



Consulting  
Engineers and  
Scientists

August 2, 2019  
Project 1804540

Ms. Rachna Balakrishna, Esq.  
c/o Mason and Murphy, Inc.  
1299 Beacon Street  
Brookline, MA 02446

Dear Ms. Balakrishna:

**Re: Summary of Findings:  
Environmental Soil Testing  
1299 Beacon Street  
Brookline, Massachusetts 02446**

GEI Consultants, Inc. has prepared this report summarizing our soil sampling and analysis at 1299 Beacon Street in Brookline, Massachusetts (the Site; Fig. 1).

## Summary

A new residential building with retail floor space is proposed for construction at the Site.

We collected three soil samples for laboratory analysis from three borings advanced in the proposed building footprint. Based on the results of our soil investigation, none of the soil samples tested contained oil or hazardous materials (OHM) in excess of the applicable Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) S-1 reportable concentrations (RCS-1). The soil is suitable for reuse at a facility accepting <RCS-1 material.

## 1. Background

The site is located at 1299 Beacon Street in Brookline, Massachusetts. The 0.43-acre site is bordered on the east by 1295 Beacon Street and 1295A-1297 Beacon Street, on the west by 1309-1317 Beacon Street, on the north by Beacon Street, and on the south by Sewall Avenue (Fig. 2). Site topography is relatively flat. A one- to two-story brick building with basement occupies the approximate northern half of the 1299 Beacon Street site. The remainder of the site is a paved parking lot.

The project will consist of demolishing the existing building at 1299 Beacon Street and constructing a new residential building with ground floor retail space. The proposed building will have two levels of below-grade parking that will extend to a depth of about 20 feet below existing grade.

As part of its review of the project, the Town of Brookline Zoning Board of Appeals (ZBA) requested that a soil characterization investigation be conducted.

GEI prepared a scope of work to conduct limited soil analysis for the material expected to be excavated as part of Site redevelopment. The objectives were to:

- Evaluate whether or not OHMs are present at the Site.
- Develop a general idea of the potential cost of soil disposal.

- Compare OHM concentrations (if identified) to MCP reporting standards and evaluate whether or not a reportable release exists for soil at the Site.

## **2. Subsurface Investigation**

### **2.1 Soil Borings**

On July 8, 2019, GEI observed Northern Drill Services, Inc. (Northern), of Northborough, Massachusetts, advance three direct-push (Geoprobe) soil borings: B101, B102, and B103. The boring locations were chosen to obtain samples from the shallow fill soil and from the natural sand beneath the fill. The boring locations are shown in Fig.2 and the associated boring logs are in Attachment A.

Soil conditions in these borings consisted of the following:

- Fill: Sand and gravel with silt, 14 to 19 feet thick, brown, with varying amounts of brick and concrete fragments.
- Silty sand: Fine to medium sand with silt, or lean clay. Below the fill, to 20 feet, this is natural soil.

No staining or odors were observed in the borings and groundwater was not encountered.

### **2.2 Soil Sampling**

GEI personnel conducted field screening of the soil samples for volatile organic compounds (VOCs) using the jar-headspace method with a photoionization detector (PID). No VOCs greater than background were detected by the PID. We submitted one sample from each of the three borings (for chemical testing. The samples from B101 and B102 were collected from the fill, while the sample from B103 was collected from the natural underlying silty sand.

The soil samples were sent to Alpha Analytical of Westborough, Massachusetts to be analyzed for VOCs, polychlorinated biphenyls (PCBs), MCP 14 metals, extractable and volatile petroleum hydrocarbons (EPH and VPH), and pH.

### **2.3 Chemical Testing Results**

Contaminant concentrations and comparisons to the applicable MCP RCS-1 residential soil standards are in Table 1. The soil samples did not contain PCBs, VPH, or EPH (including target polycyclic aromatic hydrocarbons) at concentrations above the laboratory reporting limits. One sample, B101(7.5') contained low levels of acetone at a 8 micrograms per kilogram (ug/kg), which is well below the RCS-1 value, (Table 1). The metals arsenic, barium, beryllium, chromium, lead, nickel, vanadium, and zinc were all detected, but all at concentrations well below the RCS-1 standards. The pH of the soils ranged from 7.0 to 7.8. The laboratory data sheets are in Attachment B.

Because the soil testing results are all well below the RCS-1 criteria, soil in these areas can be classified as "Category A: Restricted Reuse (<RCS-1 Material)," as described on Table 2. Most RCS-1 facilities require a sampling frequency of one sample per 500 cubic yards, therefore, these three soil samples are only sufficient to characterize approximately 1,500 cubic yards of material. Additional soil sampling and analysis will be necessary to characterize the entire volume of soil for offsite disposal.

## **3. Conclusions and Recommendations**

Based on the results of our soil boring investigation, none of the soil samples contained OHM in excess of the applicable MCP RCS-1 standard. The soil is suitable for reuse at a facility accepting

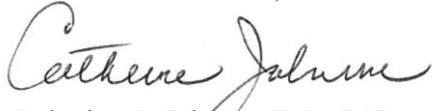
<RCS-1 material. Additional soil sampling and analysis will be necessary to completely characterize all the soil for offsite disposal.

