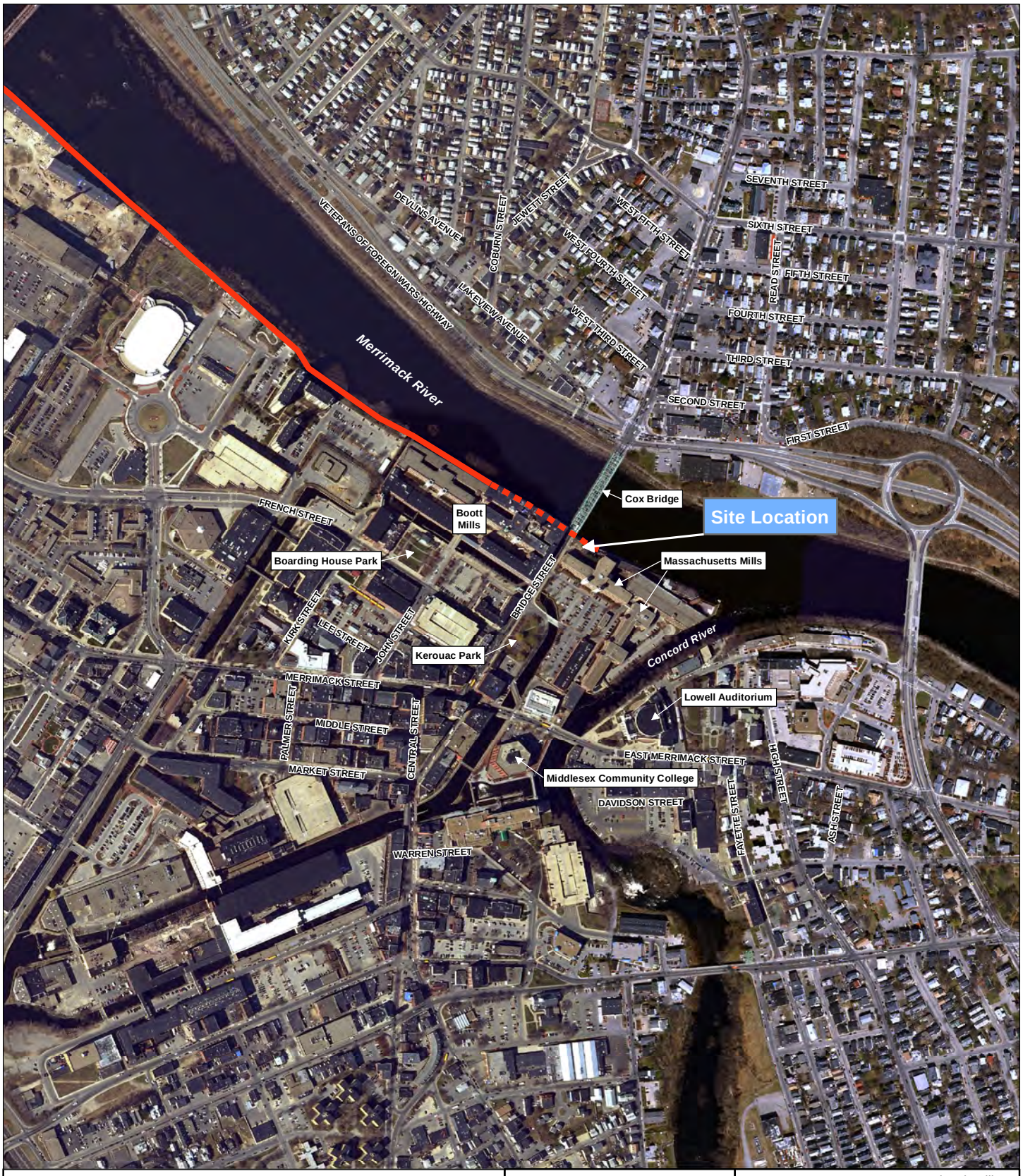
N



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

SITE LOCATION MAP (USGS)
LOWELL RIVERWALK PHASE II

FIGURE 1	MAY 2008



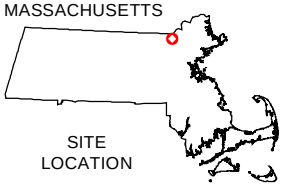
Orthophotography: MassGIS, 2005

Riverwalk Phase I (completed in 1999)

Riverwalk Phase II (to be constructed)

0 500 Feet

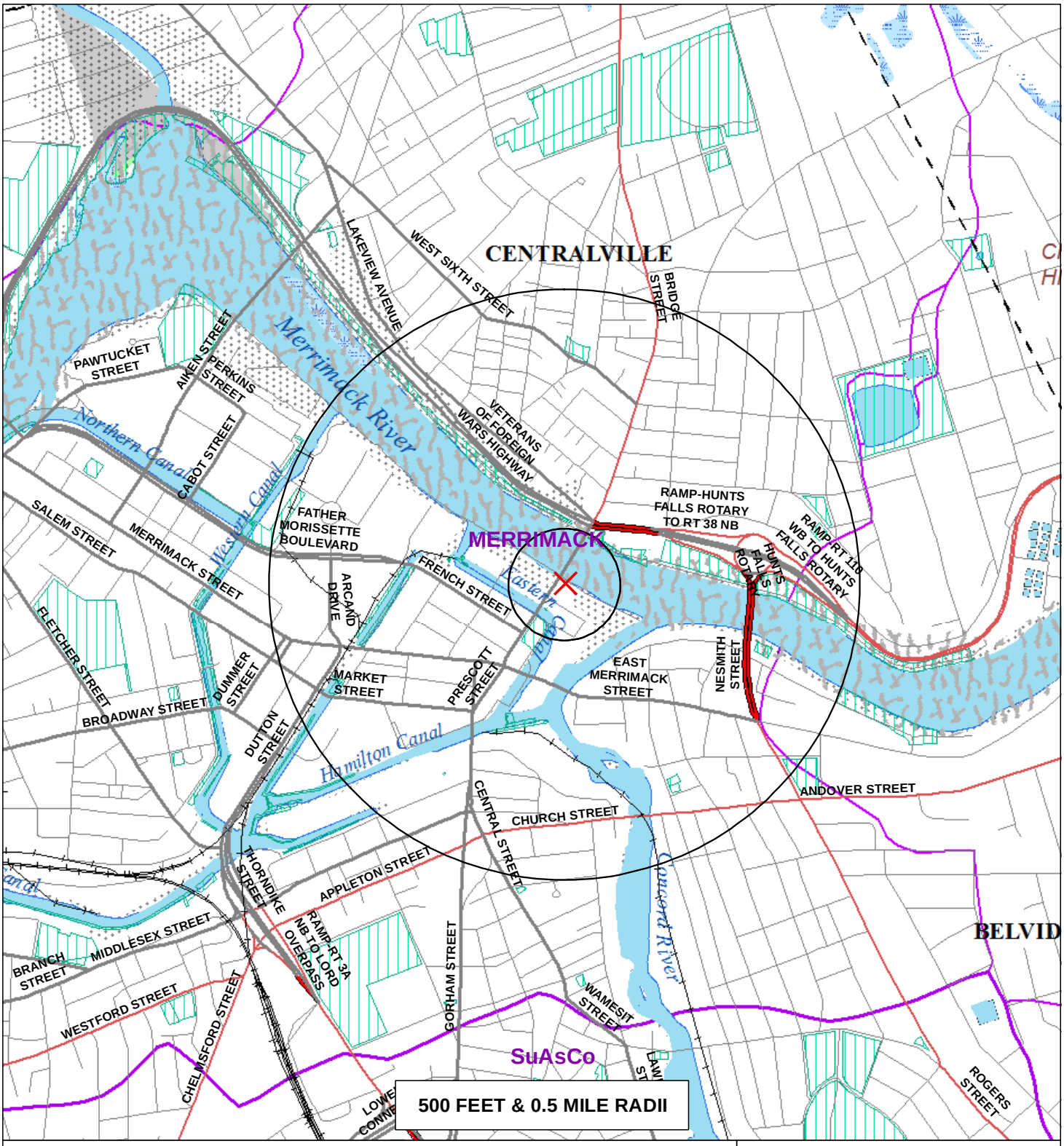
N



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

AERIAL PHOTOGRAPH
LOWELL RIVERWALK PHASE II

FIGURE 2	MAY 2008



Roads: Limited Access, Multi-Lane, Major/Minor, Track, Trail
Railroad, Pipline, Powerline
Major Basin, Sub Basin, Perennial Stream, Intermittent Stream, Shoreline, Man made Shore, Dam, Aqueduct
Wetland, Salt Wetland, Submerged Wetland, Open Water, Reservoir, Tidal Flat/Shoal
Potentially Productive Aquifers: Medium, High Yield
Non-Potential Drinking Water Source Area: Medium, High Yield
EPA Sole Source Aquifer, FEMA 100 Yr. Floodplain, DEP Solid Waste Facility
Approved Zone II, IWPA, Surface Water Supply Zone A
Protected Open Space, ACEC
Priority Habitat, Certified Vernal Pool
Boundaries: County and Town
Public Water Supplies: Ground, Surface, Non-Community (NTNC, TNC)

Source: MassGIS/EOEA

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

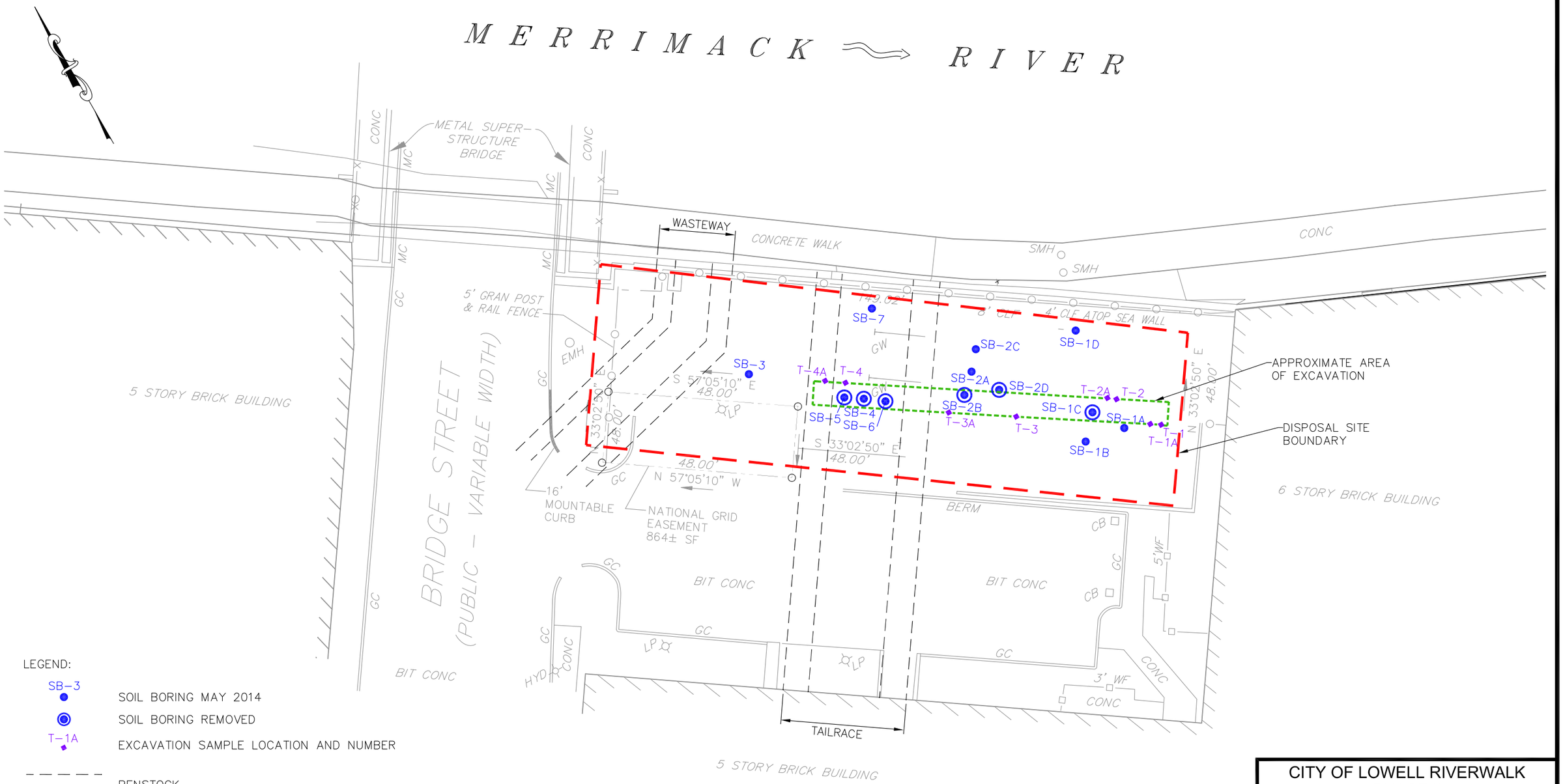
FIGURE 3

CITY OF LOWELL RIVERWALK
PHASE II
LOWELL, MASSACHUSETTS

N

0 500 1,000 1,500
Feet

MAY 2015



LEGEND:

SB-3 — SOIL BORING MAY 2014

SOIL BORING REMOVED

T-1A — EXCAVATION SAMPLE LOCATION AND NUMBER

PENSTOCK

NOTE:

DRAWING BASED ON "EASEMENT PLAN IN LOWELL, MA" BY PRECISION LAND SURVEYING, INC. OF SOUTHBOROUGH, MASSACHUSETTS, DATED JUNE 10, 2010.

APPROXIMATE GRAPHIC SCALE

0' 25' 50'

CITY OF LOWELL RIVERWALK
PHASE II
LOWELL, MASSACHUSETTS

SAMPLE LOCATION PLAN

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

DRAWN BY: MAN
CHECKED BY: JS
DATE: SEPT. 2015

FIGURE 4

FILE: T:\E_CAD\183757_Lowell_Riverwalk\Lowell Riverwalk__09_14_2015.dwg

TABLES

Table 1
Summary of Analytical Results for Soil Samples vs MCP Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte			Sample ID:	SB-1		SB-2	SB-3		T-1			T-1A	T-2			T-2A	T-3			T-3A	T-4		T-4A
				Sample Depth (ft.)*:	0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-9	0-9
				Sample Date:	4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
		S-1/GW-2	S-1/GW-3	RCS-1																				
VOCs																								
(mg/kg)	Methylene chloride	4	400	0.1	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.010 U
	1,1-Dichloroethane	9	500	0.4	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Chloroform	0.2	500	0.2	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Carbon tetrachloride	5	30	5	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,2-Dichloropropane	0.1	30	0.1	0.0022 U	0.31 U	0.31 U	0.73 U	NA	NA	NA	NA	0.003 U	NA	NA	NA	0.003 U	NA	NA	NA	0.003 U	NA	NA	0.0037 U
	Dibromochloromethane	0.03	20	0.005	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,1,2-Trichloroethane	2	40	0.1	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Tetrachloroethene	10	30	1	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Chlorobenzene	3	100	1	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Trichlorofluoromethane	NS	NS	1,000	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2-Dichloroethane	0.1	20	0.1	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,1,1-Trichloroethane	500	500	30	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Bromodichloromethane	0.1	30	0.1	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	trans-1,3-Dichloropropene	0.4[2]	20[2]	0	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	cis-1,3-Dichloropropene	0.4[2]	20[2]	0.01	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,3-Dichloropropene, Total	0.4	20	0.01	NA	NA	NA	NA	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,1-Dichloropropene	NS	NS	0.01[4]	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Bromoform	1	300	0.1	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,1,2,2-Tetrachloroethane	0.02	10	0.005	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Benzene	40	40	2	0.00062 U	**0.20**	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Toluene	500	500	30	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Ethylbenzene	500	500	40	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Chloromethane	NS	NS	100	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Bromomethane	0.5	30	0.5	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Vinyl chloride	0.7	1	0.7	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Chloroethane	NS	NS	100	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	1,1-Dichloroethene	40	500	3	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	trans-1,2-Dichloroethene	1	500	1	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Trichloroethene	0.3	30	0.3	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,2-Dichlorobenzene	100	300	9	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,3-Dichlorobenzene	100	100	3	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,4-Dichlorobenzene	1	80	0.7	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Methyl tert butyl ether	100	100	0.1	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	p/m-Xylene	NS	NS	NS	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	o-Xylene	NS	NS	NS	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Xylenes, Total	100	500	100	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	cis-1,2-Dichloroethene	0.1	100	0.1	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,2-Dichloroethene, Total	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Dibromomethane	NS	NS	500	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2,3-Trichloropropane	NS	NS	100	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Styrene	4	70	3	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Dichlorodifluoromethane	NS	NS	1,000	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.0100 U
	Acetone	50	400	6	0.022 U	3.2 U	3.2 U	7.5 U	NA	NA	NA	NA	0.031 U	NA	NA	NA	0.031 U	NA	NA	NA	0.031 U	NA	NA	0.038 U
	Carbon disulfide	NS	NS	100	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Methyl ethyl ketone	50	400	4	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.0100 U
	Methyl isobutyl ketone	50	400	0.4	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.0100 U
	2-Hexanone	NS	NS	100	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.0100 U
	Bromochloromethane	NS	NS	NS	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Tetrahydrofuran	NS	NS	500	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	2,2-Dichloropropane	NS	NS	0.1[3]	0.0031 U	0.44 U	0.45 U	1.0 U	NA	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	0.0053 U
	1,2-Dibromoethane	0.1	1	0.1	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,3-Dichloropropane	NS	NS	500	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,1,1,2-Tetrachloroethane	0.1	80	0.1	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	Bromobenzene	NS	NS	100	0.0031 U	0.44 U	0.45 U	1.0 U	NA	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	0.0053 U
	n-Butylbenzene	100[1]	100[1]	100[1]	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	sec-Butylbenzene	100[1]	100[1]	100[1]	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	tert-Butylbenzene	100[1]	100[1]	100	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	o-Chlorotoluene	NS	NS	100	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	p-Chlorotoluene	NS	NS	100[5]	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2-Dibromo-3-chloropropane	NS	NS	10	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Hexachlorobutadiene	30	30	30	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Isopropylbenzene	100[1]	100[1]	1,000	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	p-Isopropyltoluene	100[1]	100[1]	100	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	**0.0019**