### **Limitations**

This report was prepared for the use of Mason and Murphy, Inc., exclusively. The findings provided by GEI in this report are based solely on the information reported in this document. Future investigations or information that was not available to GEI at the time of this report may result in modification of this report. This report has been prepared in accordance with generally accepted engineering and geohydrological practices. No warranty, expressed or implied, is made.

Sincerely,

GEI CONSULTANTS, INC.



Catherine G. Johnson, P.G., LSP  
Senior Project Manager



Ileen S. Gladstone, P.E., LSP  
Senior Vice President

AKF:ht

Enclosures

- Table 1 – Chemical Testing Results: Soil
- Table 2 – Soil Management Categories
- Figure 1 – Site Location Map
- Figure 2 – Boring Location Plan
- Attachment A – Boring Logs
- Attachment B –Laboratory Data Sheets

# Tables

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**Table 1. Laboratory Testing Results - Soil**  
**1299 Beacon Street**  
**Brookline, Massachusetts**

Sample Location:				B101		B102		B103
Sample ID:				B101(7.5')	B101(5-10')	B102(7')	B102(5-9')	B103(14')
Sample Date:				7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
Analyte	Method	Units	MCP RCS-1					
<b>Volatile Organic Compounds (VOCs)</b>	8260B	mg/kg			NT		NT	
Acetone			6	0.008		<0.0084		<0.0066
Total VOCs			NS	0.008		ND		ND
<b>Volatile Petroleum hydrocarbons (VPH)</b>		mg/kg			NT		NT	
C5-C8 Aliphatic Hydrocarbons			100	<15.3		<15.5		<14.5
C9-C12 Aliphatic Hydrocarbons			1,000	<15.3		<15.5		<14.5
C9-C10 Aromatic Hydrocarbons			100	<15.3		<15.5		<14.5
<b>Extractable Petroleum Hydrocarbons (EPH)</b>		mg/kg			NT		NT	
C9-C18 Aliphatic Hydrocarbons			1,000		<6.53		<6.63	<7.89
C19-C36 Aliphatic Hydrocarbons			3,000		<6.53		<6.63	<7.89
C11-C22 Aromatic Hydrocarbons			1,000		<6.53		<6.63	<7.89
Polycyclic Aromatic Hydrocarbons (targets)			NA		ND		ND	ND
<b>Polychlorinated Biphenyls (PCBs)</b>	8082	mg/kg			NT		NT	
Total PCBs			2		ND		ND	ND
<b>Total Metals</b>		mg/kg			NT		NT	
Antimony	6010C		20		<2.04		<2.04	<2.35
Arsenic	6010C		20		2.34		3.40	3.68
Barium	6010C		1,000		22.4		23.2	59.2
Beryllium	6010C		90		<0.204		<0.204	0.296
Cadmium	6010C		70		<0.409		<0.409	<0.470
Chromium (Total)	6010C		100 (1,000)		8.32		11.2	10.10
Lead	6010C		200		7.68		12.9	4.24
Mercury	7471B		20		<0.066		<0.065	<0.076
Nickel	6010C		600		8.14		8.89	10.0
Selenium	7010		400		<2.04		<2.04	<2.35
Silver	6010C		100		<0.409		<0.409	<0.470
Thallium	7010		8		<2.04		<2.04	<2.35
Vanadium	6010C		400		22.9		19.8	17.0
Zinc	6010C		1,000		28.6		31.9	27.2
<b>Other</b>								
Corrosivity (pH)	9045	S.U.	NS		NT		7.0	7.0
Percent Solids		wt%	NS		97.2		97.7	96.8

**General Notes:**

- In general, analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
- "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
- MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
- Reportable Concentrations (e.g., RCS-1), where identified, are cited from the MCP.
- NS = No standard or criteria has been established for this analyte.
- NT = The sample was not tested for this analyte.
- ND = Not detected above the laboratory detection limits.
- Soil samples for VOC analysis were preserved in the field with methanol.
- mg/kg = milligrams per kilogram.
- S.U. = standard units.
- Soil samples for VOC analysis were preserved in the field with methanol.
- Values in bold exceed RCS-1 standards.

**Table 2. Soil Management Categories**  
**1299 Beacon Street**  
**Brookline, Massachusetts**

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**Construction/Demolition Debris Disposal:**

Construction/Demolition Debris is excavated or otherwise generated material that is suitable for disposal at a state-regulated facility. Construction/Demolition Debris may include asphalt, brick, concrete, rock, steel, unpreserved wood, etc.

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**Category A: Restricted Reuse (<RCS-1 Material):**

Category A materials are excavated materials with concentrations of oil or hazardous materials (OHM) below the reportable concentrations for soil category S-1 (RCS-1) as identified in the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000), and not containing visual evidence of contamination such as coal or wood ash. Category A materials may be reused on site or off site at a location subject to the anti-degradation provisions identified in 310 CMR 40.0032(3).

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**Category B: Reuse as Unlined Landfill Cover in Massachusetts:**

Category B materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for use as daily cover material at an unlined landfill in Massachusetts.

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**Category C: Reuse as Lined Landfill Cover in Massachusetts:**

Category C materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for use as daily cover material at a lined landfill in Massachusetts.

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**Category D: Recycling at an Asphalt Batch Recycling Plant:**

Category D materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for recycling by asphalt batching.