Table 1
Summary of Analytical Results for Soil Samples vs MCP Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte			Sample ID:	SB-1		SB-2	SB-3		T-1			T-1A	T-2			T-2A	T-3			T-3A	T-4		T-4A
				Sample Depth (ft.)*:	0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-9	0-9
				Sample Date:	4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
		S-1/GW-2	S-1/GW-3	RCS-1																				
	Naphthalene	20	500	4	0.0025 U	**1.6**	**1.3**	**33**	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	n-Propylbenzene	100(1)	100(1)	100	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.0010 U
	1,2,3-Trichlorobenzene	NS	NS	NS	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2,4-Trichlorobenzene	6	700	2	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,3,5-Trimethylbenzene	100(1)	100(1)	10	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2,4-Trimethylbenzene	100(1)	100(1)	1,000	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Diethyl ether	NS	NS	100	0.0031 U	0.44 U	0.45 U	1.0 U	NA	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	0.0053 U
	Diisopropyl Ether	NS	NS	100	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Ethyl-Tert-Butyl-Ether	NS	NS	NS	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Tertiary-Amyl Methyl Ether	NS	NS	NS	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,4-Dioxane	6	20	0.2	0.025 U	8.8 U	9.0 U	21 U	NA	NA	NA	NA	0.035 U	NA	NA	NA	0.034 U	NA	NA	NA	0.034 U	NA	NA	0.042 U
SVOCs																								
(mg/kg)	Acenaphthene	1,000	1,000	4	0.14 U	**0.90**	**4.4**	**2.4**	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	**1.0**	NA
	1,2,4-Trichlorobenzene	6	700	2	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Hexachlorobenzene	0.7	0.7	0.7	0.1 U	0.11 U	3.1 U	0.22 U	NA	0.1 U	0.11 U	0.10 U	NA	0.1 U	0.10 U	0.11 U	NA	0.11 U	0.11 U	0.10 U	NA	0.11 U	0.11 U	NA
	Bis(2-chloroethyl)ether	0.7	2	0.7	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	2-Chloronaphthalene	NS	NS	1,000	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	1,2-Dichlorobenzene	100	300	9	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	1,3-Dichlorobenzene	100	100	3	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	1,4-Dichlorobenzene	1	80	0.7	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	3,3'-Dichlorobenzidine	3	3	3	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,4-Dinitrotoluene	2	2	0.7	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,6-Dinitrotoluene	NS	NS	100	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Azobenzene	NS	NS	50	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Fluoranthene	1,000	1,000	1,000	**0.16**	**42**	**86**	**43**	NA	**0.92**	**0.71**	**0.39**	NA	**4.5**	**0.1**	**0.31**	NA	0.11 U	**1.0**	**6.5**	NA	0.11 U	**6.1**	NA
	4-Bromophenyl phenyl ether	NS	NS	100	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Bis(2-chloroisopropyl)ether	NS	NS	0.7	0.21 U	0.22 U	6.3 U	0.44 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	NA
	Bis(2-chloroethoxy)methane	NS	NS	500	0.19 U	0.19 U	5.6 U	0.40 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U	0.19 U	NA
	Hexachlorobutadiene	30	30	30	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Hexachloroethane	3	50	0.7	0.14 U	0.14 U	4.2 U	0.29 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	NA
	Isophorone	NS	NS	100	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	Naphthalene	20	500	4	0.18 U	**1.8**	5.2 U	**7.7**	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	**0.22**	NA	0.18 U	**0.83**	NA
	Nitrobenzene	NS	NS	500	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	Bis(2-Ethylhexyl)phthalate	90	90	90	0.18 U	0.18 U	5.2 U	0.37 U	NA	**0.72**	0.18 U	**0.22**	NA	0.17 U	0.18 U	**1.1**	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Butyl benzyl phthalate	NS	NS	100	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Di-n-butylphthalate	NS	NS	50	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Di-n-octylphthalate	NS	NS	1,000	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Diethyl phthalate	200	300	10	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Dimethyl phthalate	50	600	0.7	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Benzo(a)anthracene	7	7	7	0.1 U	**13**	**33**	**19**	NA	**0.31**	**0.32**	**0.18**	NA	**1.7**	0.10 U	**0.14**	NA	0.11 U	**0.46**	**2.7**	NA	0.11 U	**2.8**	NA
	Benzo(a)pyrene	2	2	2	0.14 U	**12**	**29**	**16**	NA	**0.27**	**0.31**	**0.19**	NA	**1.7**	0.14 U	0.14 U	NA	0.14 U	**0.47**	**2.8**	NA	0.14 U	**2.4**	NA
	Benzo(b)fluoranthene	7	7	7	0.1 U	**12**	**35**	**20**	NA	**0.37**	**0.4**	**0.24**	NA	**2.1**	0.10 U	**0.18**	NA	0.11 U	**0.54**	**3.5**	NA	0.11 U	**2.9**	NA
	Benzo(k)fluoranthene	70	70	70	0.1 U	**5.3**	**14**	**6.8**	NA	**0.13**	**0.14**	**0.1**	NA	**0.77**	0.10 U	0.11 U	NA	0.11 U	**0.23**	**1.3**	NA	0.11 U	**1.2**	NA
	Chrysene	70	70	70	0.1 U	**11**	**32**	**18**	NA	**0.36**	**0.34**	**0.18**	NA	**1.5**	0.10 U	**0.15**	NA	0.11 U	**0.44**	**2.6**	NA	0.11 U	**2.8**	NA
	Acenaphthylene	600	10	1	0.14 U	**6.7**	**6**	**7.2**	NA	0.14 U	0.14 U	0.14 U	NA	**0.4**	0.14 U	0.14 U	NA	0.14 U	0.14 U	**0.82**	NA	0.14 U	0.14 U	NA
	Anthracene	1,000	1,000	1,000	0.1 U	**7.2**	**17**	**13**	NA	**0.1**	0.11 U	0.10 U	NA	**0.43**	0.10 U	0.11 U	NA	0.11 U	**0.11**	**0.80**	NA	0.11 U	**2.0**	NA
	Benzo(ghi)perylene	1,000	1,000	1,000	0.14 U	**8.4**	**16**	**9.2**	NA	**0.15**	**0.19**	0.14 U	NA	**1.2**	0.14 U	0.14 U	NA	0.14 U	**0.31**	**2.0**	NA	0.14 U	**1.3**	NA
	Fluorene	1,000	1,000	1,000	0.18 U	**4.1**	**6**	**6.0**	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	**0.17**	NA	0.18 U	**0.97**	NA
	Phenanthrene	500	500	10	**0.1**	**37**	**72**	**42**	NA	**0.59**	**0.55**	0.10 U	NA	**2.1**	0.10 U	**0.24**	NA	0.11 U	**0.49**	**3.3**	NA	0.11 U	**6.4**	NA
	Dibenzo(a,h)anthracene	0.7	0.7	0.7	0.1 U	**2**	**3.8**	**2.5**	NA	0.1 U	0.11 U	0.10 U	NA	**0.19**	0.10 U	0.11 U	NA	0.11 U	0.11 U	**0.38**	NA	0.11 U	**0.32**	NA
	Indeno(1,2,3-cd)Pyrene	7	7	7	0.14 U	**9.1**	**18**	**11**	NA	**0.16**	**0.20**	0.14 U	NA	**1.2**	0.14 U	0.14 U	NA	0.14 U	**0.34**	**2.2**	NA	0.14 U	**1.5**	NA
	Pyrene	1,000	1,000	1,000	**0.14**	**34**	**70**	**36**	NA	**0.78**	**0.64**	**0.34**	NA	**4.0**	0.10 U	**0.25**	NA	0.11 U	**0.89**	**5.8**	NA	0.11 U	**5.2**	NA
	Aniline	NS	NS	1,000	0.21 U	0.22 U	6.3 U	0.44 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	NA
	4-Chloroaniline	7	3	1	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Dibenzofuran	NS	NS	100	0.18 U	**2.7**	**5.6**	**4.8**	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	**0.86**	NA
	2-Methylnaphthalene	80	300	0.7	0.21 U	**0.60**	6.3 U	**2.7**	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	**0.44**	NA
	Acetophenone	NS	NS	1,000	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,4,6-Trichlorophenol	20	20	0.7	0.1 U	0.11 U	3.1 U	0.22 U	NA	0.1 U	0.11 U	0.10 U	NA	0.1 U	0.10 U	0.11 U	NA	0.11 U	0.11 U	0.10 U	NA	0.11 U	0.11 U	NA
	2-Chlorophenol	100	100	0.7	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,4-Dichlorophenol	60	40	0.7	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	2,4-Dimethylphenol	100	500	0.7	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2-Nitrophenol	NS	NS	100	0.38 U	0.39 U	11 U	0.79 U	NA	0.38 U	0.39 U	0.38 U	NA	0.38 U	0.38 U	0.38 U	NA	0.38 U	0.38 U	0.38 U	NA	0.39 U	0.38 U	NA
	4-Nitrophenol	NS	NS	100	0.25 U	0.25 U	7.3 U	0.51 U	NA	0.24 U	0.25 U	0.24 U	NA	0.24 U	0.24 U	0.25 U	NA	0.25 U	0.25 U	0.24 U	NA	0.25 U	0.25 U	NA
	2,4-Dinitrophenol	50	50	3	0.84 U	0.87 U	25 U	1.8 U	NA	0.84 U	0.86 U	0.84 U	NA	0.84 U	0.84 U	0.85 U	NA	0.86 U	0.86 U	0.84 U	NA	0.86 U	0.85 U	NA

Table 1
Summary of Analytical Results for Soil Samples vs MCP Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte			Sample ID:	SB-1		SB-2	SB-3		T-1			T-1A	T-2			T-2A	T-3			T-3A	T-4		T-4A
				Sample Depth (ft.)*:	0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-9	0-9
				Sample Date:	4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
		S-1/GW-2	S-1/GW-3	RCS-1																				
	Pentachlorophenol	3	3	3	0.35 U	0.36 U	10 U	0.73 U	NA	0.35 U	0.36 U	0.35 U	NA	0.35 U	0.35 U	0.35 U	NA	0.36 U	0.36 U	0.35 U	NA	0.36 U	0.36 U	NA
	Phenol	50	20	1	0.18 U	**0.23**	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2-Methylphenol	NS	NS	500	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	3-Methylphenol/4-Methylphenol	NS	NS	500	0.25 U	**0.42**	7.5 U	0.53 U	NA	0.25 U	0.26 U	0.25 U	NA	0.25 U	0.25 U	0.25 U	NA	0.26 U	0.26 U	0.25 U	NA	0.26 U	0.26 U	NA
	2,4,5-Trichlorophenol	1,000	600	4	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
Total Petroleum Hydrocarbons																								
(mg/kg)	TPH	1,000	1,000	1,000	34.3 U	**524**	**2,160**	**2,580**	NA	NA	NA	NA	33.7 U	NA	NA	NA	**67.6**	NA	NA	NA	34.8 U	NA	NA	**39**
PCBs																								
(mg/kg)	Aroclor 1016	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1221	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1232	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1242	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1248	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1254	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1260	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1262	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1268	NS	NS	NS	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	PCBs, Total	1	1	1	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
Metals, total																								
(mg/kg)	Arsenic	20	20	20	**9.9**	**5.7**	**7.6**	**8.1**	**8.8**	NA	NA	NA	**7.9**	NA	NA	NA	**5.8**	NA	NA	NA	**5.6**	NA	NA	**8.0**
	Barium	1,000	1,000	1,000	**28**	**22**	**81**	**55**	**260**	NA	NA	NA	**22**	NA	NA	NA	**18**	NA	NA	NA	**10**	NA	NA	**120**
	Cadmium	70	70	70	0.42 U	0.43 U	0.48 U	0.43 U	0.43 U	NA	NA	NA	0.42 U	NA	NA	NA	0.43 U	NA	NA	NA	0.42 U	NA	NA	0.43 U
	Chromium	100	100	100	**20**	**10**	**18**	**17**	**9.8**	NA	NA	NA	**13**	NA	NA	NA	**8.2**	NA	NA	NA	**7.4**	NA	NA	**14**
	Lead	200	200	200	**6.7**	**33**	**45**	**150**	**97**	NA	NA	NA	**12**	NA	NA	NA	**22**	NA	NA	NA	**2.3**	NA	NA	**13**
	Mercury	20	20	20	0.073 U	0.081 U	**0.102**	**0.523**	**0.096**	NA	NA	NA	0.070 U	NA	NA	NA	0.074 U	NA	NA	NA	0.067 U	NA	NA	**0.096**
	Selenium	400	400	400	2.1 U	2.1 U	2.4 U	2.1 U	2.1 U	NA	NA	NA	2.1 U	NA	NA	NA	2.2 U	NA	NA	NA	2.1 U	NA	NA	2.1 U
	Silver	100	100	100	0.42 U	0.43 U	0.48 U	0.43 U	0.43 U	NA	NA	NA	0.42 U	NA	NA	NA	0.43 U	NA	NA	NA	0.42 U	NA	NA	0.43 U
Metals, TCLP																								
(mg/L)	Lead	N/A	N/A	5**	NA	NA	NA	0.50 U	NA	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	0.50 U
General Chemistry																								
	Ignitability	N/A	N/A	N/A	NI	NI	NI	NI	NA	NA	NA	NA	NI	NA	NA	NA	NI	NA	NA	NA	NI	NA	NA	NI
(s.u.)	pH (H)	N/A	N/A	N/A	**7.8**	**7.4**	**8.4**	**10.3**	NA	NA	NA	NA	**7.8**	NA	NA	NA	**8.0**	NA	NA	NA	**8.3**	NA	NA	**7.0**
(mg/kg)	Cyanide, Reactive	N/A	N/A	N/A	10 U	10 U	10 U	10 U	NA	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U
(mg/kg)	Sulfide, Reactive	N/A	N/A	N/A	10 U	10 U	10 U	10 U	NA	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
mg/L - milligrams per liter.
s.u. - Standard unit.
J - Estimated value.
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable.
NS - No MassDEP standards exist for this analyte.
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 and RCS-1.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
TCLP - Toxicity Characteristic Leaching Procedure.
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.
(2) - MassDEP Method 1 standards and RC for 1,3-Dichloropropene used.
(3) - MassDEP RC for Dichloropropane used.
(4) - MassDEP RC for Dichloropropene used.
(5) - MassDEP RC for Chlorotoluene used.
* - Sample depth for other/VOCs analysis; otherwise the sample depth applies to all listed analyses.
** - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	SB-1		SB-2	SB-3		T-1			T-1A
	Sample ID:							SB-1		SB-2	SB-3		T-1			T-1A
	Sample Depth (ft.)*:							0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9
	Sample Date:							4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015
VOCs (mg/kg)	Methylene chloride	N/A	N/A	N/A	ND	N/A	N/A	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U
	1,1-Dichloroethane	N/A	N/A	N/A	ND	N/A	N/A	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U
	Chloroform	< 120	N/A	N/A	ND	N/A	N/A	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U
	Carbon tetrachloride	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,2-Dichloropropane	N/A	N/A	N/A	ND	N/A	N/A	0.0022 U	0.31 U	0.31 U	0.73 U	NA	NA	NA	NA	0.003 U
	Dibromochloromethane	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,1,2-Trichloroethane	< 4,000	N/A	N/A	ND	N/A	N/A	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U
	Tetrachloroethene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Chlorobenzene	< 2,000	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Trichlorofluoromethane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,2-Dichloroethane	< 10	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,1,1-Trichloroethane	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Bromodichloromethane	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	trans-1,3-Dichloropropene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	cis-1,3-Dichloropropene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,3-Dichloropropene, Total	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	0.00087 U
	1,1-Dichloropropene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Bromoform	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,1,2,2-Tetrachloroethane	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Benzene	N/A	N/A	< 10	ND	N/A	N/A	0.00062 U	**0.20**	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Toluene	N/A	N/A	N/A	ND	N/A	N/A	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U
	Ethylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Chloromethane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Bromomethane	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	Vinyl chloride	< 4	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	Chloroethane	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	1,1-Dichloroethene	< 14	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	trans-1,2-Dichloroethene	N/A	N/A	N/A	ND	N/A	N/A	0.00094 U	0.13 U	0.13 U	0.31 U	NA	NA	NA	NA	0.0013 U
	Trichloroethene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,2-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,3-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,4-Dichlorobenzene	< 150	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Methyl tert butyl ether	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	p/m-Xylene	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	o-Xylene	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	Xylenes, Total	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	cis-1,2-Dichloroethene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,2-Dichloroethene, Total	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	0.00087 U
	Dibromomethane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,2,3-Trichloropropane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Styrene	N/A	N/A	N/A	ND	N/A	N/A	0.0012 U	0.18 U	0.18 U	0.42 U	NA	NA	NA	NA	0.0017 U
	Dichlorodifluoromethane	N/A	N/A	N/A	ND	N/A	N/A	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U
	Acetone	N/A	N/A	N/A	ND	N/A	N/A	0.022 U	3.2 U	3.2 U	7.5 U	NA	NA	NA	NA	0.031 U
	Carbon disulfide	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Methyl ethyl ketone	N/A	N/A	N/A	ND	N/A	N/A	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U
	Methyl isobutyl ketone	N/A	N/A	N/A	ND	N/A	N/A	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U
	2-Hexanone	N/A	N/A	N/A	ND	N/A	N/A	0.0062 U	0.88 U	0.90 U	2.1 U	NA	NA	NA	NA	0.0087 U
	Bromochloromethane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Tetrahydrofuran	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	SB-1		SB-2	SB-3		T-1			T-1A
	Sample ID:							SB-1		SB-2	SB-3		T-1			T-1A
	Sample Depth (ft.)*:							0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9
	Sample Date:							4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015
	2,2-Dichloropropane	N/A	N/A	N/A	ND	N/A	N/A	0.0031 U	0.44 U	0.45 U	1.0 U	NA	NA	NA	NA	0.0043 U
	1,2-Dibromoethane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,3-Dichloropropane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,1,1,2-Tetrachloroethane	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Bromobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0031 U	0.44 U	0.45 U	1.0 U	NA	NA	NA	NA	0.0043 U
	n-Butylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	sec-Butylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	tert-Butylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	o-Chlorotoluene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	p-Chlorotoluene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,2-Dibromo-3-chloropropane	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Hexachlorobutadiene	< 10	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Isopropylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	p-Isopropyltoluene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	Naphthalene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	**1.6**	**1.3**	**33**	NA	NA	NA	NA	0.0035 U
	n-Propylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.00062 U	0.088 U	0.090 U	0.21 U	NA	NA	NA	NA	0.00087 U
	1,2,3-Trichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,2,4-Trichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,3,5-Trimethylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,2,4-Trimethylbenzene	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Diethyl ether	N/A	N/A	N/A	ND	N/A	N/A	0.0031 U	0.44 U	0.45 U	1.0 U	NA	NA	NA	NA	0.0043 U
	Diisopropyl Ether	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Ethyl-Tert-Butyl-Ether	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	Tertiary-Amyl Methyl Ether	N/A	N/A	N/A	ND	N/A	N/A	0.0025 U	0.35 U	0.36 U	0.84 U	NA	NA	NA	NA	0.0035 U
	1,4-Dioxane	N/A	N/A	N/A	ND	N/A	N/A	0.025 U	8.8 U	9.0 U	21 U	NA	NA	NA	NA	0.035 U
	TotalVOCs	N/A	<2(*)	N/A	ND	4	10	*ND*	***1.80***	***1.30***	***33.0***	*NA*	*NA*	*NA*	*NA*	*ND*
SVOCs (mg/kg)	Acenaphthene	N/A	1.1(**)	N/A	<4	N/A	N/A	0.14 U	**0.90**	**4.4**	**2.4**	NA	0.14 U	0.14 U	0.14 U	NA
	1,2,4-Trichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Hexachlorobenzene	N/A	N/A	N/A	N/A	N/A	N/A	0.1 U	0.11 U	3.1 U	0.22 U	NA	0.1 U	0.11 U	0.10 U	NA
	Bis(2-chloroethyl)ether	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA
	2-Chloronaphthalene	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	1,2-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	1,3-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	1,4-Dichlorobenzene	< 150	N/A	N/A	ND	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	3,3'-Dichlorobenzidine	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	2,4-Dinitrotoluene	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	2,6-Dinitrotoluene	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Azobenzene	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Fluoranthene	N/A	2.4(**)	N/A	<53	N/A	N/A	**0.16**	**42**	**86**	**43**	NA	**0.92**	**0.71**	**0.39**	NA
	4-Bromophenyl phenyl ether	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Bis(2-chloroisopropyl)ether	#N/A	#N/A	N/A	#N/A	#N/A	#N/A	0.21 U	0.22 U	6.3 U	0.44 U	NA	0.21 U	0.21 U	0.21 U	NA
	Bis(2-chloroethoxy)methane	N/A	N/A	N/A	N/A	N/A	N/A	0.19 U	0.19 U	5.6 U	0.40 U	NA	0.19 U	0.19 U	0.19 U	NA
	Hexachlorobutadiene	< 10	N/A	N/A	ND	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Hexachloroethane	N/A	N/A	N/A	N/A	N/A	N/A	0.14 U	0.14 U	4.2 U	0.29 U	NA	0.14 U	0.14 U	0.14 U	NA
	Isophorone	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA
	Naphthalene	N/A	N/A	N/A	ND	N/A	N/A	0.18 U	**1.8**	5.2 U	**7.7**	NA	0.17 U	0.18 U	0.18 U	NA
	Nitrobenzene	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA
	Bis(2-Ethylhexyl)phthalate	N/A	N/A	N/A	<5.8	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	**0.72**	0.18 U	**0.22**	NA

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	SB-1		SB-2	SB-3		T-1			T-1A
	Sample ID:							SB-1		SB-2	SB-3		T-1			T-1A
	Sample Depth (ft.)*:							0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9
	Sample Date:							4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015
	Butyl benzyl phthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Di-n-butylphthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Di-n-octylphthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Diethyl phthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Dimethyl phthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Benzo(a)anthracene	N/A	1.1(**)	N/A	<7	N/A	N/A	0.1 U	**13**	**33**	**19**	NA	**0.31**	**0.32**	**0.18**	NA
	Benzo(a)pyrene	N/A	1.4(**)	N/A	<2	N/A	N/A	0.14 U	**12**	**29**	**16**	NA	**0.27**	**0.31**	**0.19**	NA
	Benzo(b)fluoranthene	N/A	1.6(**)	N/A	<7	N/A	N/A	0.1 U	**12**	**35**	**20**	NA	**0.37**	**0.4**	**0.24**	NA
	Benzo(k)fluoranthene	N/A	1.5(**)	N/A	<17	N/A	N/A	0.1 U	**5.3**	**14**	**6.8**	NA	**0.13**	**0.14**	**0.10**	NA
	Chrysene	N/A	1.5(**)	N/A	<33	N/A	N/A	0.1 U	**11**	**32**	**18**	NA	**0.36**	**0.34**	**0.18**	NA
	Acenaphthylene	N/A	1(**)	N/A	<1	N/A	N/A	0.14 U	**6.7**	**6.0**	**7.2**	NA	0.14 U	0.14 U	0.14 U	NA
	Anthracene	N/A	1.2(**)	N/A	<21	N/A	N/A	0.1 U	**7.2**	**17**	**13**	NA	**0.1**	0.11 U	0.10 U	NA
	Benzo(ghi)perylene	N/A	1.0(**)	N/A	<17	N/A	N/A	0.14 U	**8.4**	**16**	**9.2**	NA	**0.15**	**0.19**	0.14 U	NA
	Fluorene	N/A	1.9(**)	N/A	<8	N/A	N/A	0.18 U	**4.1**	**6.0**	**6.0**	NA	0.17 U	0.18 U	0.18 U	NA
	Phenanthrene	N/A	1.6(**)	N/A	<10	N/A	N/A	**0.1**	**37**	**72**	**42**	NA	**0.59**	**0.55**	0.10 U	NA
	Dibenzo(a,h)anthracene	N/A	0.7(**)	N/A	0.7	N/A	N/A	0.1 U	**2.0**	**3.8**	**2.5**	NA	0.1 U	0.11 U	0.10 U	NA
	Indeno(1,2,3-cd)Pyrene	N/A	1.1(**)	N/A	<7	N/A	N/A	0.14 U	**9.1**	**18**	**11**	NA	**0.16**	**0.20**	0.14 U	NA
	Pyrene	N/A	1.9(**)	N/A	<51	N/A	N/A	**0.14**	**34**	**70**	**36**	NA	**0.78**	**0.64**	**0.34**	NA
	Aniline	N/A	N/A	N/A	N/A	N/A	N/A	0.21 U	0.22 U	6.3 U	0.44 U	NA	0.21 U	0.21 U	0.21 U	NA
	4-Chloroaniline	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	Dibenzofuran	N/A	N/A	N/A	<7.3	N/A	N/A	0.18 U	**2.7**	**5.6**	**4.8**	NA	0.17 U	0.18 U	0.18 U	NA
	2-Methylnaphthalene	N/A	0.7(**)	N/A	0.7	N/A	N/A	0.21 U	**0.60**	6.3 U	**2.7**	NA	0.21 U	0.21 U	0.21 U	NA
	Acetophenone	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	2,4,6-Trichlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.1 U	0.11 U	3.1 U	0.22 U	NA	0.1 U	0.11 U	0.10 U	NA
	2-Chlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	2,4-Dichlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	4.7 U	0.33 U	NA	0.16 U	0.16 U	0.16 U	NA
	2,4-Dimethylphenol	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	2-Nitrophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.38 U	0.39 U	11 U	0.79 U	NA	0.38 U	0.39 U	0.38 U	NA
	4-Nitrophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.25 U	0.25 U	7.3 U	0.51 U	NA	0.24 U	0.25 U	0.24 U	NA
	2,4-Dinitrophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.84 U	0.87 U	25 U	1.8 U	NA	0.84 U	0.86 U	0.84 U	NA
	Pentachlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.35 U	0.36 U	10 U	0.73 U	NA	0.35 U	0.36 U	0.35 U	NA
	Phenol	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	**0.23**	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	2-Methylphenol	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	3-Methylphenol/4-Methylphenol	N/A	N/A	N/A	N/A	N/A	N/A	0.25 U	**0.42**	7.5 U	0.53 U	NA	0.25 U	0.26 U	0.25 U	NA
	2,4,5-Trichlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.18 U	0.18 U	5.2 U	0.37 U	NA	0.17 U	0.18 U	0.18 U	NA
	TotalSVOCs	N/A	N/A	N/A	N/A	100	100	***0.40***	***210***	***448***	***267***	***NA***	***4.86***	***3.80***	***1.84***	***NA***
Total Petroleum Hydrocarbons																
(mg/kg)	TPH	N/A	580(***)	N/A	662	2,500	5,000	34.3 U	**524**	**2,160**	**2,580**	NA	NA	NA	NA	33.7 U
PCBs																
(mg/kg)	Aroclor 1016	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1221	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1232	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1242	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1248	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1254	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1260	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1262	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Aroclor 1268	N/A	<1	N/A	<0.10	N/A	N/A	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U
	Total PCBs	< 2	<1(****)	< 50	<0.10	< 2	< 2	0.0347 U	0.0351 U	0.042 U	0.0361 U	NA	NA	NA	NA	0.0343 U

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	SB-1	SB-1	SB-2	SB-3	SB-3	T-1	T-1	T-1	T-1A
	Sample ID:							SB-1	SB-1	SB-2	SB-3	SB-3	T-1	T-1	T-1	T-1A
	Sample Depth (ft.)*:							0-3/3	3-14.5/10	0-14/12	0-14/7	14-18	0-3	3-6	6-9	0-9
	Sample Date:							4/21/2014	4/21/2014	4/21/2014	4/22/2014	4/23/2014	5/27/2015	5/27/2015	5/27/2015	5/27/2015
Metals, total																
(mg/kg)	Arsenic	N/A	<20	40	<20	40	40	**9.9**	**5.7**	**7.6**	**8.1**	**8.8**	NA	NA	NA	**7.9**
	Barium	N/A	205	N/A	516	N/A	N/A	**28**	**22**	**81**	**55**	**260**	NA	NA	NA	**22**
	Cadmium	N/A	<2	30	12.4	30	80	0.42 U	0.43 U	0.48 U	0.43 U	0.43 U	NA	NA	NA	0.42 U
	Chromium	N/A	73(*****)	1,000	162	1,000	1,000	**20**	**10**	**18**	**17**	**9.8**	NA	NA	NA	**13**
	Lead	N/A	162	1,000	<200	1,000	2,000	**6.7**	**33**	**45**	**150**	**97**	NA	NA	NA	**12**
	Mercury	N/A	<1	10	<20	10	10	0.073 U	0.081 U	**0.102**	**0.523**	**0.096**	NA	NA	NA	0.070 U
	Selenium	N/A	35	N/A	11	N/A	N/A	2.1 U	2.1 U	2.4 U	2.1 U	2.1 U	NA	NA	NA	2.1 U
	Silver	n/A	3.5	N/A	2.3	N/A	N/A	0.42 U	0.43 U	0.48 U	0.43 U	0.43 U	NA	NA	NA	0.42 U
Metals, TCLP																
(mg/L)	Lead	<5	<5	N/A	N/A	N/A	N/A	NA	NA	NA	0.50 U	NA	NA	NA	NA	0.50 U
General Chemistry																
	Ignitability	N/A	N/A	N/A	NI	N/A	N/A	NI	NI	NI	NI	NA	NA	NA	NA	NI
(s.u.)	pH (H)	>2<12.5	>2<12.5	N/A	5.0-9.0	>2 <12.5	>2 <12.5	**7.8**	**7.4**	**8.4**	**10.3**	NA	NA	NA	NA	**7.8**
(mg/kg)	Cyanide, Reactive	< 250	500	N/A	NR	N/A	N/A	10 U	10 U	10 U	10 U	NA	NA	NA	NA	10 U
(mg/kg)	Sulfide, Reactive	< 500	500	N/A	NR	< 500	< 500	10 U	10 U	10 U	10 U	NA	NA	NA	NA	10 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
mg/L - milligrams per liter.
mV - milliVolt.
s.u. - Standard unit.
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable/available.
ND - Not detected.
NI - Not ignitable.
NR - Not reactive.
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 criteria.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
RC - Reportable concentration.
TCLP - Toxicity Characteristic Leaching Procedure.
* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.
** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.
^ - Sample depth for other analysis/VOC analysis.
(*) - Only trace or ND levels accepted for individual VOCs since no VOCs were detected in background sampling.
(**) - These Acceptance Criteria are within 10 times site background and below RCS-1's. Concentrations are well below Risk-Based Concentrations for BHC.
(***) -Expressed as TPH or Sum of EPH/VPH Fractions
(****) - PCBs must not be detectable to a DL of < 0.25 ppm.
(*****) - Chromium is total Trivalent. Hex chromium must be <100 ppm.

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte						Sample ID:	T-2			T-2A	T-3			T-3A	T-4		T-4A
							Sample Depth (ft.)*:	0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-9	0-9
							Sample Date:	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
						Reuse Levels**												
		ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Unlined Landfills	Lined Landfills											
VOCs																		
(mg/kg)	Methylene chloride	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.01 U
	1,1-Dichloroethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Chloroform	< 120	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Carbon tetrachloride	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,2-Dichloropropane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.003 U	NA	NA	NA	0.003 U	NA	NA	0.0037 U
	Dibromochloromethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,1,2-Trichloroethane	< 4,000	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Tetrachloroethene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Chlorobenzene	< 2,000	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Trichlorofluoromethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2-Dichloroethane	< 10	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,1,1-Trichloroethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Bromodichloromethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	trans-1,3-Dichloropropene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	cis-1,3-Dichloropropene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,3-Dichloropropene, Total	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,1-Dichloropropene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Bromoform	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,1,2,2-Tetrachloroethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Benzene	N/A	N/A	< 10	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Toluene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Ethylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Chloromethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Bromomethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Vinyl chloride	< 4	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Chloroethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	1,1-Dichloroethene	< 14	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	trans-1,2-Dichloroethene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0013 U	NA	NA	NA	0.0013 U	NA	NA	0.0016 U
	Trichloroethene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,2-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,3-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,4-Dichlorobenzene	< 150	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Methyl tert butyl ether	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	p/m-Xylene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	o-Xylene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Xylenes, Total	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	cis-1,2-Dichloroethene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,2-Dichloroethene, Total	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Dibromomethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2,3-Trichloropropane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Styrene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0017 U	NA	NA	NA	0.0017 U	NA	NA	0.0021 U
	Dichlorodifluoromethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.01 U
	Acetone	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.031 U	NA	NA	NA	0.031 U	NA	NA	0.038 U
	Carbon disulfide	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Methyl ethyl ketone	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.01 U
	Methyl isobutyl ketone	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.01 U
	2-Hexanone	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0085 U	NA	NA	NA	0.0086 U	NA	NA	0.01 U
	Bromochloromethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Tetrahydrofuran	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	T-2 0-3 5/27/2015	T-2 3-6 5/27/2015	T-2 6-9 5/27/2015	T-2A 0-9 5/27/2015	T-3 0-3 5/27/2015	T-3 3-6 5/27/2015	T-3 6-9 5/27/2015	T-3A 0-9 5/28/2015	T-4 0-3 5/28/2015	T-4 3-9 5/28/2015	T-4A 0-9 5/28/2015
	2,2-Dichloropropane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	0.0053 U
	1,2-Dibromoethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,3-Dichloropropane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,1,1,2-Tetrachloroethane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	Bromobenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	0.0053 U
	n-Butylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	sec-Butylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	tert-Butylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	o-Chlorotoluene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	p-Chlorotoluene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2-Dibromo-3-chloropropane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Hexachlorobutadiene	< 10	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Isopropylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	p-Isopropyltoluene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	**0.0019**
	Naphthalene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	n-Propylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.00085 U	NA	NA	NA	0.00086 U	NA	NA	0.001 U
	1,2,3-Trichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2,4-Trichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,3,5-Trimethylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,2,4-Trimethylbenzene	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Diethyl ether	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0043 U	NA	NA	NA	0.0043 U	NA	NA	0.0053 U
	Diisopropyl Ether	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Ethyl-Tert-Butyl-Ether	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	Tertiary-Amyl Methyl Ether	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.0034 U	NA	NA	NA	0.0034 U	NA	NA	0.0042 U
	1,4-Dioxane	N/A	N/A	N/A	ND	N/A	N/A	NA	NA	NA	0.034 U	NA	NA	NA	0.034 U	NA	NA	0.042 U
	TotalVOCs	N/A	<2(*)	N/A	ND	4	10	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	***0.0019***
SVOCs (mg/kg)	Acenaphthene	N/A	1.1(**)	N/A	<4	N/A	N/A	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	**1.0**	NA
	1,2,4-Trichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Hexachlorobenzene	N/A	N/A	N/A	N/A	N/A	N/A	0.1 U	0.10 U	0.11 U	NA	0.11 U	0.11 U	0.10 U	NA	0.11 U	0.11 U	NA
	Bis(2-chloroethyl)ether	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	2-Chloronaphthalene	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	1,2-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	1,3-Dichlorobenzene	N/A	N/A	N/A	ND	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	1,4-Dichlorobenzene	< 150	N/A	N/A	ND	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	3,3'-Dichlorobenzidine	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,4-Dinitrotoluene	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,6-Dinitrotoluene	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Azobenzene	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Fluoranthene	N/A	2.4(**)	N/A	<53	N/A	N/A	**4.5**	**0.1**	**0.31**	NA	0.11 U	**1.0**	**6.5**	NA	0.11 U	**6.1**	NA
	4-Bromophenyl phenyl ether	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Bis(2-chloroisopropyl)ether	#N/A	#N/A	N/A	#N/A	#N/A	#N/A	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	NA
	Bis(2-chloroethoxy)methane	N/A	N/A	N/A	N/A	N/A	N/A	0.19 U	0.19 U	0.19 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U	0.19 U	NA
	Hexachlorobutadiene	< 10	N/A	N/A	ND	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Hexachloroethane	N/A	N/A	N/A	N/A	N/A	N/A	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U	0.14 U	NA
	Isophorone	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	Naphthalene	N/A	N/A	N/A	ND	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	**0.22**	NA	0.18 U	**0.83**	NA
	Nitrobenzene	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	Bis(2-Ethylhexyl)phthalate	N/A	N/A	N/A	<5.8	N/A	N/A	0.17 U	0.18 U	**1.1**	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	T-2			T-2A	T-3			T-3A	T-4		T-4A
	Sample ID:							T-2			T-2A	T-3			T-3A	T-4		T-4A
	Sample Depth (ft.)*:							0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-9	0-9
	Sample Date:							5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
	Butyl benzyl phthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Di-n-butylphthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Di-n-octylphthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Diethyl phthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Dimethyl phthalate	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Benzo(a)anthracene	N/A	1.1(**)	N/A	<7	N/A	N/A	**1.7**	0.10 U	**0.14**	NA	0.11 U	**0.46**	**2.7**	NA	0.11 U	**2.8**	NA
	Benzo(a)pyrene	N/A	1.4(**)	N/A	<2	N/A	N/A	**1.7**	0.14 U	0.14 U	NA	0.14 U	**0.47**	**2.8**	NA	0.14 U	**2.4**	NA
	Benzo(b)fluoranthene	N/A	1.6(**)	N/A	<7	N/A	N/A	**2.1**	0.10 U	**0.18**	NA	0.11 U	**0.54**	**3.5**	NA	0.11 U	**2.9**	NA
	Benzo(k)fluoranthene	N/A	1.5(**)	N/A	<17	N/A	N/A	**0.77**	0.10 U	0.11 U	NA	0.11 U	**0.23**	**1.3**	NA	0.11 U	**1.2**	NA
	Chrysene	N/A	1.5(**)	N/A	<33	N/A	N/A	**1.5**	0.10 U	**0.15**	NA	0.11 U	**0.44**	**2.6**	NA	0.11 U	**2.8**	NA
	Acenaphthylene	N/A	1(**)	N/A	<1	N/A	N/A	**0.40**	0.14 U	0.14 U	NA	0.14 U	0.14 U	**0.82**	NA	0.14 U	0.14 U	NA
	Anthracene	N/A	1.2(**)	N/A	<21	N/A	N/A	**0.43**	0.10 U	0.11 U	NA	0.11 U	**0.11**	**0.80**	NA	0.11 U	**2.0**	NA
	Benzo(ghi)perylene	N/A	1.0(**)	N/A	<17	N/A	N/A	1.2	0.14 U	0.14 U	NA	0.14 U	**0.31**	2.0	NA	0.14 U	1.3	NA
	Fluorene	N/A	1.9(**)	N/A	<8	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	**0.17**	NA	0.18 U	**0.97**	NA
	Phenanthrene	N/A	1.6(**)	N/A	<10	N/A	N/A	**2.1**	0.10 U	**0.24**	NA	0.11 U	**0.49**	**3.3**	NA	0.11 U	**6.4**	NA
	Dibenzo(a,h)anthracene	N/A	0.7(**)	N/A	0.7	N/A	N/A	**0.19**	0.10 U	0.11 U	NA	0.11 U	0.11 U	**0.38**	NA	0.11 U	**0.32**	NA
	Indeno(1,2,3-cd)Pyrene	N/A	1.1(**)	N/A	<7	N/A	N/A	**1.2**	0.14 U	0.14 U	NA	0.14 U	**0.34**	**2.2**	NA	0.14 U	**1.5**	NA
	Pyrene	N/A	1.9(**)	N/A	<51	N/A	N/A	**4.0**	0.10 U	**0.25**	NA	0.11 U	**0.89**	**5.8**	NA	0.11 U	**5.2**	NA
	Aniline	N/A	N/A	N/A	N/A	N/A	N/A	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	NA
	4-Chloroaniline	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	Dibenzofuran	N/A	N/A	N/A	<7.3	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	**0.86**	NA
	2-Methylnaphthalene	N/A	0.7(**)	N/A	0.7	N/A	N/A	0.21 U	0.21 U	0.21 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U	**0.44**	NA
	Acetophenone	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,4,6-Trichlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.1 U	0.10 U	0.11 U	NA	0.11 U	0.11 U	0.10 U	NA	0.11 U	0.11 U	NA
	2-Chlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2,4-Dichlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	NA
	2,4-Dimethylphenol	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2-Nitrophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.38 U	0.38 U	0.38 U	NA	0.38 U	0.38 U	0.38 U	NA	0.39 U	0.38 U	NA
	4-Nitrophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.24 U	0.24 U	0.25 U	NA	0.25 U	0.25 U	0.24 U	NA	0.25 U	0.25 U	NA
	2,4-Dinitrophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.84 U	0.84 U	0.85 U	NA	0.86 U	0.86 U	0.84 U	NA	0.86 U	0.85 U	NA
	Pentachlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.35 U	0.35 U	0.35 U	NA	0.36 U	0.36 U	0.35 U	NA	0.36 U	0.36 U	NA
	Phenol	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	2-Methylphenol	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	3-Methylphenol/4-Methylphenol	N/A	N/A	N/A	N/A	N/A	N/A	0.25 U	0.25 U	0.25 U	NA	0.26 U	0.26 U	0.25 U	NA	0.26 U	0.26 U	NA
	2,4,5-Trichlorophenol	N/A	N/A	N/A	N/A	N/A	N/A	0.17 U	0.18 U	0.18 U	NA	0.18 U	0.18 U	0.17 U	NA	0.18 U	0.18 U	NA
	TotalSVOCs	N/A	N/A	N/A	N/A	100	100	***21.8***	***0.10***	***2.37***	*NA*	*ND*	***5.28***	***35.1***	*NA*	*ND*	***39.0***	*NA*
Total Petroleum Hydrocarbons																		
(mg/kg)	TPH	N/A	580(***)	N/A	662	2,500	5,000	NA	NA	NA	**67.6**	NA	NA	NA	34.8 U	NA	NA	**39**
PCBs																		
(mg/kg)	Aroclor 1016	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1221	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1232	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1242	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1248	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1254	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1260	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1262	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Aroclor 1268	N/A	<1	N/A	<0.10	N/A	N/A	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U
	Total PCBs	< 2	<1(****)	< 50	<0.10	< 2	< 2	NA	NA	NA	0.0352 U	NA	NA	NA	0.0345 U	NA	NA	0.0363 U

Table 2
Summary of Analytical Results for Soil Samples vs Disposal Acceptance Standards - April 2014 and May 2015
179 Bridge Street
Lowell, Massachusetts

Analysis	Analyte	ARC	Blue Hill Cemetery	ESMI	Marilyn's Landing Facility	Reuse Levels** Unlined Landfills	Reuse Levels** Lined Landfills	T-2			T-2A	T-3			T-3A	T-4		T-4A
	Sample ID:							T-2			T-2A	T-3			T-3A	T-4		T-4A
	Sample Depth (ft.)*:							0-3	3-6	6-9	0-9	0-3	3-6	6-9	0-9	0-3	3-9	0-9
	Sample Date:							5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/27/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
Metals, total																		
(mg/kg)	Arsenic	N/A	<20	40	<20	40	40	NA	NA	NA	**5.8**	NA	NA	NA	**5.6**	NA	NA	**8.0**
	Barium	N/A	205	N/A	516	N/A	N/A	NA	NA	NA	**18**	NA	NA	NA	**10**	NA	NA	**120**
	Cadmium	N/A	<2	30	12.4	30	80	NA	NA	NA	0.43 U	NA	NA	NA	0.42 U	NA	NA	0.43 U
	Chromium	N/A	73(*****)	1,000	162	1,000	1,000	NA	NA	NA	**8.2**	NA	NA	NA	**7.4**	NA	NA	**14**
	Lead	N/A	162	1,000	<200	1,000	2,000	NA	NA	NA	**22**	NA	NA	NA	**2.3**	NA	NA	**13**
	Mercury	N/A	<1	10	<20	10	10	NA	NA	NA	0.074 U	NA	NA	NA	0.067 U	NA	NA	**0.096**
	Selenium	N/A	35	N/A	11	N/A	N/A	NA	NA	NA	2.2 U	NA	NA	NA	2.1 U	NA	NA	2.1 U
	Silver	n/A	3.5	N/A	2.3	N/A	N/A	NA	NA	NA	0.43 U	NA	NA	NA	0.42 U	NA	NA	0.43 U
Metals, TCLP																		
(mg/L)	Lead	<5	<5	N/A	N/A	N/A	N/A	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	0.50 U
General Chemistry																		
	Ignitability	N/A	N/A	N/A	NI	N/A	N/A	NA	NA	NA	NI	NA	NA	NA	NI	NA	NA	NI
(s.u.)	pH (H)	>2<12.5	>2<12.5	N/A	5.0-9.0	>2 <12.5	>2 <12.5	NA	NA	NA	**8.0**	NA	NA	NA	**8.3**	NA	NA	**7.0**
(mg/kg)	Cyanide, Reactive	< 250	500	N/A	NR	N/A	N/A	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U
(mg/kg)	Sulfide, Reactive	< 500	500	N/A	NR	< 500	< 500	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
mg/L - milligrams per liter.
mV - milliVolt.
s.u. - Standard unit.
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable/available.
ND - Not detected.
NI - Not ignitable.
NR - Not reactive.
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 criteria.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
RC - Reportable concentration.
TCLP - Toxicity Characteristic Leaching Procedure.
* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.
** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.
^ - Sample depth for other analysis/VOC analysis.
(*) - Only trace or ND levels accepted for individual VOCs since no VOCs were detected in background sampling.
(**) - These Acceptance Criteria are within 10 times site background and below RCS-1's. Concentrations are well below Risk-Based Concentrations for BHC.
(***) -Expressed as TPH or Sum of EPH/VPH Fractions
(****) - PCBs must not be detectable to a DL of < 0.25 ppm.
(*****) - Chromium is total Trivalent. Hex chromium must be <100 ppm.

APPENDIX A

PHOTOGRAPHIC LOG

Photographic Log

Client Name:	Site Location:	Project No.:
City of Lowell	Bridge St. RiverWalk Site Lowell, MA	183757.0000.0000

Photo No.	Date
1	5/27/2015

Description

Trench section at approximately 30 feet from start. All soil is fine sand to silty sand fill. Dark gray thin horizontal layer with reddish soil beneath is asphalt pavement. A brick layer is approximately 2 feet below the pavement layer. Note the pipe debris.

Photo No.	Date
2	5/28/2015

Description

Fine sand to silty sand fill over a pavement layer and sand fill, brick layer. Note root s in brick layer and gravelly/cobbley fill at bottom of trench.

Photographic Log

Client Name:	Site Location:	Project No.:
City of Lowell	Bridge St. RiverWalk Site Lowell, MA	183757.0000.0000

Photo No.	Date
3	5/28/2015

Description

Completed, backfill and graded trench.

APPENDIX B

WASTE DISPOSAL DOCUMENTATION

SMI of N.H.

Customer Usage by Date

Date Run: 5/28/2015
Time Run: 2:21:19PM

:ket te	Ticket Number	Truck/Trailer ID	Material ID	Unit	Net	Material	Delivery	Tax/Misc.	Total
Customer: ENP20			ENPRO SERVICES, INC. (M						
Order: 10081			Riverwalk Park						
179 Bridge St.				Lowell	MA				
7/15	301251	FORD42	UF01		37.050 tn				
7/15	301257	TC659	UF01		42.530 tn				
7/15	301269	FORD42	UF01		38.850 tn				
7/15	301275	TC659	UF01		34.410 tn				
3/15	301279	FORD42	UF01		40.860 tn				
3/15	301281	TC659	UF01		37.900 tn				
3/15	301285	FORD42	UF01		43.050 tn				
BAN FILL Totals					274.650 tn				
al Tickets: 7									
erwalk Park Totals					274.650 tn				
al Tickets: 7									
PRO SERVICES, INC. (MASS) Totals					274.650 tn				
al Tickets: 7									
Grand Totals					274.650 tn				
al Tickets: 7									

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 32312

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:

1. Release Name/Location Aid: RIVERWALK PROPERTY

2. Street Address: 179 BRIDGE STREET

3. City/Town: LOWELL 4. Zip Code: 018520000

☐ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category.
☐ a. Tier I ☐ b. Tier ID ☐ c. Tier II

B. THIS FORM IS BEING USED TO: (check one: B1-B4):

☑ 1. Submit a **Bill of Lading (BOL)** to transport Remediation Waste to Temporary Storage or a Receiving Facility.
Response Actions associated with this BOL (check all that apply):

☐ a. Immediate Response Action (IRA)
☑ b. Release Abatement Measure (RAM)
☐ c. Downgradient Property Status (DPS)
☐ d. Utility Release Abatement Measure (URAM)
☐ e. Comprehensive Response Actions
☐ f. Limited Removal Action (LRA): (must be retained pursuant to 310 CMR 40.0034(6); can't be submitted via eDEP)
☐ g. Other

☐ 2. Submit an Attestation of Completion of **Shipment to Temporary Storage** (Sections C, F and J are not required):

☐ 3. Submit an Attestation of **Completion of Shipment to a Receiving Facility** (Sections C, F and J are not required):

☐ 4. Certify that Remediation Waste Was **Not Shipped, and the Bill of Lading is Void**. (Sections C, D, E, and F are not required)

5. Date Bill of Lading submitted to the Department: _____ (mm/dd/yyyy) b. eDEP Transaction ID: _____

6. Period of Generation Associated with this Bill of Lading 5/20/2015 (mm/dd/yyyy) to 12/31/2015 (mm/dd/yyyy)

(All sections of this transmittal form must be filled out unless otherwise noted above)

The Bill of Lading is not considered complete until the Attestation of Completion of Shipment is received by the Department.