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**Category E: Disposal in Out-of-State Landfill as Non-Hazardous Waste:**

Category E materials are excavated materials with concentrations of OHM and physical characteristics that do not meet the acceptance criteria for Massachusetts landfill cover. This category includes material that has been treated to reduce toxicity characteristic leachate procedure (TCLP) concentrations to below regulatory limits, and material with trace (i.e. < 1%) amounts of asbestos.

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**Category F-1: On-site Treatment of Hazardous Waste and Disposal in Out-of-State Landfill as Non-Hazardous Waste:**

Category F-1 materials are excavated materials that are considered a listed or characteristic hazardous waste and that can feasibly be treated on site prior to disposal. This category includes material with TCLP concentrations greater than those acceptable for disposal as non-hazardous waste. The material will be re-classified and disposed of as Category E.

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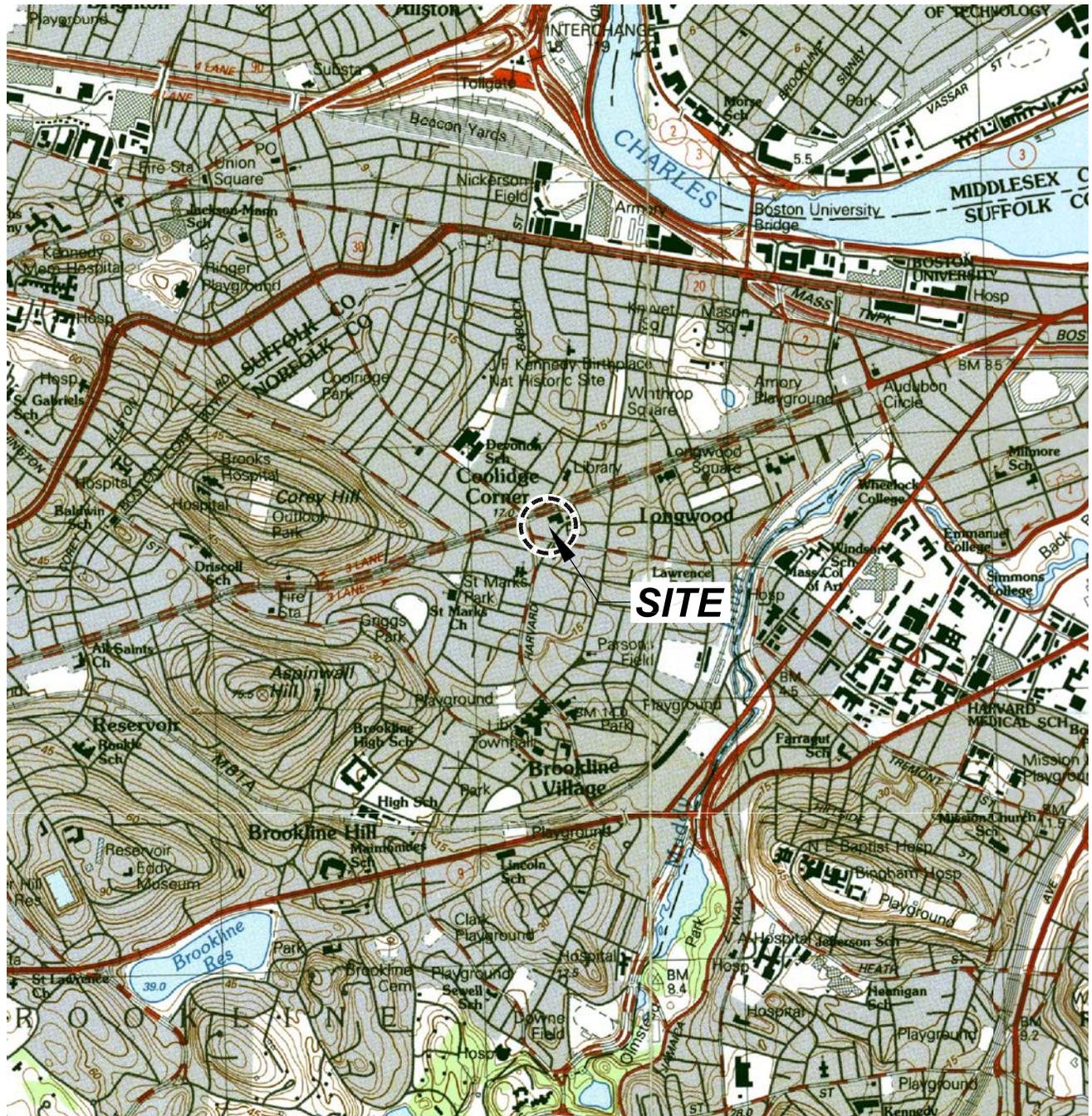
**Category F-2: Disposal in Out-of-State Landfill as Hazardous Waste:**

Category F-2 materials are excavated materials that are considered a listed or characteristic hazardous waste and that cannot feasibly be treated on site prior to disposal.

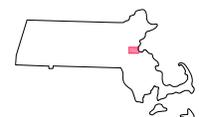
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# Figures

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This Image provided by MassGIS is from U.S.G.S. Topographic 7.5 X 15 Minute Series Boston South, MA Quadrangle, 1987. Datum is National Geodetic Vertical Datum of 1929 (NGVD29). Contour Interval is 3 Meters.



MASSACHUSETTS QUADRANGLE LOCATION

1299 Beacon Street  
Brookline, Massachusetts

Mason and Murphy, Inc.  
Brookline, Massachusetts



Project 1804540

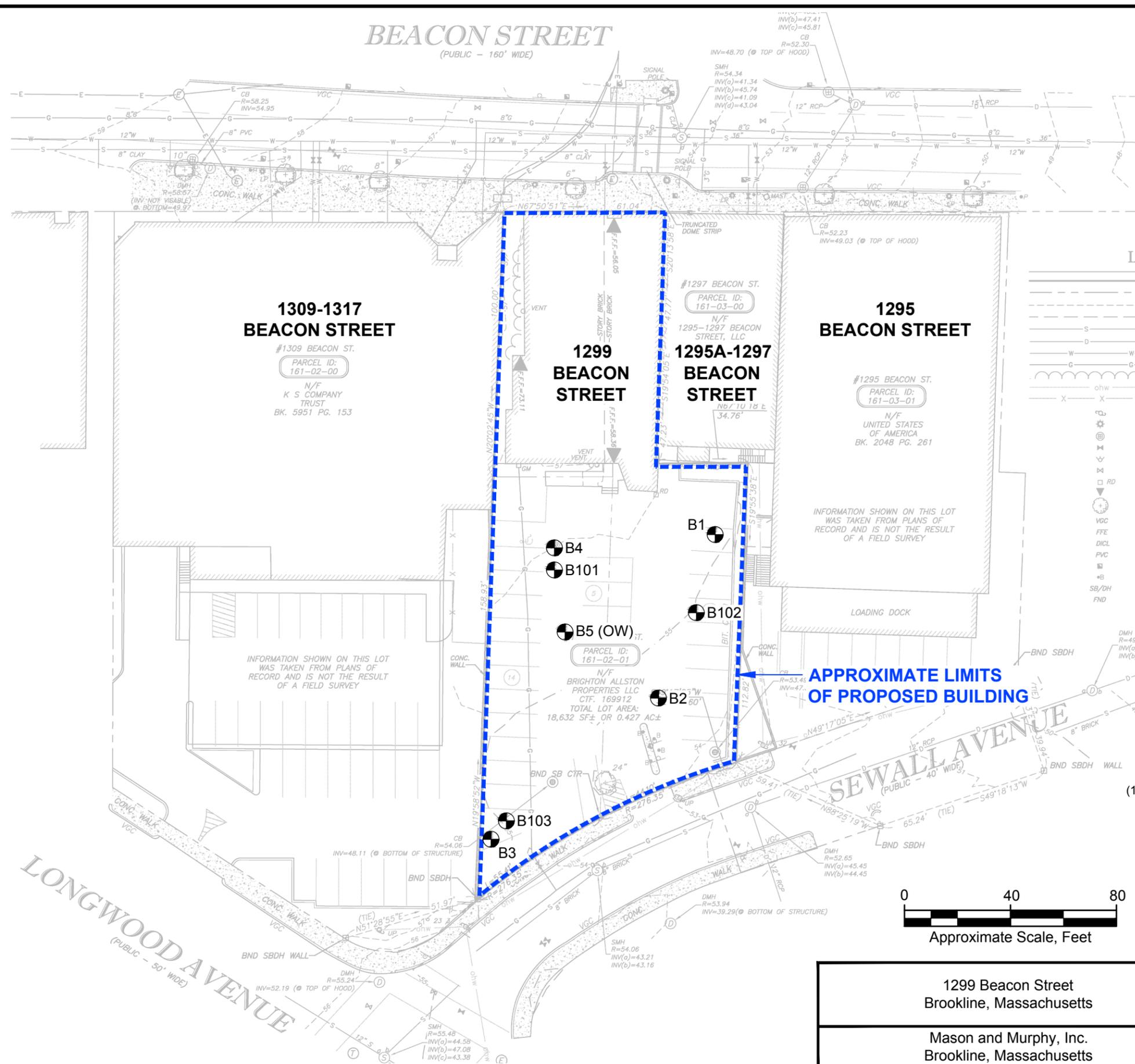
SITE LOCATION MAP

August 2019

Fig. 1

# BEACON STREET

(PUBLIC - 160' WIDE)



### LEGEND

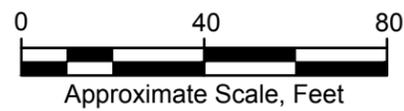
- PROPERTY LINE
- - - ABUTTING PROPERTY LINE
- - - 1' CONTOUR
- - - 5' CONTOUR
- S — (S) SEWER LINE/MANHOLE
- D — (D) DRAIN LINE/MANHOLE
- W — (W) WATER LINE
- G — (G) GAS LINE
- T — (T) TREE LINE
- X — (X) OVERHEAD WIRES
- X — (X) CHAIN LINK FENCE
- (U) UTILITY POLE
- (L) LIGHT POLE
- (C) CATCH BASIN
- (V) WATER VALVE
- (F) FIRE HYDRANT
- (G) GAS VALVE
- (R) ROOF DRAIN
- (D) DOOR
- (+) DECIDUOUS TREE
- (VGC) VERTICAL GRANITE CURB
- (FFE) FINISHED FLOOR ELEVATION
- (DCL) DUCTILE IRON CONCRETE LINED
- (PVC) POLYVINYL CHLORIDE
- (H) HAND HOLE
- (B) BOLLARD
- (SB/DH) STONE BOUND W/DRILLHOLE
- (FND) FOUND