C. DESCRIPTION OF WASTE AND WASTE SOURCE:

1. Contaminated Media/Debris (check all that apply):

☑ a. Soil ☐ b. Groundwater ☐ c. Surface Water ☐ d. Sediment ☐ e. Vegetation or Organic Debris

☐ f. Demolition/Construction Waste ☐ g. Inorganic Absorbent Materials ☐ h. Other:

2. Uncontainerized Waste (check all that apply):

☐ a. Inorganic Absorbent Materials ☐ b. Other:

C. DESCRIPTION OF WASTE AND WASTE SOURCE (cont.):

3. Containerized Waste (check all that apply):

☐ a. Tank Bottoms/Sludges ☐ b. Containers ☐ c. Drums ☐ d. Engineered Impoundments

☐ e. Other: _____

4. Estimated Quantity: 800 ☑ Tons ☐ Cu. Yds. ☐ Gallons

5. Contaminant Source (check one):

☐ a. Transportation Accident ☐ b. Underground Storage Tank ☐ c. Brownfields Redevelopment

☑ d. Other: URBAN FILL

6. Type of Contaminant (check all that apply):

☐ a. Gasoline ☐ b. Diesel Fuel ☐ c. #2 Fuel Oil ☐ d. #4 Fuel Oil ☐ e. #6 Fuel Oil ☐ f. Jet Fuel

☐ g. Waste Oil ☐ h. Kerosene ☐ i. Chlorinated Solvents ☑ j. Urban Fill ☐ k. Other: _____

7. Constituents of Concern (check all that apply):

☐ a. As ☐ b. Cd ☐ c. Cr ☐ d. Pb ☐ e. Hg ☑ f. EPH/TPH ☐ g. VPH

☐ h. PCBs ☑ i. VOCs ☑ j. SVOCs ☐ k. Other: _____

8. If applicable, check the box for the Reportable Concentration Category of the site:

☑ a. RCS-1 ☑ b. RCS-2 ☐ c. RCGW-1 ☑ d. RCGW-2

9. Remediation Waste Characterization Documentation (check at least one):

☑ a. Site History Information ☑ b. Sampling Analytical Methods and Procedures ☑ c. Laboratory Data

☑ d. Field Screening Data ☐ e. Characterization Documentation previously submitted to the Department

i. Date submitted: _____ (mm/dd/yyyy) ii. Type of Documentation: _____

D. TRANSPORTER OR COMMON CARRIER INFORMATION:

1. Transporter/Common Carrier Name: ENPRO SERVICES, INC.

2. Contact First Name: TOM 3. Last Name: O'LEARY

4. Street: 114 BRIDGE ROAD 5. Title: SALES MANAGER

6. City/Town: SALISBURY 7. State: MA 8. Zip Code: 019520000

9. Telephone: 9784651595 10. Ext: _____ 11. Email: toleary@ENPRO.COM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 32312

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:

1. Operator/Facility Name: ESMI OF NEW HAMPSHIRE, INC.
2. Contact First Name: MICHAEL 3. Last Name: PHELPS
4. Street: 67 INTERNATIONAL DRIVE 5. Title: VICE PRESIDENT
6. City/Town: LOUDON 7. State: NH 8. Zip Code: 033070000
9. Telephone: 6037830228 10. Ext: 11. Email: mphelps@esmiofnh.com
12. Type of facility: (check one)

a. Temporary Storage i. Period of Temporary Storage _____ (mm/dd/yyyy) to _____ (mm/dd/yyyy)

ii. Reason for Temporary Storage:

☐ b. Asphalt Batch/Hot Mix ☐ c. Landfill/Disposal ☐ d. Landfill/Structural Fill ☐ e. Landfill/Daily Cover

☐ f. Asphalt Batch/Cold Mix ☑ g. Thermal Processing ☐ h. Incinerator ☐ i. Other:

13. Division of Hazardous Waste/Class A Permit Number:
14. Division of Solid Waste Permit Number: DES-SW-SP-96-002
15. EPA Identification Number: NH5986485852

F. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, the assessment action(s) undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9495
2. First Name: MATTHEWE 3. Last Name: ROBBINS
4. Telephone: 5089235120 5. Ext: 6. Email: dtuttle@trcsolutions.com
7. Signature: MATTHEW E ROBBINS
8. Date: 5/22/2015 (mm/dd/yyyy)
9. LSP Stamp:

Commonwealth of Massachusetts
Electronic Seal
Licensed Site Professional

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 32312

G. PERSON SUBMITTING BILL OF LADING:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: CITY OF LOWELL

3. Contact First Name: KEVIN J 4. Last Name: MURPHY

5. Street: 375 MERRIMACK ST 2ND FLOOR 6. Title: CITY MANAGER

7. City/Town: LOWELL 8. State: MA 9. Zip Code: 018520000

10. Telephone: 9786744000 11. Ext: 12. Email: kmurphy@lowellma.gov

H. RELATIONSHIP TO SITE OF PERSON SUBMITTING BILL OF LADING:

☐ Check here to change relationship

☑ 1. RP or PRP ☑ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions: Specify Relationship:

I. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approvals issued by DEP or EPA. If the box is checked, you must attach a statement identifying the applicable provisions thereof.

☐ 2. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to BWSC.eDEP@state.ma.us

☑ 3. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING:

1. I, KEVIN J. MURPHY, attest under the pains and penalties or perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: KEVIN J. MURPHY 3. Title: CITY MANAGER

4. For: CITY OF LOWELL (Name of person or entity recorded in Section G) 5. Date: 5/26/2015 (mm/dd/yyyy)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 32312

J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING (cont.) :

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section G.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. Zip Code: _____

11. Telephone: _____ 12. Ext: _____ 13. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (MassDEP USE ONLY):

Received by DEP on 5/26/2015 11:30:01 AM

From Date: 5/25/2015 To Date: 5/25/2015 | From Truck: CIRCLET To Truck: ZORICT | From Order: 10081 To: 10081

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,275
Date :5/27/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : TC659 TC Leasing #659
Location: MA MASSACHUSETTS

Gross :	104120	lb	In	4:20 pm
Tare :	35300	lb	Out	4:20 pm
Net :	68820	lb		
	34.410	tn		

Weigh Master: ANGELA Angela Holub

Driver:

DH

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	34.410	tn					

From Date: 5/25/2015 To Date: 5/25/2015 | From Truck: CIRCLET To Truck: ZORICT | From Order: 10081 To: 10081

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,257
Date :5/27/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081
Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : TC659 TC Leasing #659
Location: MA MASSACHUSETTS

Gross :	120360	lb	In	1:03 pm
Tare :	35300	lb	Out	1:03 pm
Net :	85060	lb		
	42.530	tn		

Weigh Master: ANGELA Angela Holub

Driver:

DT

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	42.530	tn					

From Date: 5/28/2015 To Date: 5/28/2015 | From Truck: CIRCLE1 To Truck: ZOKIC1 | From Order: 10081 To: 10081

ESMI of N.H.
57 International Drive

Loudon, NH 03307

Ticket No : 301,279
Date :5/28/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : FORD42 EDDIE FORD
Location: MA MASSACHUSETTS

Gross :	116440	lb	In	9:21 am
Tare :	34720	lb	Out	9:20 am
Net :	81720	lb		
	40.860	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
F01	40.860	tn					

From Date: 5/29/2015 To Date: 5/25/2015 | From Truck: CIRCLE1 To Truck: ZUKIC1 | From Order: 10081 To: 10081

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,285
Date :5/28/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : FORD42 EDDIE FORD
Location: MA MASSACHUSETTS

Gross : 120820 lb In 12:11 pm
Tare : 34720 lb Out 12:11 pm

Net : 86100 lb
43.050 tn

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
JF01	43.050	tn					

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING Transport Log Sheet

Page _____ OF _____

Release Tracking Number ☐ - ☐

I. LOAD INFORMATION:

Load 1:
Signature of Transporter Representative: Eddie
Date of Shipment: 5/27/15
Time of Shipment: 10:45 ☒ AM ☐ PM
Truck/Tractor Registration: AR2774 MA
Trailer Registration (if any): T139016
Receiving Facility/Temporary Storage Representative: Eshu/A Holub
Date of Receipt: 5/27/15
Time of Receipt: 12:01 ☐ AM ☒ PM
Load Size (cu. yds./tons): 37.05

Load 2:
Signature of Transporter Representative: Eddie Fed
Date of Shipment: 5/27/15
Time of Shipment: 135 ☒ AM ☐ PM
Truck/Tractor Registration: AR2774 MA
Trailer Registration (if any): T139016
Receiving Facility/Temporary Storage Representative: Eshu/A Holub
Date of Receipt: 5/27/15
Time of Receipt: 2:56 ☐ AM ☒ PM
Load Size (cu. yds./tons): 38.85

Load 3:
Signature of Transporter Representative: Eddie
Date of Shipment: 5/28/15
Time of Shipment: 805 ☒ AM ☐ PM
Truck/Tractor Registration: AR2774 MA
Trailer Registration (if any): T139016
Receiving Facility/Temporary Storage Representative: Eshu/A Holub
Date of Receipt: 5/28/15
Time of Receipt: 9:21 ☒ AM ☐ PM
Load Size (cu. yds./tons): 40.86

Load 4:
Signature of Transporter Representative: Eddie Fed
Date of Shipment: 5/28/15
Time of Shipment: 10:30 ☒ AM ☐ PM
Truck/Tractor Registration: AR2774 MA
Trailer Registration (if any): T139016
Receiving Facility/Temporary Storage Representative: Eshu/A Holub
Date of Receipt: 5/28/15
Time of Receipt: 12:11 ☐ AM ☒ PM
Load Size (cu. yds./tons): 43.05

Load 5:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 6:
Signatiure of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume Recorded This Page (cu. yds./tons): 159.81
Total Carried Forward (cu. yds./tons):
Total Carried Forward and This Page (cu. yds./tons):

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING Transport Log Sheet

Page _____ OF _____

Release Tracking Number ☐ - ☐

I. LOAD INFORMATION:

Load 1:
Signature of Transporter Representative: [illegible]
Date of Shipment: 5-27-15
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: 88716
Trailer Registration (if any): 91084
Receiving Facility/Temporary Storage Representative: ESMI/A Holub
Date of Receipt: 5/27/15
Time of Receipt: 1:03 ☐ AM ☐ PM
Load Size (cu. yds./tons): 42.53

Load 2:
Signature of Transporter Representative: [illegible]
Date of Shipment: 5-27-15
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: 88716
Trailer Registration (if any): 91055
Receiving Facility/Temporary Storage Representative: ESMI/M. Cady
Date of Receipt: 5/27/15
Time of Receipt: 4:20 ☐ AM ☒ PM
Load Size (cu. yds./tons): 34.41

Load 3:
Signature of Transporter Representative: [illegible]
Date of Shipment: 5-28-15
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: 88716
Trailer Registration (if any): 91055
Receiving Facility/Temporary Storage Representative: ESMI/A Holub
Date of Receipt: 5/28/15
Time of Receipt: 11:08 ☒ AM ☐ PM
Load Size (cu. yds./tons): 37.90

Load 4:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 5:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 6:
Signatiure of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume Recorded This Page (cu. yds./tons): 114.84
Total Carried Forward (cu. yds./tons):
Total Carried Forward and This Page (cu. yds./tons):

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC112A

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number

SUMMARY OF SHIPMENT SHEET _____ **OF** _____

A. SUMMARY OF SHIPMENT (To be filled out by the receiving facility upon receipt of Remediation Waste):

1. Date of Shipment: (mm/dd/yyyy)	2. Date of Receipt: (mm/dd/yyyy)	3. Number of Loads Shipped:	4. Daily Volume Shipped: ☐ yds³ ☒ tons ☐ gals
05/27/2015	05/27/2015	4	152.84
05/28/2015	05/28/2015	3	121.81
5. Totals Recorded on this Summary of Shipment Sheet:		7	274.65

B. ☐ Check here if additional BWSC112A BOL Summary Sheets are needed.

Revised: 03/10/2010

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,251
Date :5/27/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : FORD42 EDDIE FORD
Location: MA MASSACHUSETTS

Gross :	108820	lb	In	12:01 pm
Tare :	34720	lb	Out	12:01 pm
Net :	74100	lb		
	37.050	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	37.050	tn					

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,257
Date :5/27/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : TC659 TC Leasing #659
Location: MA MASSACHUSETTS

Gross :	120360	lb	In	1:03 pm
Tare :	35300	lb	Out	1:03 pm
Net :	85060	lb		
	42.530	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	42.530	tn					

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,269
Date :5/27/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : FORD42 EDDIE FORD
Location: MA MASSACHUSETTS

Gross :	112420	lb	In	2:56 pm
Tare :	34720	lb	Out	2:56 pm
Net :	77700	lb		
	38.850	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Eddie

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	38.850	tn					

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,275
Date :5/27/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : TC659 TC Leasing #659
Location: MA MASSACHUSETTS

Gross :	104120	lb	In	4:20 pm
Tare :	35300	lb	Out	4:20 pm
Net :	68820	lb		
	34.410	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	34.410	tn					

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,279
Date :5/28/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : FORD42 EDDIE FORD
Location: MA MASSACHUSETTS

Gross :	116440	lb	In	9:21 am
Tare :	34720	lb	Out	9:20 am
Net :	81720	lb		
	40.860	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	40.860	tn					

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,281
Date :5/28/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : TC659 TC Leasing #659
Location: MA MASSACHUSETTS

Gross :	111100	lb	In	11:08 am
Tare :	35300	lb	Out	11:07 am
Net :	75800	lb		
	37.900	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	37.900	tn					

From Date: **6/12/2015** To Date: **5/1/2015** | From Truck: **CIRCLE1** To Truck: **ZUKIC1** | From Order: **10081** To: **10081**

ESMI of N.H.
67 International Drive

Loudon, NH 03307

Ticket No : 301,285
Date :5/28/15
Phone :(603)783-0228
Fax :(603)783-0104

Customer: ENP20
ENPRO SERVICES, INC. (MASS)
114 Bridge Road

Salisbury, MA 01952

Order No : 10081

Riverwalk Park
179 Bridge St.
Lowell MA

Loads : 7
Miles : 0
Tons : 274.65

Truck : FORD42 EDDIE FORD
Location: MA MASSACHUSETTS

Gross :	120820	lb	In	12:11 pm
Tare :	34720	lb	Out	12:11 pm
Net :	86100	lb		
	43.050	tn		

Weigh Master: ANGELA Angela Holub

Driver:

Remarks: Thank You For Your Business

Material $
Delivery $
Misc $
Tax $

Total $

MATERIAL	QTY		UNIT-$	DELIVERY-$	MISC-$	TAX-$	TOTAL-$
UF01	43.050	tn					

APPENDIX C

LABORATORY REPORTS

ANALYTICAL REPORT

Lab Number:	L1511711
Client:	TRC Environmental Consultants Wannalancit Mills 650 Suffolk Street Lowell, MA 01854
ATTN:	Matt Robbins
Phone:	(978) 656-3549
Project Name:	RIVERWALK PHASE II
Project Number:	Not Specified
Report Date:	06/08/15

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), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1511711-01	T-1 (0-3')	SOIL	LOWELL, MA	05/27/15 10:30	05/28/15
L1511711-02	T-2 (0-3')	SOIL	LOWELL, MA	05/27/15 11:30	05/28/15
L1511711-03	T-3 (0-3')	SOIL	LOWELL, MA	05/27/15 14:50	05/28/15
L1511711-04	T-4 (0-3')	SOIL	LOWELL, MA	05/28/15 11:10	05/28/15
L1511711-05	T-1A (0-9')	SOIL	LOWELL, MA	05/27/15 11:00	05/28/15
L1511711-06	T-2A (0-9')	SOIL	LOWELL, MA	05/27/15 12:00	05/28/15
L1511711-07	T-3A (0-9')	SOIL	LOWELL, MA	05/28/15 09:45	05/28/15
L1511711-08	T-4A (0-9')	SOIL	LOWELL, MA	05/28/15 11:20	05/28/15
L1511711-09	T-1 (3-6')	SOIL	LOWELL, MA	05/27/15 10:40	05/28/15
L1511711-10	T-1 (6-9')	SOIL	LOWELL, MA	05/27/15 10:50	05/28/15
L1511711-11	T-2 (3-6')	SOIL	LOWELL, MA	05/27/15 11:40	05/28/15
L1511711-12	T-2 (6-9')	SOIL	LOWELL, MA	05/27/15 11:50	05/28/15
L1511711-13	T-3 (3-6')	SOIL	LOWELL, MA	05/27/15 15:00	05/28/15
L1511711-14	T-3 (6-9')	SOIL	LOWELL, MA	05/27/15 15:10	05/28/15
L1511711-15	T-4 (3-9')	SOIL	LOWELL, MA	05/28/15 11:15	05/28/15
L1511711-16	TRIP BLANK	SOIL	LOWELL, MA	05/27/15 00:00	05/28/15

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

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:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

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. All specific QC 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. 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 (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar 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. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

Case Narrative (continued)

MCP Related Narratives

Sample Receipt

A Trip Blank was received in the laboratory but not listed on the Chain of Custody.

In reference to question H:

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

Volatile Organics

In reference to question H:

The WG789873-1/-2 LCS/LCSD recoveries, associated with L1511711-05 and -07, are below the individual acceptance criteria for dichlorodifluoromethane (LCSD at 69%), acetone (68%/66%), carbon disulfide (LCSD at 69%), and 2-hexanone (66%/65%), 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 WG790242-1/-2 LCS/LCSD recoveries, associated with L1511711-08, are above the individual acceptance criteria for dichlorodifluoromethane (138%/138%) and acetone (134%/138%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

The WG790242-4 LCS recovery, associated with L1511711-06, is outside the acceptance criteria for individual target compounds, but within the overall method allowances. The results of the associated sample are reported; however, all results are considered to have a potentially high bias for dichlorodifluoromethane (132%).

The initial calibration, associated with L1511711-05 and -07, did not meet the method required minimum response factor on the lowest calibration standard for 4-methyl-2-pentanone (0.08545) and 1,4-dioxane (0.00260), as well as the average response factor for acetone, 4-methyl-2-pentanone, and 1,4-dioxane. In addition, a quadratic fit was utilized for carbon disulfide.

The initial calibration, associated with L1511711-06 and -08, did not meet the method required minimum response factor on the lowest calibration standard for 4-methyl-2-pentanone (0.07494), as well as the average response factor for 2-butanone and 4-methyl-2-pentanone. The initial calibration verification is outside acceptance criteria for dichlorodifluoromethane (133%), but within overall method criteria.

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

Case Narrative (continued)

The continuing calibration standards, associated with L1511711-05 through -08, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

Metals

In reference to question I:

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

Non MCP Related Narratives

TPH

The WG789929-4 Laboratory Duplicate RPD (59%), performed on L1511711-08, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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: Cristin Walker

Title: Technical Director/Representative

Date: 06/08/15

ORGANICS

VOLATILES

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-05	Date Collected:	05/27/15 11:00
Client ID:	T-1A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		
Analytical Method:	97,8260C		
Analytical Date:	06/01/15 16:48		
Analyst:	BN		
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.7	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.87	--	1
1,2-Dichloropropane	ND		ug/kg	3.0	--	1
Dibromochloromethane	ND		ug/kg	0.87	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.87	--	1
Chlorobenzene	ND		ug/kg	0.87	--	1
Trichlorofluoromethane	ND		ug/kg	3.5	--	1
1,2-Dichloroethane	ND		ug/kg	0.87	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.87	--	1
Bromodichloromethane	ND		ug/kg	0.87	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.87	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.87	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.87	--	1
1,1-Dichloropropene	ND		ug/kg	3.5	--	1
Bromoform	ND		ug/kg	3.5	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.87	--	1
Benzene	ND		ug/kg	0.87	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	0.87	--	1
Chloromethane	ND		ug/kg	3.5	--	1
Bromomethane	ND		ug/kg	1.7	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	1.7	--	1
1,1-Dichloroethene	ND		ug/kg	0.87	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
Trichloroethene	ND		ug/kg	0.87	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.5	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-05 Date Collected: 05/27/15 11:00

Client ID: T-1A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.5	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.5	--	1
Methyl tert butyl ether	ND		ug/kg	1.7	--	1
p/m-Xylene	ND		ug/kg	1.7	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	ND		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.87	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.87	--	1
Dibromomethane	ND		ug/kg	3.5	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.5	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	8.7	--	1
Acetone	ND		ug/kg	31	--	1
Carbon disulfide	ND		ug/kg	3.5	--	1
Methyl ethyl ketone	ND		ug/kg	8.7	--	1
Methyl isobutyl ketone	ND		ug/kg	8.7	--	1
2-Hexanone	ND		ug/kg	8.7	--	1
Bromochloromethane	ND		ug/kg	3.5	--	1
Tetrahydrofuran	ND		ug/kg	3.5	--	1
2,2-Dichloropropane	ND		ug/kg	4.3	--	1
1,2-Dibromoethane	ND		ug/kg	3.5	--	1
1,3-Dichloropropane	ND		ug/kg	3.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.87	--	1
Bromobenzene	ND		ug/kg	4.3	--	1
n-Butylbenzene	ND		ug/kg	0.87	--	1
sec-Butylbenzene	ND		ug/kg	0.87	--	1
tert-Butylbenzene	ND		ug/kg	3.5	--	1
o-Chlorotoluene	ND		ug/kg	3.5	--	1
p-Chlorotoluene	ND		ug/kg	3.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	--	1
Hexachlorobutadiene	ND		ug/kg	3.5	--	1
Isopropylbenzene	ND		ug/kg	0.87	--	1
p-Isopropyltoluene	ND		ug/kg	0.87	--	1
Naphthalene	ND		ug/kg	3.5	--	1
n-Propylbenzene	ND		ug/kg	0.87	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.5	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.5	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.5	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.5	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-05 Date Collected: 05/27/15 11:00

Client ID: T-1A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.3	--	1
Diisopropyl Ether	ND		ug/kg	3.5	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.5	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.5	--	1
1,4-Dioxane	ND		ug/kg	35	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	105		70-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-06	Date Collected:	05/27/15 12:00
Client ID:	T-2A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		
Analytical Method:	97,8260C		
Analytical Date:	06/03/15 13:16		
Analyst:	BN		
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.5	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.85	--	1
1,2-Dichloropropane	ND		ug/kg	3.0	--	1
Dibromochloromethane	ND		ug/kg	0.85	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.85	--	1
Chlorobenzene	ND		ug/kg	0.85	--	1
Trichlorofluoromethane	ND		ug/kg	3.4	--	1
1,2-Dichloroethane	ND		ug/kg	0.85	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.85	--	1
Bromodichloromethane	ND		ug/kg	0.85	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.85	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.85	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.85	--	1
1,1-Dichloropropene	ND		ug/kg	3.4	--	1
Bromoform	ND		ug/kg	3.4	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.85	--	1
Benzene	ND		ug/kg	0.85	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	0.85	--	1
Chloromethane	ND		ug/kg	3.4	--	1
Bromomethane	ND		ug/kg	1.7	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	1.7	--	1
1,1-Dichloroethene	ND		ug/kg	0.85	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
Trichloroethene	ND		ug/kg	0.85	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.4	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-06 Date Collected: 05/27/15 12:00