### LEGEND:

- (100 Series) (B) GEI BORING, JULY 2019
- (B) GEI BORING, DECEMBER 2018
- (OW) INDICATES OBSERVATION WELL INSTALLED

### SOURCE:

1. BASE PLAN FROM "1299 BEACON ST., BROOKLINE, MA, EXISTING CONDITIONS PLAN," DRAWING No. EX-1 PREPARED BY RJ O'CONNELL & ASSOCIATES, INC. DATED 06/20/2018.



<p>1299 Beacon Street Brookline, Massachusetts</p>		<p>BORING LOCATION PLAN</p>
<p>Mason and Murphy, Inc. Brookline, Massachusetts</p>	<p>Project 1804540</p>	<p>August 2019 <span style="float: right;">Fig. 2</span></p>

# Attachment A

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## Boring Logs

<b>BORING INFORMATION</b>		<b>BORING B101</b>
LOCATION: See Plan		
GROUND SURFACE EL. (ft): 56	DATE START/END: 7/8/2019 - 7/8/2019	
VERTICAL DATUM: Town of Brookline	DRILLING COMPANY: Northern Drill Service, Inc.	
TOTAL DEPTH (ft): 20.0	DRILLER NAME: J. Bierholm	<b>PAGE 1 of 1</b>
LOGGED BY: M. Greer	RIG TYPE: Geoprobe 6620DT	

<b>DRILLING INFORMATION</b>		
HAMMER TYPE: Automatic	CASING I.D./O.D.: 2 inch / 2.375 inch	CORE BARREL TYPE: Macrocore
AUGER I.D./O.D.: NA / NA	DRILL ROD O.D.: NM	CORE BARREL I.D./O.D. NA / NA
DRILLING METHOD: Direct Push		
WATER LEVEL DEPTHS (ft): Not measured		

**ABBREVIATIONS:**

Pen. = Penetration Length	S = Split Spoon Sample	Qp = Pocket Penetrometer Strength
Rec. = Recovery Length	C = Core Sample	Sv = Pocket Torvane Shear Strength
RQD = Rock Quality Designation	U = Undisturbed Sample	LL = Liquid Limit
= Length of Sound Cores > 4 in / Pen., %	SC = Sonic Core	PI = Plasticity Index
WOR = Weight of Rods	DP = Direct Push Sample	PID = Photoionization Detector
WOH = Weight of Hammer	HSA = Hollow-Stem Auger	I.D./O.D. = Inside Diameter/Outside Diameter

NA, NM = Not Applicable, Not Measured  
Blows per 6 in.: 140-lb hammer falling  
30 inches to drive a 2-inch-O.D.  
split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./Rec. (in)	Blows per 6 in. or RQD			
55		S1	0 to 5	60/32	PUSH	S1(4-32"): 0.2 ppm	FILL	S1(0-4"): ASPHALT. S1(4-32"): WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, ~20% subrounded to subangular gravel up to 2", ~10% nonplastic fines, brown, dry. Contains brick fragments.
50	5	S2	5 to 10	60/52	PUSH	S2: 1.3 ppm		S2: WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, ~20% subrounded to subangular gravel up to 2", ~5% nonplastic fines, brown, dry. Contains concrete fragments up to 1.5".
45	10	S3	10 to 15	60/49	PUSH	S3: 5.1 ppm		S3: Similar to S2, but with trace concrete fragments.
40	15	S4	15 to 20	60/60	PUSH	S4(0-44"): 0.4 ppm		S4(0-44"): WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, ~10% subangular gravel up to 1", ~10% nonplastic fines, brown, dry.
						S4(44-60"): 0.2 ppm	SAND	S4(44-60"): SILTY SAND (SM); ~85% fine sand, ~15% nonplastic fines, brown, damp.
35	20							Bottom of boring at 20 ft. Backfilled with soil cuttings. Topped with asphalt patch.

<b>NOTES:</b> Environmental sample collected.	<b>PROJECT NAME:</b> 1299 Beacon Street  <b>CITY/STATE:</b> Brookline, Massachusetts <b>GEI PROJECT NUMBER:</b> 1804540
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GEI WOBURN STD 1-LOCATION-LAYER NAME BORING LOGS.GPJ 7/9/19

<b>BORING INFORMATION</b>		<b>BORING B102</b>
LOCATION: See Plan		
GROUND SURFACE EL. (ft): 55	DATE START/END: 7/8/2019 - 7/8/2019	
VERTICAL DATUM: Town of Brookline	DRILLING COMPANY: Northern Drill Service, Inc.	
TOTAL DEPTH (ft): 20.0	DRILLER NAME: J. Bierholm	
LOGGED BY: M. Greer	RIG TYPE: Geoprobe 6620DT	PAGE 1 of 1