Client ID: T-2A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.4	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.4	--	1
Methyl tert butyl ether	ND		ug/kg	1.7	--	1
p/m-Xylene	ND		ug/kg	1.7	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	ND		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.85	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.85	--	1
Dibromomethane	ND		ug/kg	3.4	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.4	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	8.5	--	1
Acetone	ND		ug/kg	31	--	1
Carbon disulfide	ND		ug/kg	3.4	--	1
Methyl ethyl ketone	ND		ug/kg	8.5	--	1
Methyl isobutyl ketone	ND		ug/kg	8.5	--	1
2-Hexanone	ND		ug/kg	8.5	--	1
Bromochloromethane	ND		ug/kg	3.4	--	1
Tetrahydrofuran	ND		ug/kg	3.4	--	1
2,2-Dichloropropane	ND		ug/kg	4.3	--	1
1,2-Dibromoethane	ND		ug/kg	3.4	--	1
1,3-Dichloropropane	ND		ug/kg	3.4	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.85	--	1
Bromobenzene	ND		ug/kg	4.3	--	1
n-Butylbenzene	ND		ug/kg	0.85	--	1
sec-Butylbenzene	ND		ug/kg	0.85	--	1
tert-Butylbenzene	ND		ug/kg	3.4	--	1
o-Chlorotoluene	ND		ug/kg	3.4	--	1
p-Chlorotoluene	ND		ug/kg	3.4	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	--	1
Hexachlorobutadiene	ND		ug/kg	3.4	--	1
Isopropylbenzene	ND		ug/kg	0.85	--	1
p-Isopropyltoluene	ND		ug/kg	0.85	--	1
Naphthalene	ND		ug/kg	3.4	--	1
n-Propylbenzene	ND		ug/kg	0.85	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.4	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.4	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-06 Date Collected: 05/27/15 12:00

Client ID: T-2A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.3	--	1
Diisopropyl Ether	ND		ug/kg	3.4	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.4	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.4	--	1
1,4-Dioxane	ND		ug/kg	34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	95		70-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-07	Date Collected:	05/28/15 09:45
Client ID:	T-3A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		
Analytical Method:	97,8260C		
Analytical Date:	06/01/15 17:13		
Analyst:	BN		
Percent Solids:	94%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.6	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.86	--	1
1,2-Dichloropropane	ND		ug/kg	3.0	--	1
Dibromochloromethane	ND		ug/kg	0.86	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.86	--	1
Chlorobenzene	ND		ug/kg	0.86	--	1
Trichlorofluoromethane	ND		ug/kg	3.4	--	1
1,2-Dichloroethane	ND		ug/kg	0.86	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.86	--	1
Bromodichloromethane	ND		ug/kg	0.86	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.86	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.86	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.86	--	1
1,1-Dichloropropene	ND		ug/kg	3.4	--	1
Bromoform	ND		ug/kg	3.4	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.86	--	1
Benzene	ND		ug/kg	0.86	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	0.86	--	1
Chloromethane	ND		ug/kg	3.4	--	1
Bromomethane	ND		ug/kg	1.7	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	1.7	--	1
1,1-Dichloroethene	ND		ug/kg	0.86	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
Trichloroethene	ND		ug/kg	0.86	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.4	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-07 Date Collected: 05/28/15 09:45

Client ID: T-3A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.4	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.4	--	1
Methyl tert butyl ether	ND		ug/kg	1.7	--	1
p/m-Xylene	ND		ug/kg	1.7	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	ND		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.86	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.86	--	1
Dibromomethane	ND		ug/kg	3.4	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.4	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	8.6	--	1
Acetone	ND		ug/kg	31	--	1
Carbon disulfide	ND		ug/kg	3.4	--	1
Methyl ethyl ketone	ND		ug/kg	8.6	--	1
Methyl isobutyl ketone	ND		ug/kg	8.6	--	1
2-Hexanone	ND		ug/kg	8.6	--	1
Bromochloromethane	ND		ug/kg	3.4	--	1
Tetrahydrofuran	ND		ug/kg	3.4	--	1
2,2-Dichloropropane	ND		ug/kg	4.3	--	1
1,2-Dibromoethane	ND		ug/kg	3.4	--	1
1,3-Dichloropropane	ND		ug/kg	3.4	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.86	--	1
Bromobenzene	ND		ug/kg	4.3	--	1
n-Butylbenzene	ND		ug/kg	0.86	--	1
sec-Butylbenzene	ND		ug/kg	0.86	--	1
tert-Butylbenzene	ND		ug/kg	3.4	--	1
o-Chlorotoluene	ND		ug/kg	3.4	--	1
p-Chlorotoluene	ND		ug/kg	3.4	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	--	1
Hexachlorobutadiene	ND		ug/kg	3.4	--	1
Isopropylbenzene	ND		ug/kg	0.86	--	1
p-Isopropyltoluene	ND		ug/kg	0.86	--	1
Naphthalene	ND		ug/kg	3.4	--	1
n-Propylbenzene	ND		ug/kg	0.86	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.4	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.4	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-07 Date Collected: 05/28/15 09:45

Client ID: T-3A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.3	--	1
Diisopropyl Ether	ND		ug/kg	3.4	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.4	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.4	--	1
1,4-Dioxane	ND		ug/kg	34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	104		70-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-08	Date Collected:	05/28/15 11:20
Client ID:	T-4A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		
Analytical Method:	97,8260C		
Analytical Date:	06/02/15 11:27		
Analyst:	BN		
Percent Solids:	91%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	10	--	1
1,1-Dichloroethane	ND		ug/kg	1.6	--	1
Chloroform	ND		ug/kg	1.6	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	3.7	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	--	1
Tetrachloroethene	ND		ug/kg	1.0	--	1
Chlorobenzene	ND		ug/kg	1.0	--	1
Trichlorofluoromethane	ND		ug/kg	4.2	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	--	1
Bromodichloromethane	ND		ug/kg	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--	1
1,1-Dichloropropene	ND		ug/kg	4.2	--	1
Bromoform	ND		ug/kg	4.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--	1
Benzene	ND		ug/kg	1.0	--	1
Toluene	ND		ug/kg	1.6	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.2	--	1
Bromomethane	ND		ug/kg	2.1	--	1
Vinyl chloride	ND		ug/kg	2.1	--	1
Chloroethane	ND		ug/kg	2.1	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	--	1
Trichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichlorobenzene	ND		ug/kg	4.2	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-08 Date Collected: 05/28/15 11:20

Client ID: T-4A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4.2	--	1
1,4-Dichlorobenzene	ND		ug/kg	4.2	--	1
Methyl tert butyl ether	ND		ug/kg	2.1	--	1
p/m-Xylene	ND		ug/kg	2.1	--	1
o-Xylene	ND		ug/kg	2.1	--	1
Xylenes, Total	ND		ug/kg	2.1	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	4.2	--	1
1,2,3-Trichloropropane	ND		ug/kg	4.2	--	1
Styrene	ND		ug/kg	2.1	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	38	--	1
Carbon disulfide	ND		ug/kg	4.2	--	1
Methyl ethyl ketone	ND		ug/kg	10	--	1
Methyl isobutyl ketone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Bromochloromethane	ND		ug/kg	4.2	--	1
Tetrahydrofuran	ND		ug/kg	4.2	--	1
2,2-Dichloropropane	ND		ug/kg	5.3	--	1
1,2-Dibromoethane	ND		ug/kg	4.2	--	1
1,3-Dichloropropane	ND		ug/kg	4.2	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--	1
Bromobenzene	ND		ug/kg	5.3	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	4.2	--	1
o-Chlorotoluene	ND		ug/kg	4.2	--	1
p-Chlorotoluene	ND		ug/kg	4.2	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.2	--	1
Hexachlorobutadiene	ND		ug/kg	4.2	--	1
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	1.9		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.2	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.2	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.2	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.2	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	4.2	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-08 Date Collected: 05/28/15 11:20

Client ID: T-4A (0-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	5.3	--	1
Diisopropyl Ether	ND		ug/kg	4.2	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.2	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.2	--	1
1,4-Dioxane	ND		ug/kg	42	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	98		70-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/01/15 09:03
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05,07 Batch: WG789873-3					
Methylene chloride	ND		ug/kg	10	--
1,1-Dichloroethane	ND		ug/kg	1.5	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	3.5	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.5	--
Tetrachloroethene	ND		ug/kg	1.0	--
Chlorobenzene	ND		ug/kg	1.0	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	1.0	--
Bromodichloromethane	ND		ug/kg	1.0	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--
1,1-Dichloropropene	ND		ug/kg	4.0	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--
Benzene	ND		ug/kg	1.0	--
Toluene	ND		ug/kg	1.5	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	2.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	1.0	--

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/01/15 09:03
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05,07 Batch: WG789873-3					
1,2-Dichlorobenzene	ND		ug/kg	4.0	--
1,3-Dichlorobenzene	ND		ug/kg	4.0	--
1,4-Dichlorobenzene	ND		ug/kg	4.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	2.0	--
Xylenes, Total	ND		ug/kg	2.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	4.0	--
1,2,3-Trichloropropane	ND		ug/kg	4.0	--
Styrene	ND		ug/kg	2.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	36	--
Carbon disulfide	ND		ug/kg	4.0	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	4.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	5.0	--
1,2-Dibromoethane	ND		ug/kg	4.0	--
1,3-Dichloropropane	ND		ug/kg	4.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--
Bromobenzene	ND		ug/kg	5.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	4.0	--
o-Chlorotoluene	ND		ug/kg	4.0	--

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/01/15 09:03
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05,07 Batch: WG789873-3					
p-Chlorotoluene	ND		ug/kg	4.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	4.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	4.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	4.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	4.0	--
Diethyl ether	ND		ug/kg	5.0	--
Diisopropyl Ether	ND		ug/kg	4.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	--
1,4-Dioxane	ND		ug/kg	40	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	76		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	89		70-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/02/15 09:42
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG790242-3					
Methylene chloride	ND		ug/kg	10	--
1,1-Dichloroethane	ND		ug/kg	1.5	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	3.5	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.5	--
Tetrachloroethene	ND		ug/kg	1.0	--
Chlorobenzene	ND		ug/kg	1.0	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	1.0	--
Bromodichloromethane	ND		ug/kg	1.0	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--
1,1-Dichloropropene	ND		ug/kg	4.0	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--
Benzene	ND		ug/kg	1.0	--
Toluene	ND		ug/kg	1.5	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	2.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	1.0	--

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/02/15 09:42
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG790242-3					
1,2-Dichlorobenzene	ND		ug/kg	4.0	--
1,3-Dichlorobenzene	ND		ug/kg	4.0	--
1,4-Dichlorobenzene	ND		ug/kg	4.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	2.0	--
Xylenes, Total	ND		ug/kg	2.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	4.0	--
1,2,3-Trichloropropane	ND		ug/kg	4.0	--
Styrene	ND		ug/kg	2.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	36	--
Carbon disulfide	ND		ug/kg	4.0	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	4.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	5.0	--
1,2-Dibromoethane	ND		ug/kg	4.0	--
1,3-Dichloropropane	ND		ug/kg	4.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--
Bromobenzene	ND		ug/kg	5.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	4.0	--
o-Chlorotoluene	ND		ug/kg	4.0	--

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/02/15 09:42
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG790242-3					
p-Chlorotoluene	ND		ug/kg	4.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	4.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	4.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	4.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	4.0	--
Diethyl ether	ND		ug/kg	5.0	--
Diisopropyl Ether	ND		ug/kg	4.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	--
1,4-Dioxane	ND		ug/kg	40	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	98		70-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/03/15 09:18
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 06 Batch: WG790242-6					
Methylene chloride	ND		ug/kg	10	--
1,1-Dichloroethane	ND		ug/kg	1.5	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	3.5	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.5	--
Tetrachloroethene	ND		ug/kg	1.0	--
Chlorobenzene	ND		ug/kg	1.0	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	1.0	--
Bromodichloromethane	ND		ug/kg	1.0	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--
1,1-Dichloropropene	ND		ug/kg	4.0	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--
Benzene	ND		ug/kg	1.0	--
Toluene	ND		ug/kg	1.5	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	2.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	1.0	--

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/03/15 09:18
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 06 Batch: WG790242-6					
1,2-Dichlorobenzene	ND		ug/kg	4.0	--
1,3-Dichlorobenzene	ND		ug/kg	4.0	--
1,4-Dichlorobenzene	ND		ug/kg	4.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	2.0	--
Xylenes, Total	ND		ug/kg	2.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	4.0	--
1,2,3-Trichloropropane	ND		ug/kg	4.0	--
Styrene	ND		ug/kg	2.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	36	--
Carbon disulfide	ND		ug/kg	4.0	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	4.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	5.0	--
1,2-Dibromoethane	ND		ug/kg	4.0	--
1,3-Dichloropropane	ND		ug/kg	4.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--
Bromobenzene	ND		ug/kg	5.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	4.0	--
o-Chlorotoluene	ND		ug/kg	4.0	--

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 06/03/15 09:18
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 06 Batch: WG790242-6					
p-Chlorotoluene	ND		ug/kg	4.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	4.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	4.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	4.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	4.0	--
Diethyl ether	ND		ug/kg	5.0	--
Diisopropyl Ether	ND		ug/kg	4.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	--
1,4-Dioxane	ND		ug/kg	40	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	96		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05,07 Batch: WG789873-1 WG789873-2								
Methylene chloride	98		93		70-130	5		20
1,1-Dichloroethane	100		93		70-130	7		20
Chloroform	96		91		70-130	5		20
Carbon tetrachloride	105		96		70-130	9		20
1,2-Dichloropropane	97		94		70-130	3		20
Dibromochloromethane	87		88		70-130	1		20
1,1,2-Trichloroethane	91		90		70-130	1		20
Tetrachloroethene	110		103		70-130	7		20
Chlorobenzene	102		100		70-130	2		20
Trichlorofluoromethane	99		85		70-130	15		20
1,2-Dichloroethane	77		76		70-130	1		20
1,1,1-Trichloroethane	101		93		70-130	8		20
Bromodichloromethane	88		86		70-130	2		20
trans-1,3-Dichloropropene	85		85		70-130	0		20
cis-1,3-Dichloropropene	94		93		70-130	1		20
1,1-Dichloropropene	110		99		70-130	11		20
Bromoform	90		89		70-130	1		20
1,1,2,2-Tetrachloroethane	85		85		70-130	0		20
Benzene	108		102		70-130	6		20
Toluene	105		101		70-130	4		20
Ethylbenzene	105		100		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05,07 Batch: WG789873-1 WG789873-2								
Chloromethane	90		80		70-130	12		20
Bromomethane	98		88		70-130	11		20
Vinyl chloride	104		90		70-130	14		20
Chloroethane	102		93		70-130	9		20
1,1-Dichloroethene	120		104		70-130	14		20
trans-1,2-Dichloroethene	115		105		70-130	9		20
Trichloroethene	108		102		70-130	6		20
1,2-Dichlorobenzene	96		95		70-130	1		20
1,3-Dichlorobenzene	103		100		70-130	3		20
1,4-Dichlorobenzene	99		98		70-130	1		20
Methyl tert butyl ether	87		84		70-130	4		20
p/m-Xylene	111		106		70-130	5		20
o-Xylene	106		103		70-130	3		20
cis-1,2-Dichloroethene	109		103		70-130	6		20
Dibromomethane	87		87		70-130	0		20
1,2,3-Trichloropropane	80		79		70-130	1		20
Styrene	104		103		70-130	1		20
Dichlorodifluoromethane	81		**69**	Q	70-130	16		20
Acetone	**68**	Q	**66**	Q	70-130	3		20
Carbon disulfide	82		**69**	Q	70-130	17		20
Methyl ethyl ketone	71		71		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05,07 Batch: WG789873-1 WG789873-2								
Methyl isobutyl ketone	71		71		70-130	0		20
2-Hexanone	**66**	Q	**65**	Q	70-130	2		20
Bromochloromethane	106		102		70-130	4		20
Tetrahydrofuran	78		76		70-130	3		20
2,2-Dichloropropane	100		91		70-130	9		20
1,2-Dibromoethane	90		89		70-130	1		20
1,3-Dichloropropane	86		85		70-130	1		20
1,1,1,2-Tetrachloroethane	95		94		70-130	1		20
Bromobenzene	100		97		70-130	3		20
n-Butylbenzene	110		101		70-130	9		20
sec-Butylbenzene	112		104		70-130	7		20
tert-Butylbenzene	109		101		70-130	8		20
o-Chlorotoluene	100		95		70-130	5		20
p-Chlorotoluene	99		95		70-130	4		20
1,2-Dibromo-3-chloropropane	79		80		70-130	1		20
Hexachlorobutadiene	113		106		70-130	6		20
Isopropylbenzene	109		101		70-130	8		20
p-Isopropyltoluene	111		104		70-130	7		20
Naphthalene	86		85		70-130	1		20
n-Propylbenzene	108		100		70-130	8		20
1,2,3-Trichlorobenzene	96		96		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05,07 Batch: WG789873-1 WG789873-2								
1,2,4-Trichlorobenzene	103		100		70-130	3		20
1,3,5-Trimethylbenzene	104		99		70-130	5		20
1,2,4-Trimethylbenzene	102		98		70-130	4		20
Diethyl ether	100		96		70-130	4		20
Diisopropyl Ether	90		86		70-130	5		20
Ethyl-Tert-Butyl-Ether	87		84		70-130	4		20
Tertiary-Amyl Methyl Ether	87		86		70-130	1		20
1,4-Dioxane	78		79		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	74		74		70-130
Toluene-d8	96		96		70-130
4-Bromofluorobenzene	92		92		70-130
Dibromofluoromethane	94		93		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG790242-1 WG790242-2								
Methylene chloride	109		110		70-130	1		20
1,1-Dichloroethane	116		114		70-130	2		20
Chloroform	114		113		70-130	1		20
Carbon tetrachloride	120		119		70-130	1		20
1,2-Dichloropropane	117		118		70-130	1		20
Dibromochloromethane	110		109		70-130	1		20
1,1,2-Trichloroethane	114		114		70-130	0		20
Tetrachloroethene	114		108		70-130	5		20
Chlorobenzene	116		112		70-130	4		20
Trichlorofluoromethane	111		109		70-130	2		20
1,2-Dichloroethane	118		119		70-130	1		20
1,1,1-Trichloroethane	118		118		70-130	0		20
Bromodichloromethane	115		114		70-130	1		20
trans-1,3-Dichloropropene	117		114		70-130	3		20
cis-1,3-Dichloropropene	115		115		70-130	0		20
1,1-Dichloropropene	120		120		70-130	0		20
Bromoform	109		115		70-130	5		20
1,1,2,2-Tetrachloroethane	116		122		70-130	5		20
Benzene	116		117		70-130	1		20
Toluene	120		114		70-130	5		20
Ethylbenzene	118		115		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG790242-1 WG790242-2								
Chloromethane	116		115		70-130	1		20
Bromomethane	91		97		70-130	6		20
Vinyl chloride	112		108		70-130	4		20
Chloroethane	101		103		70-130	2		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	115		115		70-130	0		20
Trichloroethene	119		116		70-130	3		20
1,2-Dichlorobenzene	118		120		70-130	2		20
1,3-Dichlorobenzene	120		120		70-130	0		20
1,4-Dichlorobenzene	116		118		70-130	2		20
Methyl tert butyl ether	106		108		70-130	2		20
p/m-Xylene	122		117		70-130	4		20
o-Xylene	119		114		70-130	4		20
cis-1,2-Dichloroethene	116		117		70-130	1		20
Dibromomethane	115		119		70-130	3		20
1,2,3-Trichloropropane	117		122		70-130	4		20
Styrene	119		115		70-130	3		20
Dichlorodifluoromethane	**138**	Q	**138**	Q	70-130	0		20
Acetone	**134**	Q	**138**	Q	70-130	3		20
Carbon disulfide	87		88		70-130	1		20
Methyl ethyl ketone	120		126		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG790242-1 WG790242-2								
Methyl isobutyl ketone	114		116		70-130	2		20
2-Hexanone	124		122		70-130	2		20
Bromochloromethane	114		118		70-130	3		20
Tetrahydrofuran	115		130		70-130	12		20
2,2-Dichloropropane	122		120		70-130	2		20
1,2-Dibromoethane	112		111		70-130	1		20
1,3-Dichloropropane	119		112		70-130	6		20
1,1,1,2-Tetrachloroethane	112		111		70-130	1		20
Bromobenzene	119		120		70-130	1		20
n-Butylbenzene	127		124		70-130	2		20
sec-Butylbenzene	126		127		70-130	1		20
tert-Butylbenzene	120		121		70-130	1		20
o-Chlorotoluene	124		120		70-130	3		20
p-Chlorotoluene	123		122		70-130	1		20
1,2-Dibromo-3-chloropropane	107		110		70-130	3		20
Hexachlorobutadiene	112		113		70-130	1		20
Isopropylbenzene	121		122		70-130	1		20
p-Isopropyltoluene	121		120		70-130	1		20
Naphthalene	113		114		70-130	1		20
n-Propylbenzene	127		126		70-130	1		20
1,2,3-Trichlorobenzene	115		113		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG790242-1 WG790242-2								
1,2,4-Trichlorobenzene	118		116		70-130	2		20
1,3,5-Trimethylbenzene	118		117		70-130	1		20
1,2,4-Trimethylbenzene	120		121		70-130	1		20
Diethyl ether	93		93		70-130	0		20
Diisopropyl Ether	123		124		70-130	1		20
Ethyl-Tert-Butyl-Ether	110		112		70-130	2		20
Tertiary-Amyl Methyl Ether	109		110		70-130	1		20
1,4-Dioxane	92		104		70-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		101		70-130
Toluene-d8	98		95		70-130
4-Bromofluorobenzene	99		102		70-130
Dibromofluoromethane	95		98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG790242-4 WG790242-5								
Methylene chloride	108		105		70-130	3		20
1,1-Dichloroethane	116		110		70-130	5		20
Chloroform	108		105		70-130	3		20
Carbon tetrachloride	111		105		70-130	6		20
1,2-Dichloropropane	116		114		70-130	2		20
Dibromochloromethane	100		102		70-130	2		20
1,1,2-Trichloroethane	113		109		70-130	4		20
Tetrachloroethene	106		104		70-130	2		20
Chlorobenzene	111		109		70-130	2		20
Trichlorofluoromethane	103		97		70-130	6		20
1,2-Dichloroethane	111		107		70-130	4		20
1,1,1-Trichloroethane	112		105		70-130	6		20
Bromodichloromethane	109		106		70-130	3		20
trans-1,3-Dichloropropene	107		108		70-130	1		20
cis-1,3-Dichloropropene	112		108		70-130	4		20
1,1-Dichloropropene	117		110		70-130	6		20
Bromoform	103		103		70-130	0		20
1,1,2,2-Tetrachloroethane	112		115		70-130	3		20
Benzene	115		112		70-130	3		20
Toluene	115		113		70-130	2		20
Ethylbenzene	114		109		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG790242-4 WG790242-5								
Chloromethane	120		112		70-130	7		20
Bromomethane	90		82		70-130	9		20
Vinyl chloride	112		102		70-130	9		20
Chloroethane	102		92		70-130	10		20
1,1-Dichloroethene	97		90		70-130	7		20
trans-1,2-Dichloroethene	116		105		70-130	10		20
Trichloroethene	114		109		70-130	4		20
1,2-Dichlorobenzene	114		113		70-130	1		20
1,3-Dichlorobenzene	118		115		70-130	3		20
1,4-Dichlorobenzene	114		117		70-130	3		20
Methyl tert butyl ether	103		98		70-130	5		20
p/m-Xylene	118		114		70-130	3		20
o-Xylene	114		111		70-130	3		20
cis-1,2-Dichloroethene	116		108		70-130	7		20
Dibromomethane	110		106		70-130	4		20
1,2,3-Trichloropropane	111		113		70-130	2		20
Styrene	115		112		70-130	3		20
Dichlorodifluoromethane	**132**	Q	124		70-130	6		20
Acetone	117		123		70-130	5		20
Carbon disulfide	86		82		70-130	5		20
Methyl ethyl ketone	110		112		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG790242-4 WG790242-5								
Methyl isobutyl ketone	111		103		70-130	7		20
2-Hexanone	112		112		70-130	0		20
Bromochloromethane	111		107		70-130	4		20
Tetrahydrofuran	108		117		70-130	8		20
2,2-Dichloropropane	115		112		70-130	3		20
1,2-Dibromoethane	103		103		70-130	0		20
1,3-Dichloropropane	111		109		70-130	2		20
1,1,1,2-Tetrachloroethane	103		103		70-130	0		20
Bromobenzene	117		115		70-130	2		20
n-Butylbenzene	124		123		70-130	1		20
sec-Butylbenzene	124		119		70-130	4		20
tert-Butylbenzene	119		115		70-130	3		20
o-Chlorotoluene	122		119		70-130	2		20
p-Chlorotoluene	119		117		70-130	2		20
1,2-Dibromo-3-chloropropane	100		93		70-130	7		20
Hexachlorobutadiene	109		106		70-130	3		20
Isopropylbenzene	119		117		70-130	2		20
p-Isopropyltoluene	118		116		70-130	2		20
Naphthalene	108		108		70-130	0		20
n-Propylbenzene	124		123		70-130	1		20
1,2,3-Trichlorobenzene	108		109		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG790242-4 WG790242-5								
1,2,4-Trichlorobenzene	116		114		70-130	2		20
1,3,5-Trimethylbenzene	115		112		70-130	3		20
1,2,4-Trimethylbenzene	117		115		70-130	2		20
Diethyl ether	91		85		70-130	7		20
Diisopropyl Ether	123		117		70-130	5		20
Ethyl-Tert-Butyl-Ether	108		106		70-130	2		20
Tertiary-Amyl Methyl Ether	106		104		70-130	2		20
1,4-Dioxane	97		97		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		95		70-130
Toluene-d8	95		97		70-130
4-Bromofluorobenzene	100		102		70-130
Dibromofluoromethane	92		94		70-130

SEMIVOLATILES

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-01	Date Collected:	05/27/15 10:30
Client ID:	T-1 (0-3')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 12:04		
Analyst:	PS		
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	--	1
Hexachlorobenzene	ND		ug/kg	100	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	170	--	1
1,2-Dichlorobenzene	ND		ug/kg	170	--	1
1,3-Dichlorobenzene	ND		ug/kg	170	--	1
1,4-Dichlorobenzene	ND		ug/kg	170	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	--	1
2,4-Dinitrotoluene	ND		ug/kg	170	--	1
2,6-Dinitrotoluene	ND		ug/kg	170	--	1
Azobenzene	ND		ug/kg	170	--	1
Fluoranthene	920		ug/kg	100	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	170	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	170	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	720		ug/kg	170	--	1
Butyl benzyl phthalate	ND		ug/kg	170	--	1
Di-n-butylphthalate	ND		ug/kg	170	--	1
Di-n-octylphthalate	ND		ug/kg	170	--	1
Diethyl phthalate	ND		ug/kg	170	--	1
Dimethyl phthalate	ND		ug/kg	170	--	1
Benzo(a)anthracene	310		ug/kg	100	--	1
Benzo(a)pyrene	270		ug/kg	140	--	1
Benzo(b)fluoranthene	370		ug/kg	100	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-01 Date Collected: 05/27/15 10:30

Client ID: T-1 (0-3') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	130		ug/kg	100	--	1
Chrysene	360		ug/kg	100	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	100		ug/kg	100	--	1
Benzo(ghi)perylene	150		ug/kg	140	--	1
Fluorene	ND		ug/kg	170	--	1
Phenanthrene	590		ug/kg	100	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	--	1
Indeno(1,2,3-cd)Pyrene	160		ug/kg	140	--	1
Pyrene	780		ug/kg	100	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	170	--	1
Dibenzofuran	ND		ug/kg	170	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	170	--	1
2,4,6-Trichlorophenol	ND		ug/kg	100	--	1
2-Chlorophenol	ND		ug/kg	170	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	170	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	240	--	1
2,4-Dinitrophenol	ND		ug/kg	840	--	1
Pentachlorophenol	ND		ug/kg	350	--	1
Phenol	ND		ug/kg	170	--	1
2-Methylphenol	ND		ug/kg	170	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	--	1
2,4,5-Trichlorophenol	ND		ug/kg	170	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		30-130
Phenol-d6	76		30-130
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	72		30-130
4-Terphenyl-d14	53		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-02	Date Collected:	05/27/15 11:30
Client ID:	T-2 (0-3')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 12:29		
Analyst:	PS		
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	--	1
Hexachlorobenzene	ND		ug/kg	100	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	170	--	1
1,2-Dichlorobenzene	ND		ug/kg	170	--	1
1,3-Dichlorobenzene	ND		ug/kg	170	--	1
1,4-Dichlorobenzene	ND		ug/kg	170	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	--	1
2,4-Dinitrotoluene	ND		ug/kg	170	--	1
2,6-Dinitrotoluene	ND		ug/kg	170	--	1
Azobenzene	ND		ug/kg	170	--	1
Fluoranthene	4500		ug/kg	100	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	170	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	170	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	170	--	1
Butyl benzyl phthalate	ND		ug/kg	170	--	1
Di-n-butylphthalate	ND		ug/kg	170	--	1
Di-n-octylphthalate	ND		ug/kg	170	--	1
Diethyl phthalate	ND		ug/kg	170	--	1
Dimethyl phthalate	ND		ug/kg	170	--	1
Benzo(a)anthracene	1700		ug/kg	100	--	1
Benzo(a)pyrene	1700		ug/kg	140	--	1
Benzo(b)fluoranthene	2100		ug/kg	100	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-02 Date Collected: 05/27/15 11:30

Client ID: T-2 (0-3') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	770		ug/kg	100	--	1
Chrysene	1500		ug/kg	100	--	1
Acenaphthylene	400		ug/kg	140	--	1
Anthracene	430		ug/kg	100	--	1
Benzo(ghi)perylene	1200		ug/kg	140	--	1
Fluorene	ND		ug/kg	170	--	1
Phenanthrene	2100		ug/kg	100	--	1
Dibenzo(a,h)anthracene	190		ug/kg	100	--	1
Indeno(1,2,3-cd)Pyrene	1200		ug/kg	140	--	1
Pyrene	4000		ug/kg	100	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	170	--	1
Dibenzofuran	ND		ug/kg	170	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	170	--	1
2,4,6-Trichlorophenol	ND		ug/kg	100	--	1
2-Chlorophenol	ND		ug/kg	170	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	170	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	240	--	1
2,4-Dinitrophenol	ND		ug/kg	840	--	1
Pentachlorophenol	ND		ug/kg	350	--	1
Phenol	ND		ug/kg	170	--	1
2-Methylphenol	ND		ug/kg	170	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	--	1
2,4,5-Trichlorophenol	ND		ug/kg	170	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		30-130
Phenol-d6	80		30-130
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	89		30-130
4-Terphenyl-d14	76		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-03	Date Collected:	05/27/15 14:50
Client ID:	T-3 (0-3')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 12:55		
Analyst:	PS		
Percent Solids:	93%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1
Benzo(a)pyrene	ND		ug/kg	140	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-03 Date Collected: 05/27/15 14:50

Client ID: T-3 (0-3') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	250	--	1
2,4-Dinitrophenol	ND		ug/kg	860	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		30-130
Phenol-d6	79		30-130
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	87		30-130
4-Terphenyl-d14	77		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-04	Date Collected:	05/28/15 11:10
Client ID:	T-4 (0-3')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 13:20		
Analyst:	PS		
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1
Benzo(a)pyrene	ND		ug/kg	140	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-04 Date Collected: 05/28/15 11:10

Client ID: T-4 (0-3') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	390	--	1
4-Nitrophenol	ND		ug/kg	250	--	1
2,4-Dinitrophenol	ND		ug/kg	860	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		30-130
Phenol-d6	85		30-130
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	87		30-130
4-Terphenyl-d14	75		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-09	Date Collected:	05/27/15 10:40
Client ID:	T-1 (3-6')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 13:46		
Analyst:	PS		
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	710		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	320		ug/kg	110	--	1
Benzo(a)pyrene	310		ug/kg	140	--	1
Benzo(b)fluoranthene	400		ug/kg	110	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-09 Date Collected: 05/27/15 10:40

Client ID: T-1 (3-6') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	140		ug/kg	110	--	1
Chrysene	340		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	190		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	550		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	200		ug/kg	140	--	1
Pyrene	640		ug/kg	110	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	390	--	1
4-Nitrophenol	ND		ug/kg	250	--	1
2,4-Dinitrophenol	ND		ug/kg	860	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		30-130
Phenol-d6	82		30-130
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	95		30-130
4-Terphenyl-d14	86		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-10	Date Collected:	05/27/15 10:50
Client ID:	T-1 (6-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 14:12		
Analyst:	PS		
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	100	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	390		ug/kg	100	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	220		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	180		ug/kg	100	--	1
Benzo(a)pyrene	190		ug/kg	140	--	1
Benzo(b)fluoranthene	240		ug/kg	100	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-10 Date Collected: 05/27/15 10:50

Client ID: T-1 (6-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	100		ug/kg	100	--	1
Chrysene	180		ug/kg	100	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	ND		ug/kg	100	--	1
Benzo(ghi)perylene	ND		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	ND		ug/kg	100	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	--	1
Pyrene	340		ug/kg	100	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	100	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	240	--	1
2,4-Dinitrophenol	ND		ug/kg	840	--	1
Pentachlorophenol	ND		ug/kg	350	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		30-130
Phenol-d6	68		30-130
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	87		30-130
4-Terphenyl-d14	79		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-11	Date Collected:	05/27/15 11:40
Client ID:	T-2 (3-6')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 14:37		
Analyst:	PS		
Percent Solids:	94%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	100	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	100		ug/kg	100	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	ND		ug/kg	100	--	1
Benzo(a)pyrene	ND		ug/kg	140	--	1
Benzo(b)fluoranthene	ND		ug/kg	100	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-11 Date Collected: 05/27/15 11:40

Client ID: T-2 (3-6') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	100	--	1
Chrysene	ND		ug/kg	100	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	ND		ug/kg	100	--	1
Benzo(ghi)perylene	ND		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	ND		ug/kg	100	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	--	1
Pyrene	ND		ug/kg	100	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	100	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	240	--	1
2,4-Dinitrophenol	ND		ug/kg	840	--	1
Pentachlorophenol	ND		ug/kg	350	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		30-130
Phenol-d6	79		30-130
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	85		30-130
4-Terphenyl-d14	79		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-12	Date Collected:	05/27/15 11:50
Client ID:	T-2 (6-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 15:03		
Analyst:	PS		
Percent Solids:	93%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	310		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	1100		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	140		ug/kg	110	--	1
Benzo(a)pyrene	ND		ug/kg	140	--	1
Benzo(b)fluoranthene	180		ug/kg	110	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-12 Date Collected: 05/27/15 11:50

Client ID: T-2 (6-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	150		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	240		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	--	1
Pyrene	250		ug/kg	110	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	250	--	1
2,4-Dinitrophenol	ND		ug/kg	850	--	1
Pentachlorophenol	ND		ug/kg	350	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		30-130
Phenol-d6	76		30-130
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	74		30-130
4-Terphenyl-d14	60		30-130

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-13	Date Collected:	05/27/15 15:00
Client ID:	T-3 (3-6')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 19:49		
Analyst:	PS		
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	1000		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	460		ug/kg	110	--	1
Benzo(a)pyrene	470		ug/kg	140	--	1
Benzo(b)fluoranthene	540		ug/kg	110	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-13 Date Collected: 05/27/15 15:00

Client ID: T-3 (3-6') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	230		ug/kg	110	--	1
Chrysene	440		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	110		ug/kg	110	--	1
Benzo(ghi)perylene	310		ug/kg	140	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	490		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	340		ug/kg	140	--	1
Pyrene	890		ug/kg	110	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	250	--	1
2,4-Dinitrophenol	ND		ug/kg	860	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		30-130
Phenol-d6	88		30-130
Nitrobenzene-d5	88		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	98		30-130
4-Terphenyl-d14	81		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-14	Date Collected:	05/27/15 15:10
Client ID:	T-3 (6-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 20:15		
Analyst:	PS		
Percent Solids:	93%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	--	1
Hexachlorobenzene	ND		ug/kg	100	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	170	--	1
1,2-Dichlorobenzene	ND		ug/kg	170	--	1
1,3-Dichlorobenzene	ND		ug/kg	170	--	1
1,4-Dichlorobenzene	ND		ug/kg	170	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	--	1
2,4-Dinitrotoluene	ND		ug/kg	170	--	1
2,6-Dinitrotoluene	ND		ug/kg	170	--	1
Azobenzene	ND		ug/kg	170	--	1
Fluoranthene	6500		ug/kg	100	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	170	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	220		ug/kg	170	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	170	--	1
Butyl benzyl phthalate	ND		ug/kg	170	--	1
Di-n-butylphthalate	ND		ug/kg	170	--	1
Di-n-octylphthalate	ND		ug/kg	170	--	1
Diethyl phthalate	ND		ug/kg	170	--	1
Dimethyl phthalate	ND		ug/kg	170	--	1
Benzo(a)anthracene	2700		ug/kg	100	--	1
Benzo(a)pyrene	2800		ug/kg	140	--	1
Benzo(b)fluoranthene	3500		ug/kg	100	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-14 Date Collected: 05/27/15 15:10

Client ID: T-3 (6-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	1300		ug/kg	100	--	1
Chrysene	2600		ug/kg	100	--	1
Acenaphthylene	820		ug/kg	140	--	1
Anthracene	800		ug/kg	100	--	1
Benzo(ghi)perylene	2000		ug/kg	140	--	1
Fluorene	170		ug/kg	170	--	1
Phenanthrene	3300		ug/kg	100	--	1
Dibenzo(a,h)anthracene	380		ug/kg	100	--	1
Indeno(1,2,3-cd)Pyrene	2200		ug/kg	140	--	1
Pyrene	5800		ug/kg	100	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	170	--	1
Dibenzofuran	ND		ug/kg	170	--	1
2-Methylnaphthalene	ND		ug/kg	210	--	1
Acetophenone	ND		ug/kg	170	--	1
2,4,6-Trichlorophenol	ND		ug/kg	100	--	1
2-Chlorophenol	ND		ug/kg	170	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	170	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	240	--	1
2,4-Dinitrophenol	ND		ug/kg	840	--	1
Pentachlorophenol	ND		ug/kg	350	--	1
Phenol	ND		ug/kg	170	--	1
2-Methylphenol	ND		ug/kg	170	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	--	1
2,4,5-Trichlorophenol	ND		ug/kg	170	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		30-130
Phenol-d6	90		30-130
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	86		30-130
4-Terphenyl-d14	72		30-130

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-15	Date Collected:	05/28/15 11:15
Client ID:	T-4 (3-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8270D	Extraction Date:	06/02/15 13:25
Analytical Date:	06/05/15 20:41		
Analyst:	PS		
Percent Solids:	93%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	1000		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	6100		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	140	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	830		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	2800		ug/kg	110	--	1
Benzo(a)pyrene	2400		ug/kg	140	--	1
Benzo(b)fluoranthene	2900		ug/kg	110	--	1

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-15 Date Collected: 05/28/15 11:15

Client ID: T-4 (3-9') Date Received: 05/28/15

Sample Location: LOWELL, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	1200		ug/kg	110	--	1
Chrysene	2800		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	140	--	1
Anthracene	2000		ug/kg	110	--	1
Benzo(ghi)perylene	1300		ug/kg	140	--	1
Fluorene	970		ug/kg	180	--	1
Phenanthrene	6400		ug/kg	110	--	1
Dibenzo(a,h)anthracene	320		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	1500		ug/kg	140	--	1
Pyrene	5200		ug/kg	110	--	1
Aniline	ND		ug/kg	210	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	860		ug/kg	180	--	1
2-Methylnaphthalene	440		ug/kg	210	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	380	--	1
4-Nitrophenol	ND		ug/kg	250	--	1
2,4-Dinitrophenol	ND		ug/kg	850	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		30-130
Phenol-d6	87		30-130
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	97		30-130
4-Terphenyl-d14	68		30-130

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 06/05/15 10:47
Analyst: PS

Extraction Method: EPA 3546
Extraction Date: 06/02/15 13:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04,09-15 Batch: WG790012-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	98	--
Bis(2-chloroethyl)ether	ND		ug/kg	150	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	98	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	98	--
Benzo(a)pyrene	ND		ug/kg	130	--

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 06/05/15 10:47
Analyst: PS

Extraction Method: EPA 3546
Extraction Date: 06/02/15 13:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04,09-15 Batch: WG790012-1					
Benzo(b)fluoranthene	ND		ug/kg	98	--
Benzo(k)fluoranthene	ND		ug/kg	98	--
Chrysene	ND		ug/kg	98	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	98	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	98	--
Dibenzo(a,h)anthracene	ND		ug/kg	98	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	98	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	200	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	98	--
2-Chlorophenol	ND		ug/kg	160	--
2,4-Dichlorophenol	ND		ug/kg	150	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
Pentachlorophenol	ND		ug/kg	320	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 06/05/15 10:47
Analyst: PS

Extraction Method: EPA 3546
Extraction Date: 06/02/15 13:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04,09-15 Batch: WG790012-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		30-130
Phenol-d6	81		30-130
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	89		30-130
4-Terphenyl-d14	93		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,09-15 Batch: WG790012-2 WG790012-3								
Acenaphthene	84		77		40-140	9		30
1,2,4-Trichlorobenzene	79		72		40-140	9		30
Hexachlorobenzene	86		77		40-140	11		30
Bis(2-chloroethyl)ether	79		72		40-140	9		30
2-Chloronaphthalene	84		76		40-140	10		30
1,2-Dichlorobenzene	76		70		40-140	8		30
1,3-Dichlorobenzene	75		67		40-140	11		30
1,4-Dichlorobenzene	75		68		40-140	10		30
3,3'-Dichlorobenzidine	77		65		40-140	17		30
2,4-Dinitrotoluene	90		80		40-140	12		30
2,6-Dinitrotoluene	89		78		40-140	13		30
Azobenzene	86		77		40-140	11		30
Fluoranthene	88		79		40-140	11		30
4-Bromophenyl phenyl ether	87		79		40-140	10		30
Bis(2-chloroisopropyl)ether	80		73		40-140	9		30
Bis(2-chloroethoxy)methane	84		75		40-140	11		30
Hexachlorobutadiene	78		72		40-140	8		30
Hexachloroethane	74		67		40-140	10		30
Isophorone	82		74		40-140	10		30
Naphthalene	80		73		40-140	9		30
Nitrobenzene	80		74		40-140	8		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,09-15 Batch: WG790012-2 WG790012-3								
Bis(2-Ethylhexyl)phthalate	93		83		40-140	11		30
Butyl benzyl phthalate	93		82		40-140	13		30
Di-n-butylphthalate	90		81		40-140	11		30
Di-n-octylphthalate	94		83		40-140	12		30
Diethyl phthalate	87		78		40-140	11		30
Dimethyl phthalate	89		80		40-140	11		30
Benzo(a)anthracene	89		79		40-140	12		30
Benzo(a)pyrene	88		78		40-140	12		30
Benzo(b)fluoranthene	88		76		40-140	15		30
Benzo(k)fluoranthene	86		77		40-140	11		30
Chrysene	88		78		40-140	12		30
Acenaphthylene	85		77		40-140	10		30
Anthracene	87		79		40-140	10		30
Benzo(ghi)perylene	85		75		40-140	13		30
Fluorene	86		77		40-140	11		30
Phenanthrene	85		78		40-140	9		30
Dibenzo(a,h)anthracene	86		75		40-140	14		30
Indeno(1,2,3-cd)Pyrene	85		75		40-140	13		30
Pyrene	88		78		40-140	12		30
Aniline	63		53		40-140	17		30
4-Chloroaniline	90		80		40-140	12		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,09-15 Batch: WG790012-2 WG790012-3								
Dibenzofuran	85		77		40-140	10		30
2-Methylnaphthalene	82		76		40-140	8		30
Acetophenone	79		72		40-140	9		30
2,4,6-Trichlorophenol	87		78		30-130	11		30
2-Chlorophenol	80		73		30-130	9		30
2,4-Dichlorophenol	85		78		30-130	9		30
2,4-Dimethylphenol	89		78		30-130	13		30
2-Nitrophenol	81		74		30-130	9		30
4-Nitrophenol	101		90		30-130	12		30
2,4-Dinitrophenol	80		72		30-130	11		30
Pentachlorophenol	85		75		30-130	13		30
Phenol	84		76		30-130	10		30
2-Methylphenol	84		76		30-130	10		30
3-Methylphenol/4-Methylphenol	87		78		30-130	11		30
2,4,5-Trichlorophenol	90		80		30-130	12		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,09-15 Batch: WG790012-2 WG790012-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	88		79		30-130
Phenol-d6	91		82		30-130
Nitrobenzene-d5	85		78		30-130
2-Fluorobiphenyl	90		82		30-130
2,4,6-Tribromophenol	95		86		30-130
4-Terphenyl-d14	95		84		30-130

PETROLEUM HYDROCARBONS

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-05	Date Collected:	05/27/15 11:00
Client ID:	T-1A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8015C(M)	Extraction Date:	06/02/15 09:38
Analytical Date:	06/03/15 14:24		
Analyst:	AR		
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH	ND		ug/kg	33700	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	81		40-140