<b>DRILLING INFORMATION</b>		
HAMMER TYPE: Automatic	CASING I.D./O.D.: 2 inch / 2.375 inch	CORE BARREL TYPE: Macrocore
AUGER I.D./O.D.: NA / NA	DRILL ROD O.D.: NM	CORE BARREL I.D./O.D. NA / NA
DRILLING METHOD: Direct Push		
WATER LEVEL DEPTHS (ft): Not measured		

**ABBREVIATIONS:**

Pen. = Penetration Length	S = Split Spoon Sample	Qp = Pocket Penetrometer Strength	NA, NM = Not Applicable, Not Measured
Rec. = Recovery Length	C = Core Sample	Sv = Pocket Torvane Shear Strength	Blows per 6 in.: 140-lb hammer falling
RQD = Rock Quality Designation	U = Undisturbed Sample	LL = Liquid Limit	30 inches to drive a 2-inch-O.D.
= Length of Sound Cores > 4 in / Pen., %	SC = Sonic Core	PI = Plasticity Index	split spoon sampler.
WOR = Weight of Rods	DP = Direct Push Sample	PID = Photoionization Detector	
WOH = Weight of Hammer	HSA = Hollow-Stem Auger	I.D./O.D. = Inside Diameter/Outside Diameter	

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./Rec. (in)	Blows per 6 in. or RQD			
50	5	S1	0 to 5	60/36	PUSH	S1(4-20"): 2.7 ppm  S1(20-36"): 1.2 ppm	FILL	S1(0-4"): ASPHALT.  S1(4-20"): WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, ~15% subrounded gravel up to 1", ~5% nonplastic fines, dark brown, dry. S1(20-36"): NARROWLY GRADED SAND (SP); ~90% fine to medium sand, ~5% subrounded gravel up to 0.5", ~5% nonplastic fines, light brown, dry.
		S2	5 to 10	60/60	PUSH	S2(0-51"): 4.0 ppm  S2(51-60"): 4.2 ppm		S2(0-51"): WIDELY GRADED SAND (SW); ~85% sand, ~10% subrounded gravel up to 0.75", ~5% nonplastic fines, brown, dry. Contains trace brick fragments.
		S3	10 to 15	60/60	PUSH	S3: 3.5 ppm		S2(51-60"): LEAN CLAY WITH SAND (CL); ~85% low plasticity fines, ~15% mostly fine sand, yellow-brown S3: WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, ~20% subrounded gravel up to 1.25", ~5% nonplastic fines, brown, dry. Contains trace concrete fragments.
		S4	15 to 20	60/60	PUSH	S4(0-45"): 0.8 ppm  S4(45-60"): 0.0 ppm		S4(0-45"): Similar to S3.
35	20					CLAY	S4(45-60): LEAN CLAY WITH SAND (CL); ~85% low plasticity fines, ~15% mostly fine sand, yellow-brown.	
							Bottom of boring at 20 ft. Backfilled with soil cuttings. Topped with asphalt patch.	

<b>NOTES:</b> Environmental sample collected.	<b>PROJECT NAME:</b> 1299 Beacon Street  <b>CITY/STATE:</b> Brookline, Massachusetts <b>GEI PROJECT NUMBER:</b> 1804540
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GEI WOBURN STD 1-LOCATION-LAYER NAME\_BORING LOGS.GPJ 7/9/19

<b>BORING INFORMATION</b>		<b>BORING B103 PAGE 1 of 1</b>
LOCATION: See Plan		
GROUND SURFACE EL. (ft): 55	DATE START/END: 7/8/2019 - 7/8/2019	
VERTICAL DATUM: Town of Brookline	DRILLING COMPANY: Northern Drill Service, Inc.	
TOTAL DEPTH (ft): 20.0	DRILLER NAME: J. Bierholm	
LOGGED BY: M. Greer	RIG TYPE: Geoprobe 6620DT	

<b>DRILLING INFORMATION</b>		
HAMMER TYPE: Automatic	CASING I.D./O.D.: 2 inch / 2.375 inch	CORE BARREL TYPE: Macrocore
AUGER I.D./O.D.: NA / NA	DRILL ROD O.D.: NM	CORE BARREL I.D./O.D. NA / NA
DRILLING METHOD: Direct Push		
WATER LEVEL DEPTHS (ft): Not measured		

**ABBREVIATIONS:**

Pen. = Penetration Length Rec. = Recovery Length RQD = Rock Quality Designation = Length of Sound Cores > 4 in / Pen., % WOR = Weight of Rods WOH = Weight of Hammer	S = Split Spoon Sample C = Core Sample U = Undisturbed Sample SC = Sonic Core DP = Direct Push Sample HSA = Hollow-Stem Auger	Qp = Pocket Penetrometer Strength Sv = Pocket Torvane Shear Strength LL = Liquid Limit PI = Plasticity Index PID = Photoionization Detector I.D./O.D. = Inside Diameter/Outside Diameter
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NA, NM = Not Applicable, Not Measured  
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./Rec. (in)	Blows per 6 in. or RQD			
50 45 40 35	5	S1	0 to 5	60/49	PUSH	S1(5-25"): 5.6 ppm  S1(25-49"): 5.3 ppm	FILL	S1(0-4"): ASPHALT. S1(5-25"): SILTY SAND (SM); ~85% fine to medium sand, ~15% nonplastic fines, brown, dry.  S1(25-49"): WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand ~15% subangular gravel, ~5% nonplastic fines, brown, dry. Contains concrete fragments.
	10	S2	5 to 10	60/47	PUSH	S2: 5.5 ppm		S2: Similar to S1(25-49"), but gravel up to 2".
	15	S3	10 to 15	60/48	PUSH	S3(0-37"): 0.3 ppm  S3(37-48"): NM		S3(0-37"): Similar to S1(25-49").
	20	S4	15 to 20	60/0	PUSH	S4: NM		S3(37-48"): SILTY SAND (SM); ~85% fine to medium sand, ~15% nonplastic fines, brown, damp. S4: No recovery.
	20						SILTY SAND	Bottom of boring at 20 ft. Backfilled with soil cuttings. Topped with asphalt patch.

<b>NOTES:</b> Environmental sample collected.	<b>PROJECT NAME:</b> 1299 Beacon Street  <b>CITY/STATE:</b> Brookline, Massachusetts <b>GEI PROJECT NUMBER:</b> 1804540
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GEI WOBURN STD 1-LOCATION-LAYER NAME BORING LOGS.GPJ 7/9/19

# **Attachment B**

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## **Laboratory Data Sheets**



## ANALYTICAL REPORT

Lab Number:	L1929763
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Cathy Johnson
Phone:	(781) 721-4000
Project Name:	1299 BEACON STREET
Project Number:	1804540
Report Date:	07/24/19

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), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1929763-01	1804540-B101(7.5)	SOIL	BROOKLINE, MA	07/08/19 08:12	07/09/19
L1929763-02	1804540B101(5-10)	SOIL	BROOKLINE, MA	07/08/19 08:14	07/09/19
L1929763-03	1804540B102(7)	SOIL	BROOKLINE, MA	07/08/19 07:39	07/09/19
L1929763-04	1804540B102(5-9)	SOIL	BROOKLINE, MA	07/08/19 07:41	07/09/19
L1929763-05	1804540B103(14)	SOIL	BROOKLINE, MA	07/08/19 09:02	07/09/19

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

### 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.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
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).	YES
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
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
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
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

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



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

### 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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data 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.

**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 Alpha Project Manager 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 Project Management at 800-624-9220 with any questions.

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**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

### Case Narrative (continued)

#### MCP Related Narratives

##### Sample Receipt

In reference to question H:

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

##### Volatile Organics

The initial calibration, associated with L1929763-01, -03 and -05, utilized a quadratic fit for bromomethane.

In reference to question H:

The initial calibration, associated with L1929763-01, -03 and -05, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.0862) and 1,4-dioxane (0.0016), as well as the average response factor for 2-butanone and 1,4-dioxane.

The continuing calibration standard, associated with L1929763-01, -03 and -05, is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

##### VPH

In reference to question I:

All samples were analyzed for a subset of MCP analytes per client request.

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:

 Amita Naik

Title: Technical Director/Representative

Date: 07/24/19

## QC OUTLIER SUMMARY REPORT

**Project Name:** 1299 BEACON STREET

**Lab Number:** L1929763

**Project Number:** 1804540

**Report Date:** 07/24/19

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics by EPA 5035 Low - Westborough Lab								
8260C	Batch QC	WG1261961-3	1,4-Dioxane	LCS	135	70-130	01,03,05	potential high bias
8260C	Batch QC	WG1261961-4	Tetrahydrofuran	LCSD	23	20	01,03,05	non-directional bias
Extractable Petroleum Hydrocarbons - Westborough Lab								
EPH-04-1.1	Batch QC	WG1262124-3	C11-C22 Aromatics	LCSD	27	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Phenanthrene	LCSD	26	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Anthracene	LCSD	26	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Fluoranthene	LCSD	26	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Pyrene	LCSD	26	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Benzo(a)anthracene	LCSD	27	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Chrysene	LCSD	28	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Benzo(b)fluoranthene	LCSD	27	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Benzo(k)fluoranthene	LCSD	29	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Benzo(a)pyrene	LCSD	28	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Indeno(1,2,3-cd)Pyrene	LCSD	26	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Dibenzo(a,h)anthracene	LCSD	27	25	02,04-05	non-directional bias
EPH-04-1.1	Batch QC	WG1262124-3	Benzo(ghi)perylene	LCSD	29	25	02,04-05	non-directional bias