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-06	Date Collected:	05/27/15 12:00
Client ID:	T-2A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8015C(M)	Extraction Date:	06/02/15 09:38
Analytical Date:	06/03/15 14:58		
Analyst:	AR		
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH	67600		ug/kg	34200	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	78		40-140

Project Name: RIVERWALK PHASE II

Lab Number: L1511711

Project Number: Not Specified

Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-07	Date Collected:	05/28/15 09:45
Client ID:	T-3A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8015C(M)	Extraction Date:	06/02/15 09:38
Analytical Date:	06/03/15 13:49		
Analyst:	AR		
Percent Solids:	94%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH	ND		ug/kg	34800	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	79		40-140

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-08	Date Collected:	05/28/15 11:20
Client ID:	T-4A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8015C(M)	Extraction Date:	06/02/15 09:38
Analytical Date:	06/03/15 14:58		
Analyst:	AR		
Percent Solids:	91%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH	39000		ug/kg	36400	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	77		40-140

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015C(M)
Analytical Date: 06/03/15 11:21
Analyst: AR

Extraction Method: EPA 3546
Extraction Date: 06/02/15 09:38

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 05-08 Batch: WG789929-1					
TPH	ND		ug/kg	32900	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	81		40-140

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 05-08 QC Batch ID: WG789929-4 QC Sample: L1511711-08 Client ID: T-4A (0-9')						
TPH	39000	71500	ug/kg	**59**	Q	40

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	77		78		40-140

PCBS

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-05	Date Collected:	05/27/15 11:00
Client ID:	T-1A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8082	Extraction Date:	06/02/15 18:08
Analytical Date:	06/03/15 05:42	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	06/03/15
Percent Solids:	95%	Cleanup Method:	EPA 3660B
		Cleanup Date:	06/03/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	34.3	--	1	A
Aroclor 1221	ND		ug/kg	34.3	--	1	A
Aroclor 1232	ND		ug/kg	34.3	--	1	A
Aroclor 1242	ND		ug/kg	34.3	--	1	A
Aroclor 1248	ND		ug/kg	34.3	--	1	A
Aroclor 1254	ND		ug/kg	34.3	--	1	A
Aroclor 1260	ND		ug/kg	34.3	--	1	B
Aroclor 1262	ND		ug/kg	34.3	--	1	A
Aroclor 1268	ND		ug/kg	34.3	--	1	A
PCBs, Total	ND		ug/kg	34.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	101		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: RIVERWALK PHASE II
Project Number: Not Specified
Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-06	Date Collected:	05/27/15 12:00
Client ID:	T-2A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8082	Extraction Date:	06/02/15 18:08
Analytical Date:	06/03/15 05:58	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	06/03/15
Percent Solids:	92%	Cleanup Method:	EPA 3660B
		Cleanup Date:	06/03/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.2	--	1	A
Aroclor 1221	ND		ug/kg	35.2	--	1	A
Aroclor 1232	ND		ug/kg	35.2	--	1	A
Aroclor 1242	ND		ug/kg	35.2	--	1	A
Aroclor 1248	ND		ug/kg	35.2	--	1	A
Aroclor 1254	ND		ug/kg	35.2	--	1	A
Aroclor 1260	ND		ug/kg	35.2	--	1	A
Aroclor 1262	ND		ug/kg	35.2	--	1	A
Aroclor 1268	ND		ug/kg	35.2	--	1	A
PCBs, Total	ND		ug/kg	35.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-07	Date Collected:	05/28/15 09:45
Client ID:	T-3A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8082	Extraction Date:	06/02/15 18:08
Analytical Date:	06/03/15 06:13	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	06/03/15
Percent Solids:	94%	Cleanup Method:	EPA 3660B
		Cleanup Date:	06/03/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	34.5	--	1	A
Aroclor 1221	ND		ug/kg	34.5	--	1	A
Aroclor 1232	ND		ug/kg	34.5	--	1	A
Aroclor 1242	ND		ug/kg	34.5	--	1	A
Aroclor 1248	ND		ug/kg	34.5	--	1	A
Aroclor 1254	ND		ug/kg	34.5	--	1	A
Aroclor 1260	ND		ug/kg	34.5	--	1	A
Aroclor 1262	ND		ug/kg	34.5	--	1	A
Aroclor 1268	ND		ug/kg	34.5	--	1	A
PCBs, Total	ND		ug/kg	34.5	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-08	Date Collected:	05/28/15 11:20
Client ID:	T-4A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	97,8082	Extraction Date:	06/02/15 18:08
Analytical Date:	06/03/15 06:28	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	06/03/15
Percent Solids:	91%	Cleanup Method:	EPA 3660B
		Cleanup Date:	06/03/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.3	--	1	A
Aroclor 1221	ND		ug/kg	36.3	--	1	A
Aroclor 1232	ND		ug/kg	36.3	--	1	A
Aroclor 1242	ND		ug/kg	36.3	--	1	A
Aroclor 1248	ND		ug/kg	36.3	--	1	A
Aroclor 1254	ND		ug/kg	36.3	--	1	A
Aroclor 1260	ND		ug/kg	36.3	--	1	A
Aroclor 1262	ND		ug/kg	36.3	--	1	A
Aroclor 1268	ND		ug/kg	36.3	--	1	A
PCBs, Total	ND		ug/kg	36.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	45		30-150	A
Decachlorobiphenyl	80		30-150	A
2,4,5,6-Tetrachloro-m-xylene	47		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8082A
Analytical Date: 06/03/15 06:44
Analyst: JT

Extraction Method: EPA 3546
Extraction Date: 06/02/15 18:08
Cleanup Method: EPA 3665A
Cleanup Date: 06/03/15
Cleanup Method: EPA 3660B
Cleanup Date: 06/03/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 05-08 Batch: WG790112-1						
Aroclor 1016	ND		ug/kg	32.2	--	A
Aroclor 1221	ND		ug/kg	32.2	--	A
Aroclor 1232	ND		ug/kg	32.2	--	A
Aroclor 1242	ND		ug/kg	32.2	--	A
Aroclor 1248	ND		ug/kg	32.2	--	A
Aroclor 1254	ND		ug/kg	32.2	--	A
Aroclor 1260	ND		ug/kg	32.2	--	A
Aroclor 1262	ND		ug/kg	32.2	--	A
Aroclor 1268	ND		ug/kg	32.2	--	A
PCBs, Total	ND		ug/kg	32.2	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	85		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II

Project Number: Not Specified

Lab Number: L1511711

Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 05-08 Batch: WG790112-2 WG790112-3									
Aroclor 1016	63		59		40-140	7		30	A
Aroclor 1260	66		63		40-140	5		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		56		30-150	A
Decachlorobiphenyl	92		89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		67		30-150	B
Decachlorobiphenyl	87		83		30-150	B

METALS

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-05	Date Collected:	05/27/15 11:00
Client ID:	T-1A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	TCLP/SPLP Ext. Date:	06/03/15 17:05
Percent Solids:	95%		

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	06/05/15 11:00	06/05/15 18:07	EPA 3015	1,6010C	TT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified
Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-05
Client ID: T-1A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil
Percent Solids: 95%

Date Collected: 05/27/15 11:00
Date Received: 05/28/15
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	7.9		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH
Barium, Total	22		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH
Cadmium, Total	ND		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH
Chromium, Total	13		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH
Lead, Total	12		mg/kg	2.1	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH
Mercury, Total	ND		mg/kg	0.070	--	1	05/30/15 09:39	06/02/15 16:28	EPA 7471B	97,7471B	DB
Selenium, Total	ND		mg/kg	2.1	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH
Silver, Total	ND		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 22:45	EPA 3050B	97,6010C	JH

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-06	Date Collected:	05/27/15 12:00
Client ID:	T-2A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	TCLP/SPLP Ext. Date:	06/03/15 17:05
Percent Solids:	92%		

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	06/05/15 11:00	06/05/15 18:11	EPA 3015	1,6010C	TT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified
Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-06
Client ID: T-2A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil
Percent Solids: 92%

Date Collected: 05/27/15 12:00
Date Received: 05/28/15
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	5.8		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH
Barium, Total	18		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH
Cadmium, Total	ND		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH
Chromium, Total	8.2		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH
Lead, Total	22		mg/kg	2.2	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH
Mercury, Total	ND		mg/kg	0.074	--	1	05/30/15 09:39	06/02/15 16:40	EPA 7471B	97,7471B	DB
Selenium, Total	ND		mg/kg	2.2	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH
Silver, Total	ND		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 22:49	EPA 3050B	97,6010C	JH

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-07	Date Collected:	05/28/15 09:45
Client ID:	T-3A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	TCLP/SPLP Ext. Date:	06/03/15 17:05
Percent Solids:	94%		

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	06/05/15 11:00	06/05/15 18:15	EPA 3015	1,6010C	TT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified
Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-07
Client ID: T-3A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil
Percent Solids: 94%

Date Collected: 05/28/15 09:45
Date Received: 05/28/15
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	5.6		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH
Barium, Total	10		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH
Cadmium, Total	ND		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH
Chromium, Total	7.4		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH
Lead, Total	2.3		mg/kg	2.1	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH
Mercury, Total	ND		mg/kg	0.067	--	1	05/30/15 09:39	06/02/15 16:42	EPA 7471B	97,7471B	DB
Selenium, Total	ND		mg/kg	2.1	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH
Silver, Total	ND		mg/kg	0.42	--	1	05/29/15 08:43	05/29/15 23:00	EPA 3050B	97,6010C	JH

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-08	Date Collected:	05/28/15 11:20
Client ID:	T-4A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil	TCLP/SPLP Ext. Date:	06/03/15 17:05
Percent Solids:	91%		

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	06/05/15 11:00	06/05/15 18:53	EPA 3015	1,6010C	TT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified
Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-08
Client ID: T-4A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil
Percent Solids: 91%

Date Collected: 05/28/15 11:20
Date Received: 05/28/15
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	8.0		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH
Barium, Total	120		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH
Cadmium, Total	ND		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH
Chromium, Total	14		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH
Lead, Total	13		mg/kg	2.1	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH
Mercury, Total	0.096		mg/kg	0.073	--	1	05/30/15 09:39	06/02/15 16:43	EPA 7471B	97,7471B	DB
Selenium, Total	ND		mg/kg	2.1	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH
Silver, Total	ND		mg/kg	0.43	--	1	05/29/15 08:43	05/29/15 23:03	EPA 3050B	97,6010C	JH

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

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): 05-08 Batch: WG789022-1										
Arsenic, Total	ND		mg/kg	0.40	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH
Barium, Total	ND		mg/kg	0.40	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH
Cadmium, Total	ND		mg/kg	0.40	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH
Chromium, Total	ND		mg/kg	0.40	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH
Lead, Total	ND		mg/kg	2.0	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH
Selenium, Total	ND		mg/kg	2.0	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH
Silver, Total	ND		mg/kg	0.40	--	1	05/29/15 08:43	05/29/15 22:30	97,6010C	JH

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): 05-08 Batch: WG789347-1										
Mercury, Total	ND		mg/kg	0.083	--	1	05/30/15 09:39	06/02/15 16:20	97,7471B	DB

Prep Information

Digestion Method: EPA 7471B

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): 05-08 Batch: WG790960-1										
Lead, TCLP	ND		mg/l	0.50	--	1	06/05/15 11:00	06/05/15 15:26	1,6010C	TT

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 06/03/15 17:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 05-08 Batch: WG789022-2 WG789022-3 SRM Lot Number: D088-540								
Arsenic, Total	96		96		79-121	0		30
Barium, Total	88		88		83-117	0		30
Cadmium, Total	92		94		83-117	2		30
Chromium, Total	92		101		80-120	9		30
Lead, Total	90		90		81-117	0		30
Selenium, Total	97		102		78-122	5		30
Silver, Total	96		103		75-124	7		30
MCP Total Metals - Westborough Lab Associated sample(s): 05-08 Batch: WG789347-2 WG789347-3 SRM Lot Number: D088-540								
Mercury, Total	112		111		72-128	1		30
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 05-08 Batch: WG790960-2								
Lead, TCLP	98		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

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): 05-08 QC Batch ID: WG790960-4 QC Sample: L1511839-01 Client ID: MS Sample												
Lead, TCLP	ND	5.1	5.2	102		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 05-08 QC Batch ID: WG790960-3 QC Sample: L1511839-01 Client ID: DUP Sample						
Lead, TCLP	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-05	Date Collected:	05/27/15 11:00
Client ID:	T-1A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/01/15 21:21	1,1030	SB

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-06	Date Collected:	05/27/15 12:00
Client ID:	T-2A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/01/15 21:21	1,1030	SB

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-07	Date Collected:	05/28/15 09:45
Client ID:	T-3A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/01/15 21:21	1,1030	SB

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

SAMPLE RESULTS

Lab ID:	L1511711-08	Date Collected:	05/28/15 11:20
Client ID:	T-4A (0-9')	Date Received:	05/28/15
Sample Location:	LOWELL, MA	Field Prep:	Not Specified
Matrix:	Soil		

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/01/15 21:21	1,1030	SB

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-01
Client ID: T-1 (0-3')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 10:30
Date Received: 05/28/15
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	95.3		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-02
Client ID: T-2 (0-3')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 11:30
Date Received: 05/28/15
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	94.6		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-03
Client ID: T-3 (0-3')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 14:50
Date Received: 05/28/15
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	93.0		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-04
Client ID: T-4 (0-3')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/28/15 11:10
Date Received: 05/28/15
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	91.8		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-05
Client ID: T-1A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 11:00
Date Received: 05/28/15
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	94.6		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT
pH (H)	7.8		SU	-	NA	1	-	05/28/15 22:50	1,9045D	LH
Cyanide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:19	1,7.3	RP
Sulfide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:10	1,7.3	RP

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-06
Client ID: T-2A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 12:00
Date Received: 05/28/15
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	91.6		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT
pH (H)	8.0		SU	-	NA	1	-	05/28/15 22:50	1,9045D	LH
Cyanide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:19	1,7.3	RP
Sulfide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:10	1,7.3	RP

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-07
Client ID: T-3A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/28/15 09:45
Date Received: 05/28/15
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		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT
pH (H)	8.3		SU	-	NA	1	-	05/28/15 22:50	1,9045D	LH
Cyanide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:20	1,7.3	RP
Sulfide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:10	1,7.3	RP

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-08
Client ID: T-4A (0-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/28/15 11:20
Date Received: 05/28/15
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	91.1		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT
pH (H)	7.0		SU	-	NA	1	-	05/28/15 22:50	1,9045D	LH
Cyanide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:20	1,7.3	RP
Sulfide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:11	1,7.3	RP

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-09
Client ID: T-1 (3-6')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 10:40
Date Received: 05/28/15
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	91.5		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-10
Client ID: T-1 (6-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 10:50
Date Received: 05/28/15
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	94.8		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-11
Client ID: T-2 (3-6')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 11:40
Date Received: 05/28/15
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	93.7		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-12
Client ID: T-2 (6-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 11:50
Date Received: 05/28/15
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	93.4		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-13
Client ID: T-3 (3-6')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 15:00
Date Received: 05/28/15
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	91.6		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-14
Client ID: T-3 (6-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/27/15 15:10
Date Received: 05/28/15
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	93.0		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

SAMPLE RESULTS

Lab ID: L1511711-15
Client ID: T-4 (3-9')
Sample Location: LOWELL, MA
Matrix: Soil

Date Collected: 05/28/15 11:15
Date Received: 05/28/15
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	92.6		%	0.100	NA	1	-	05/28/15 21:00	30,2540G	RT

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711

Project Number: Not Specified **Report Date:** 06/08/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 05-08 Batch: WG789408-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:09	1,7.3	RP
General Chemistry - Westborough Lab for sample(s): 05-08 Batch: WG789409-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	05/30/15 16:40	05/30/15 18:18	1,7.3	RP

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 05-08 Batch: WG788912-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 05-08 Batch: WG789408-2								
Sulfide, Reactive	87		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 05-08 Batch: WG789409-2								
Cyanide, Reactive	52		-		30-125	-		40

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-15 QC Batch ID: WG788895-1 QC Sample: L1511625-01 Client ID: DUP Sample						
Solids, Total	89.7	89.4	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 05-08 QC Batch ID: WG788912-2 QC Sample: L1511704-01 Client ID: DUP Sample						
pH	7.0	7.0	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 05-08 QC Batch ID: WG789408-3 QC Sample: L1511865-01 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 05-08 QC Batch ID: WG789409-3 QC Sample: L1511865-01 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 05/28/2015 17:08

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1511711-01A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-01B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-02A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-02B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-03A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-03B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-04A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-04B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-05A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-05B	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-05C	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-05D	Glass 500ml/16oz unpreserved	A	N/A	4.3	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),PH-9045(1),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)
L1511711-05E	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-05X	Plastic 120ml HNO3 preserved spl	A	<2	4.3	Y	Absent	PB-CI(180)
L1511711-05X9	Tumble Vessel	A	N/A	4.3	Y	Absent	-
L1511711-06A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-06B	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-06C	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)

*Values in parentheses indicate holding time in days

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1511711-06D	Glass 500ml/16oz unpreserved	A	N/A	4.3	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),PH-9045(1),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)
L1511711-06E	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-06X	Plastic 120ml HNO3 preserved spl	A	<2	4.3	Y	Absent	PB-CI(180)
L1511711-06X9	Tumble Vessel	A	N/A	4.3	Y	Absent	-
L1511711-07A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-07B	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-07C	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-07D	Glass 500ml/16oz unpreserved	A	N/A	4.3	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),PH-9045(1),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)
L1511711-07E	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-07X	Plastic 120ml HNO3 preserved spl	A	<2	4.3	Y	Absent	PB-CI(180)
L1511711-07X9	Tumble Vessel	A	N/A	4.3	Y	Absent	-
L1511711-08A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-08B	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-08C	Vial water preserved	A	N/A	4.3	Y	Absent	MCP-8260HLW-10(14)
L1511711-08D	Glass 500ml/16oz unpreserved	A	N/A	4.3	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),PH-9045(1),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)
L1511711-08E	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-08X	Plastic 120ml HNO3 preserved spl	A	<2	4.3	Y	Absent	PB-CI(180)

*Values in parentheses indicate holding time in days

Project Name: RIVERWALK PHASE II
Project Number: Not Specified

Lab Number: L1511711
Report Date: 06/08/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1511711-08X9	Tumble Vessel	A	N/A	4.3	Y	Absent	-
L1511711-09A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-09B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-10A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-10B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-11A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-11B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-12A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-12B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-13A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-13B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-14A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-14B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-15A	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1511711-15B	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	MCP-8270-10(14)
L1511711-16A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	HOLD-8260HLW(14)
L1511711-16B	Vial water preserved	A	N/A	4.3	Y	Absent	HOLD-8260HLW(14)

*Values in parentheses indicate holding time in days

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

GLOSSARY

Acronyms

EDL - Estimated 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 EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

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.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

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

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

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 ten times (10x) 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. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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.

Report Format: Data Usability Report

Project Name:	RIVERWALK PHASE II	**Lab Number:**	L1511711
Project Number:	Not Specified	**Report Date:**	06/08/15

Data Qualifiers

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 lower value for the two columns 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.

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.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: RIVERWALK PHASE II **Lab Number:** L1511711
Project Number: Not Specified **Report Date:** 06/08/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: 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
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL
World Class Chemistry

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Date Rec'd In Lab: 5/28/15

ALPHA Job #: L1511711

Project Information

Project Name: Riverwalk Phase II

Project Location: Lowell, MA

Project #:

Project Manager: Matt Robbins

ALPHA Quote #:

Client Information

Client: TRC

Address: 650 Suffolk St
Lowell, MA 01854

Phone: 978-970-5600

Email: mrobbins@trcsolutions.com

Turn-Around Time

☑ Standard ☐ RUSH *(only confirmed if pre-approved!)*

Date Due:

Additional Project Information:

Report Information - Data Deliverables

☐ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods

☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☐ No NPDES RGP

☐ Other State /Fed Program ____________ Criteria ____________

ANALYSIS: VOC: ☑ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☒ PAH 8270D; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☒ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☒ PCB ☐ PEST; TPH: ☒ Quant Only ☐ Fingerprint; TS; pH; Reac.; Flashpoint; TCLP Lead

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS (MCP)	METALS (RCRA)	EPH	VPH	PCB	TPH	TS	pH	Reac.	Flashpoint	TCLP Lead	Sample Comments	TOTAL # BOTTLES
11711-01	T-1 (0-3')	5/27/15	1030	soil	MPS		X							X						2
02	T-2 (0-3')	5/27/15	1130	↓	↓		X							X						2
03	T-3 (0-3')	5/27/15	1450	↓	↓		X							X						2
04	T-4 (0-3')	5/28/15	1110	↓	↓		X							X						2
05	T-1a (0-9')	5/27/15	1100	↓	↓	X			X			X	X	X	X	X	X	X	waste char. package	5
06	T-2a (0-9')	5/27/15	1200	↓	↓	X			X			X	X	X	X	X	X	X	↓	5
07	T-3a (0-9')	5/28/15	~~1030~~ 945	↓	↓	X			X			X	X	X	X	X	X	X	↓	5
08	T-4a (0-9')	5/28/15	1120	↓	↓	X			X			X	X	X	X	X	X	X	↓	5

	VOC	SVOC	METALS (MCP)	METALS (RCRA)	EPH	VPH	PCB	TPH	TS	pH	Reac.	Flashpoint	TCLP Lead
Container Type	V	A		A			A	A	P	A	A	A	A
Preservative	F	A		A			A	A	A	A	A	A	A

Container Type	Preservative
P= Plastic	A= None
A= Amber glass	B= HCl
V= Vial	C= HNO_3
G= Glass	D= H_2SO_4
B= Bacteria cup	E= NaOH
C= Cube	F= MeOH
O= Other	G= $NaHSO_4$
E= Encore	H = $Na_2S_2O_3$
D= BOD Bottle	I= Ascorbic Acid
	J = NH_4Cl
	K= Zn Acetate
	O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
M Acosta	5/28/15 1530	T. Hudd[illegible]	5/28/15 1530
T. Huddl[illegible]	5/28/15 1630	Melin[illegible]	5/28/15 1630

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL — World Class Chemistry

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 5/28/15

ALPHA Job #: L1511711

Project Information

Project Name: Riverwalk Phase II
Project Location: Lowell, MA
Project #:
Project Manager: Matt Robbins
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: TRC
Address: 650 Suffolk St, Lowell, MA
Phone: 978-970-5600
Email: mrobbins@trcsolutions.com

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH ☒ 8270
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint

SAMPLE INFO
Filtration: ☐ Field ☐ Lab to do
Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	EPH	VPH	TPH (TS)	Sample Comments	Total # Bottles
11711-09	T-1 (3-6')	5/27/15	1040	Soil	MPS		X				X		2
10	T-1 (6-9')	↓	1050	↓	↓		X				X		2
11	T-2 (3-6')	↓	1140	↓	↓		X				X		2
12	T-2 (6-9')	↓	1150	↓	↓		X				X		2
13	T-3 (3-6')	↓	1500	↓	↓		X				X		2
14	T-3 (6-9')	↓	1510	↓	↓		X				X		2
15	T-4 (3-9')	5/28/15	1115	↓	↓		X				X		2
Container Type							A				P		
Preservative							A				A		

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	5/28/15 1530	[signature]	5/28/15 1530
T. Hutchison	5/28/15 1630	[signature]	5/28/15 1630

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

7A
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa104.i Calibration Date: 03-JUN-2015 Time: 07:59

Lab File ID: 0603A02 Init. Calib. Date(s): 11-MAY-2 11-MAY-2

Sample No: 8260 CCAL Init. Calib. Times : 13:31 16:37

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
dichlorodifluoromethane	.19325	.2556	.1	32	20	F
chloromethane	.39822	.47951	.1	20	20	F
vinyl chloride	.3254	.36505	.1	12	20	
bromomethane	100	89.915	.1	-10	20	
chloroethane	.177	.17971	.1	2	20	
trichlorofluoromethane	.39336	.40596	.1	3	20	
ethyl ether	.13024	.11851	.05	-9	20	
1,1,-dichloroethene	.24446	.2378	.1	-3	20	
carbon disulfide	.9085	.78548	.1	-14	20	
methylene chloride	.27844	.30167	.1	8	20	
acetone	100	117	.1	17	20	
trans-1,2-dichloroethene	.2776	.32111	.1	16	20	
methyl tert butyl ether	.67108	.68922	.1	3	20	
Diisopropyl Ether	1.1018	1.3541	.05	23	20	F
1,1-dichloroethane	.56407	.65308	.2	16	20	
Ethyl-Tert-Butyl-Ether	.9332	1.0083	.05	8	20	
cis-1,2-dichloroethene	.29881	.34633	.1	16	20	
2,2-dichloropropane	.42915	.49325	.05	15	20	
bromochloromethane	.12532	.13864	.05	11	20	
chloroform	.53454	.57919	.2	8	20	
carbontetrachloride	.39715	.4428	.1	11	20	
tetrahydrofuran	.07431	.07994	.05	8	20	
1,1,1-trichloroethane	.47516	.53356	.1	12	20	
2-butanone	.09909	.10925	.1	10	20	F
1,1-dichloropropene	.37363	.43665	.05	17	20	
benzene	1.0193	1.1764	.5	15	20	
Tertiary-Amyl Methyl Ether	.66195	.70355	.05	6	20	
1,2-dichloroethane	.3843	.42713	.1	11	20	
trichloroethene	.2975	.33903	.2	14	20	
dibromomethane	.15071	.16651	.05	10	20	
1,2-dichloropropane	.30058	.34876	.1	16	20	
bromodichloromethane	.4017	.43794	.2	9	20	
1,4-dioxane	5000	4842	.05	-3	20	
cis-1,3-dichloropropene	.42553	.47694	.2	12	20	
toluene	.84026	.96366	.4	15	20	
tetrachloroethene	.35768	.37998	.2	6	20	
4-methyl-2-pentanone	.08623	.09553	.1	11	20	F
trans-1,3-dichloropropene	.47883	.51102	.1	7	20	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa104.i Calibration Date: 03-JUN-2015 Time: 07:59

Lab File ID: 0603A02 Init. Calib. Date(s): 11-MAY-2 11-MAY-2

Sample No: 8260 CCAL Init. Calib. Times : 13:31 16:37

Compound	$\overline{RRF}$	RRF	MIN RRF	%D	MAX %D	
1,1,2-trichloroethane	.23042	.26018	.1	13	20	
chlorodibromomethane	.35748	.35922	.1	0	20	
1,3-dichloropropane	.4427	.49347	.05	11	20	
1,2-dibromoethane	.2813	.29037	.1	3	20	
2-hexanone	.18837	.21125	.1	12	20	
chlorobenzene	.94404	1.0458	.5	11	20	
ethyl benzene	1.6714	1.9053	.1	14	20	
1,1,1,2-tetrachloroethane	.35486	.36469	.05	3	20	
p/m xylene	.62596	.74043	.1	18	20	
o xylene	.61509	.70146	.3	14	20	
styrene	1.0028	1.1519	.3	15	20	
bromoform	.4107	.42263	.1	3	20	
isopropylbenzene	3.3364	3.9814	.1	19	20	
bromobenzene	.71763	.8385	.05	17	20	
n-propylbenzene	3.9898	4.9528	.05	24	20	F
1,1,2,2,-tetrachloroethane	.68369	.76808	.3	12	20	
2-chlorotoluene	2.4890	3.0248	.05	22	20	F
1,2,3-trichloropropane	.52727	.58397	.05	11	20	
1,3,5-trimethybenzene	2.9752	3.4206	.05	15	20	
4-chorotoluene	2.5055	2.9865	.05	19	20	
tert-butylbenzene	2.3398	2.7797	.05	19	20	
1,2,4-trimethylbenzene	2.9101	3.4072	.05	17	20	
sec-butylbenzene	3.608	4.4694	.05	24	20	F
p-isopropyltoluene	2.9802	3.5314	.05	18	20	
1,3-dichlorobenzene	1.4743	1.7380	.6	18	20	
1,4-dichlorobenzene	1.4698	1.6697	.5	14	20	
n-butylbenzene	2.9397	3.6446	.05	24	20	F
1,2-dichlorobenzene	1.3422	1.5278	.4	14	20	
1,2-dibromo-3-chloropropane	.09256	.09304	.05	1	20	
hexachlorobutadiene	.49119	.53668	.05	9	20	
1,2,4-trichlorobenzene	.88365	1.0276	.2	16	20	
naphthalene	1.9732	2.1242	.05	8	20	
1,2,3-trichlorobenzene	.81655	.88162	.05	8	20	
dibromofluoromethane	.28106	.25954	.05	-8	30	
1,2-dichloroethane-d4	.27905	.27064	.05	-3	30	
toluene-d8	1.2609	1.2024	.05	-5	30	
4-bromofluorobenzene	1.0643	1.0611	.05	0	30	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa111.i Calibration Date: 01-JUN-2015 Time: 07:22

Lab File ID: 0601A01 Init. Calib. Date(s): 25-APR-2 25-APR-2

Sample No: 8260 CCAL Init. Calib. Times : 14:34 17:33

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
dichlorodifluoromethane	.3224	.26051	.1	-19	20	
chloromethane	.34306	.30691	.1	-11	20	
vinyl chloride	.28254	.29343	.1	4	20	
bromomethane	.21237	.20759	.1	-2	20	
chloroethane	.15978	.16363	.1	2	20	
trichlorofluoromethane	.44924	.44283	.1	-1	20	
ethyl ether	.1731	.17344	.05	0	20	
1,1,-dichloroethene	.22748	.27209	.1	20	20	
carbon disulfide	100	81.718	.1	-18	20	
methylene chloride	.32576	.31881	.1	-2	20	
acetone	.07971	.05381	.1	-32	20	F
trans-1,2-dichloroethene	.27741	.32017	.1	15	20	
methyl tert butyl ether	.92447	.80142	.1	-13	20	
Diisopropyl Ether	.95248	.8589	.05	-10	20	
1,1-dichloroethane	.5581	.55558	.2	0	20	
Ethyl-Tert-Butyl-Ether	.99518	.86616	.05	-13	20	
cis-1,2-dichloroethene	.31796	.34707	.1	9	20	
2,2-dichloropropane	.48938	.48781	.05	0	20	
bromochloromethane	.1502	.15923	.05	6	20	
chloroform	.57201	.55012	.2	-4	20	
carbontetrachloride	.40616	.42488	.1	5	20	
tetrahydrofuran	.09164	.0718	.05	-22	20	F
1,1,1-trichloroethane	.49524	.5019	.1	1	20	
2-butanone	.11192	.07984	.1	-29	20	F
1,1-dichloropropene	.38855	.42737	.05	10	20	
benzene	1.1315	1.2193	.5	8	20	
Tertiary-Amyl Methyl Ether	.86001	.74678	.05	-13	20	
1,2-dichloroethane	.50149	.38745	.1	-23	20	F
trichloroethene	.30007	.32567	.2	9	20	
dibromomethane	.18694	.16314	.05	-13	20	
1,2-dichloropropane	.3008	.29152	.1	-3	20	
bromodichloromethane	.45035	.39399	.2	-13	20	
1,4-dioxane	.00301	.00234	.05	-22	20	F
cis-1,3-dichloropropene	.51447	.48238	.2	-6	20	
toluene	.97852	1.0286	.4	5	20	
4-methyl-2-pentanone	.09455	.06716	.1	-29	20	F
tetrachloroethene	.44013	.48418	.2	10	20	
trans-1,3-dichloropropene	.65737	.56128	.1	-15	20	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa111.i Calibration Date: 01-JUN-2015 Time: 07:22

Lab File ID: 0601A01 Init. Calib. Date(s): 25-APR-2 25-APR-2

Sample No: 8260 CCAL Init. Calib. Times : 14:34 17:33

Compound	$\overline{RRF}$	RRF	MIN RRF	%D	MAX %D	
1,1,2-trichloroethane	.30156	.2736	.1	-9	20	
chlorodibromomethane	.42628	.3702	.1	-13	20	
1,3-dichloropropane	.65121	.5626	.05	-14	20	
1,2-dibromoethane	.34311	.30841	.1	-10	20	
2-hexanone	.21315	.14018	.1	-34	20	F
chlorobenzene	1.1342	1.1590	.5	2	20	
ethyl benzene	1.8353	1.9256	.1	5	20	
1,1,1,2-tetrachloroethane	.42825	.4076	.05	-5	20	
p/m xylene	.67315	.75054	.1	11	20	
o xylene	.66364	.70117	.3	6	20	
styrene	1.0705	1.119	.3	5	20	
bromoform	.53912	.48273	.1	-10	20	
isopropylbenzene	3.3899	3.6960	.1	9	20	
bromobenzene	.96739	.96857	.05	0	20	
n-propylbenzene	4.1543	4.4824	.05	8	20	
1,1,2,2,-tetrachloroethane	.86793	.73898	.3	-15	20	
2-chlorotoluene	3.0310	3.0428	.05	0	20	
1,3,5-trimethybenzene	2.9757	3.1076	.05	4	20	
1,2,3-trichloropropane	.755	.60276	.05	-20	20	F
4-chorotoluene	2.7188	2.6854	.05	-1	20	
tert-butylbenzene	2.4260	2.6457	.05	9	20	
1,2,4-trimethylbenzene	3.0103	3.0866	.05	3	20	
sec-butylbenzene	3.5423	3.9749	.05	12	20	
p-isopropyltoluene	3.0163	3.3550	.05	11	20	
1,3-dichlorobenzene	1.8001	1.8590	.6	3	20	
1,4-dichlorobenzene	1.8460	1.8334	.5	-1	20	
n-butylbenzene	2.9108	3.1898	.05	10	20	
1,2-dichlorobenzene	1.7244	1.6539	.4	-4	20	
1,2-dibromo-3-chloropropane	.12708	.10047	.05	-21	20	F
hexachlorobutadiene	.69881	.79	.05	13	20	
1,2,4-trichlorobenzene	1.3061	1.3459	.2	3	20	
naphthalene	2.8505	2.4473	.05	-14	20	
1,2,3-trichlorobenzene	1.2899	1.2424	.05	-4	20	
dibromofluoromethane	.25938	.24378	.05	-6	30	
1,2-dichloroethane-d4	.32882	.24424	.05	-26	30	
toluene-d8	1.3174	1.2596	.05	-4	30	
4-bromofluorobenzene	.96787	.88984	.05	-8	30	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa104.i Calibration Date: 02-JUN-2015 Time: 08:24

Lab File ID: 0602A03 Init. Calib. Date(s): 11-MAY-2 11-MAY-2

Sample No: 8260 CCAL Init. Calib. Times : 13:31 16:37

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
dichlorodifluoromethane	.19325	.267	.1	38	20	F
chloromethane	.39822	.46139	.1	16	20	
vinyl chloride	.3254	.36492	.1	12	20	
bromomethane	100	90.576	.1	-9	20	
chloroethane	.177	.17841	.1	1	20	
trichlorofluoromethane	.39336	.43819	.1	11	20	
ethyl ether	.13024	.12081	.05	-7	20	
1,1,-dichloroethene	.24446	.24583	.1	1	20	
carbon disulfide	.9085	.79303	.1	-13	20	
methylene chloride	.27844	.30272	.1	9	20	
acetone	100	134	.1	34	20	F
trans-1,2-dichloroethene	.2776	.32018	.1	15	20	
methyl tert butyl ether	.67108	.7106	.1	6	20	
Diisopropyl Ether	1.1018	1.3552	.05	23	20	F
1,1-dichloroethane	.56407	.65226	.2	16	20	
Ethyl-Tert-Butyl-Ether	.9332	1.0311	.05	10	20	
cis-1,2-dichloroethene	.29881	.34599	.1	16	20	
2,2-dichloropropane	.42915	.5221	.05	22	20	F
bromochloromethane	.12532	.14226	.05	14	20	
chloroform	.53454	.60872	.2	14	20	
carbontetrachloride	.39715	.47501	.1	20	20	
tetrahydrofuran	.07431	.08542	.05	15	20	
1,1,1-trichloroethane	.47516	.55838	.1	18	20	
2-butanone	.09909	.11855	.1	20	20	F
1,1-dichloropropene	.37363	.44931	.05	20	20	F
benzene	1.0193	1.1811	.5	16	20	
Tertiary-Amyl Methyl Ether	.66195	.71951	.05	9	20	
1,2-dichloroethane	.3843	.4518	.1	18	20	
trichloroethene	.2975	.35381	.2	19	20	
dibromomethane	.15071	.17378	.05	15	20	
1,2-dichloropropane	.30058	.35124	.1	17	20	
bromodichloromethane	.4017	.46059	.2	15	20	
1,4-dioxane	5000	4590	.05	-8	20	
cis-1,3-dichloropropene	.42553	.48913	.2	15	20	
toluene	.84026	1.0073	.4	20	20	
tetrachloroethene	.35768	.40923	.2	14	20	
4-methyl-2-pentanone	.08623	.09811	.1	14	20	F
trans-1,3-dichloropropene	.47883	.55985	.1	17	20	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa104.i Calibration Date: 02-JUN-2015 Time: 08:24

Lab File ID: 0602A03 Init. Calib. Date(s): 11-MAY-2 11-MAY-2

Sample No: 8260 CCAL Init. Calib. Times : 13:31 16:37

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
1,1,2-trichloroethane	.23042	.26181	.1	14	20	
chlorodibromomethane	.35748	.39362	.1	10	20	
1,3-dichloropropane	.4427	.52763	.05	19	20	
1,2-dibromoethane	.2813	.31571	.1	12	20	
2-hexanone	.18837	.23333	.1	24	20	F
chlorobenzene	.94404	1.0947	.5	16	20	
ethyl benzene	1.6714	1.9789	.1	18	20	
1,1,1,2-tetrachloroethane	.35486	.39805	.05	12	20	
p/m xylene	.62596	.76132	.1	22	20	F
o xylene	.61509	.73196	.3	19	20	
styrene	1.0028	1.1906	.3	19	20	
bromoform	.4107	.44708	.1	9	20	
isopropylbenzene	3.3364	4.0449	.1	21	20	F
bromobenzene	.71763	.85177	.05	19	20	
n-propylbenzene	3.9898	5.0552	.05	27	20	F
1,1,2,2,-tetrachloroethane	.68369	.79077	.3	16	20	
2-chlorotoluene	2.4890	3.0977	.05	24	20	F
1,2,3-trichloropropane	.52727	.61549	.05	17	20	
1,3,5-trimethybenzene	2.9752	3.5227	.05	18	20	
4-chorotoluene	2.5055	3.0756	.05	23	20	F
tert-butylbenzene	2.3398	2.8092	.05	20	20	F
1,2,4-trimethylbenzene	2.9101	3.5073	.05	21	20	F
sec-butylbenzene	3.608	4.5612	.05	26	20	F
p-isopropyltoluene	2.9802	3.5947	.05	21	20	F
1,3-dichlorobenzene	1.4743	1.7621	.6	20	20	
1,4-dichlorobenzene	1.4698	1.7131	.5	17	20	
n-butylbenzene	2.9397	3.7352	.05	27	20	F
1,2-dichlorobenzene	1.3422	1.5777	.4	18	20	
1,2-dibromo-3-chloropropane	.09256	.09897	.05	7	20	
hexachlorobutadiene	.49119	.55078	.05	12	20	
1,2,4-trichlorobenzene	.88365	1.0439	.2	18	20	
naphthalene	1.9732	2.2267	.05	13	20	
1,2,3-trichlorobenzene	.81655	.94227	.05	15	20	
dibromofluoromethane	.28106	.26778	.05	-5	30	
1,2-dichloroethane-d4	.27905	.27797	.05	0	30	
toluene-d8	1.2609	1.2305	.05	-2	30	
4-bromofluorobenzene	1.0643	1.0568	.05	-1	30	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa111.i Calibration Date: 05-JUN-2015 Time: 07:31

Lab File ID: 0605A02 Init. Calib. Date(s): 25-APR-2 25-APR-2

Sample No: 8260 CCAL Init. Calib. Times : 14:34 17:33

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
dichlorodifluoromethane	.3224	.31805	.1	-1	20	
chloromethane	.34306	.36138	.1	5	20	
vinyl chloride	.28254	.33711	.1	19	20	
bromomethane	.21237	.23748	.1	12	20	
chloroethane	.15978	.18504	.1	16	20	
trichlorofluoromethane	.44924	.50955	.1	13	20	
ethyl ether	.1731	.17747	.05	3	20	
1,1,-dichloroethene	.22748	.2572	.1	13	20	
carbon disulfide	100	83.029	.1	-17	20	
methylene chloride	.32576	.33233	.1	2	20	
acetone	.07971	.09079	.1	14	20	F
trans-1,2-dichloroethene	.27741	.31106	.1	12	20	
methyl tert butyl ether	.92447	.91981	.1	-1	20	
Diisopropyl Ether	.95248	1.0085	.05	6	20	
1,1-dichloroethane	.5581	.64308	.2	15	20	
Ethyl-Tert-Butyl-Ether	.99518	1.0057	.05	1	20	
cis-1,2-dichloroethene	.31796	.34935	.1	10	20	
2,2-dichloropropane	.48938	.59805	.05	22	20	F
bromochloromethane	.1502	.16192	.05	8	20	
chloroform	.57201	.66311	.2	16	20	
carbontetrachloride	.40616	.52915	.1	30	20	F
tetrahydrofuran	.09164	.08833	.05	-4	20	
1,1,1-trichloroethane	.49524	.61352	.1	24	20	F
2-butanone	.11192	.1184	.1	6	20	
1,1-dichloropropene	.38855	.47839	.05	23	20	F
benzene	1.1315	1.2899	.5	14	20	
Tertiary-Amyl Methyl Ether	.86001	.83707	.05	-3	20	
1,2-dichloroethane	.50149	.5489	.1	9	20	
trichloroethene	.30007	.36016	.2	20	20	F
dibromomethane	.18694	.19399	.05	4	20	
1,2-dichloropropane	.3008	.32514	.1	8	20	
bromodichloromethane	.45035	.49949	.2	11	20	
1,4-dioxane	.00301	.00231	.05	-23	20	F
cis-1,3-dichloropropene	.51447	.54959	.2	7	20	
toluene	.97852	1.0403	.4	6	20	
4-methyl-2-pentanone	.09455	.07536	.1	-20	20	F
tetrachloroethene	.44013	.45884	.2	4	20	
trans-1,3-dichloropropene	.65737	.6566	.1	0	20	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1511711

Instrument ID: Voa111.i Calibration Date: 05-JUN-2015 Time: 07:31

Lab File ID: 0605A02 Init. Calib. Date(s): 25-APR-2 25-APR-2

Sample No: 8260 CCAL Init. Calib. Times : 14:34 17:33

Compound	$\overline{RRF}$	RRF	MIN RRF	%D	MAX %D	
1,1,2-trichloroethane	.30156	.29367	.1	-3	20	
chlorodibromomethane	.42628	.4204	.1	-1	20	
1,3-dichloropropane	.65121	.62816	.05	-4	20	
1,2-dibromoethane	.34311	.32982	.1	-4	20	
2-hexanone	.21315	.16849	.1	-21	20	F
chlorobenzene	1.1342	1.1685	.5	3	20	
ethyl benzene	1.8353	2.0501	.1	12	20	
1,1,1,2-tetrachloroethane	.42825	.4551	.05	6	20	
p/m xylene	.67315	.75781	.1	13	20	
o xylene	.66364	.72309	.3	9	20	
styrene	1.0705	1.1783	.3	10	20	
bromoform	.53912	.51853	.1	-4	20	
isopropylbenzene	3.3899	3.6217	.1	7	20	
bromobenzene	.96739	.92883	.05	-4	20	
n-propylbenzene	4.1543	4.5706	.05	10	20	
1,1,2,2,-tetrachloroethane	.86793	.79652	.3	-8	20	
2-chlorotoluene	3.0310	3.2333	.05	7	20	
1,3,5-trimethybenzene	2.9757	3.2444	.05	9	20	
1,2,3-trichloropropane	.755	.69	.05	-9	20	
4-chorotoluene	2.7188	2.8524	.05	5	20	
tert-butylbenzene	2.4260	2.6375	.05	9	20	
1,2,4-trimethylbenzene	3.0103	3.2231	.05	7	20	
sec-butylbenzene	3.5423	4.0092	.05	13	20	
p-isopropyltoluene	3.0163	3.3882	.05	12	20	
1,3-dichlorobenzene	1.8001	1.8409	.6	2	20	
1,4-dichlorobenzene	1.8460	1.8281	.5	-1	20	
n-butylbenzene	2.9108	3.3876	.05	16	20	
1,2-dichlorobenzene	1.7244	1.6669	.4	-3	20	
1,2-dibromo-3-chloropropane	.12708	.10866	.05	-14	20	
hexachlorobutadiene	.69881	.78312	.05	12	20	
1,2,4-trichlorobenzene	1.3061	1.3087	.2	0	20	
naphthalene	2.8505	2.4715	.05	-13	20	
1,2,3-trichlorobenzene	1.2899	1.2361	.05	-4	20	
dibromofluoromethane	.25938	.27258	.05	5	30	
1,2-dichloroethane-d4	.32882	.3361	.05	2	30	
toluene-d8	1.3174	1.2751	.05	-3	30	
4-bromofluorobenzene	.96787	.90928	.05	-6	30	

FORM VII MCP-8260HLW-10