# ORGANICS

# VOLATILES

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-01  
 Client ID: 1804540-B101(7.5)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 08:12  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 97,8260C  
 Analytical Date: 07/18/19 22:16  
 Analyst: NLK  
 Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	3.5	--	1
1,1-Dichloroethane	ND		ug/kg	0.70	--	1
Chloroform	ND		ug/kg	1.0	--	1
Carbon tetrachloride	ND		ug/kg	0.70	--	1
1,2-Dichloropropane	ND		ug/kg	0.70	--	1
Dibromochloromethane	ND		ug/kg	0.70	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.70	--	1
Tetrachloroethene	ND		ug/kg	0.35	--	1
Chlorobenzene	ND		ug/kg	0.35	--	1
Trichlorofluoromethane	ND		ug/kg	2.8	--	1
1,2-Dichloroethane	ND		ug/kg	0.70	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.35	--	1
Bromodichloromethane	ND		ug/kg	0.35	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.70	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.35	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.35	--	1
1,1-Dichloropropene	ND		ug/kg	0.35	--	1
Bromoform	ND		ug/kg	2.8	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.35	--	1
Benzene	ND		ug/kg	0.35	--	1
Toluene	ND		ug/kg	0.70	--	1
Ethylbenzene	ND		ug/kg	0.70	--	1
Chloromethane	ND		ug/kg	2.8	--	1
Bromomethane	ND		ug/kg	1.4	--	1
Vinyl chloride	ND		ug/kg	0.70	--	1
Chloroethane	ND		ug/kg	1.4	--	1
1,1-Dichloroethene	ND		ug/kg	0.70	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.0	--	1

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-01  
**Client ID:** 1804540-B101(7.5)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 08:12  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
Trichloroethene	ND		ug/kg	0.35	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.4	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.4	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.4	--	1
Methyl tert butyl ether	ND		ug/kg	1.4	--	1
p/m-Xylene	ND		ug/kg	1.4	--	1
o-Xylene	ND		ug/kg	0.70	--	1
Xylenes, Total	ND		ug/kg	0.70	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.70	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.70	--	1
Dibromomethane	ND		ug/kg	1.4	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.4	--	1
Styrene	ND		ug/kg	0.70	--	1
Dichlorodifluoromethane	ND		ug/kg	7.0	--	1
Acetone	8.0		ug/kg	7.0	--	1
Carbon disulfide	ND		ug/kg	7.0	--	1
Methyl ethyl ketone	ND		ug/kg	7.0	--	1
Methyl isobutyl ketone	ND		ug/kg	7.0	--	1
2-Hexanone	ND		ug/kg	7.0	--	1
Bromochloromethane	ND		ug/kg	1.4	--	1
Tetrahydrofuran	ND		ug/kg	2.8	--	1
2,2-Dichloropropane	ND		ug/kg	1.4	--	1
1,2-Dibromoethane	ND		ug/kg	0.70	--	1
1,3-Dichloropropane	ND		ug/kg	1.4	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.35	--	1
Bromobenzene	ND		ug/kg	1.4	--	1
n-Butylbenzene	ND		ug/kg	0.70	--	1
sec-Butylbenzene	ND		ug/kg	0.70	--	1
tert-Butylbenzene	ND		ug/kg	1.4	--	1
o-Chlorotoluene	ND		ug/kg	1.4	--	1
p-Chlorotoluene	ND		ug/kg	1.4	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.1	--	1
Hexachlorobutadiene	ND		ug/kg	2.8	--	1
Isopropylbenzene	ND		ug/kg	0.70	--	1
p-Isopropyltoluene	ND		ug/kg	0.70	--	1
Naphthalene	ND		ug/kg	2.8	--	1
n-Propylbenzene	ND		ug/kg	0.70	--	1

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-01  
**Client ID:** 1804540-B101(7.5)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 08:12  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
1,2,3-Trichlorobenzene	ND		ug/kg	1.4	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.4	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.4	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.4	--	1
Diethyl ether	ND		ug/kg	1.4	--	1
Diisopropyl Ether	ND		ug/kg	1.4	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.4	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.4	--	1
1,4-Dioxane	ND		ug/kg	56	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	107		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-03  
 Client ID: 1804540B102(7)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 07:39  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 97,8260C  
 Analytical Date: 07/18/19 22:47  
 Analyst: NLK  
 Percent Solids: 98%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	4.2	--	1
1,1-Dichloroethane	ND		ug/kg	0.84	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.84	--	1
1,2-Dichloropropane	ND		ug/kg	0.84	--	1
Dibromochloromethane	ND		ug/kg	0.84	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.84	--	1
Tetrachloroethene	ND		ug/kg	0.42	--	1
Chlorobenzene	ND		ug/kg	0.42	--	1
Trichlorofluoromethane	ND		ug/kg	3.4	--	1
1,2-Dichloroethane	ND		ug/kg	0.84	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.42	--	1
Bromodichloromethane	ND		ug/kg	0.42	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.84	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.42	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.42	--	1
1,1-Dichloropropene	ND		ug/kg	0.42	--	1
Bromoform	ND		ug/kg	3.4	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.42	--	1
Benzene	ND		ug/kg	0.42	--	1
Toluene	ND		ug/kg	0.84	--	1
Ethylbenzene	ND		ug/kg	0.84	--	1
Chloromethane	ND		ug/kg	3.4	--	1
Bromomethane	ND		ug/kg	1.7	--	1
Vinyl chloride	ND		ug/kg	0.84	--	1
Chloroethane	ND		ug/kg	1.7	--	1
1,1-Dichloroethene	ND		ug/kg	0.84	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-03  
**Client ID:** 1804540B102(7)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 07:39  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
Trichloroethene	ND		ug/kg	0.42	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.7	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.7	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.7	--	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	0.84	--	1
Xylenes, Total	ND		ug/kg	0.84	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.84	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.84	--	1
Dibromomethane	ND		ug/kg	1.7	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.7	--	1
Styrene	ND		ug/kg	0.84	--	1
Dichlorodifluoromethane	ND		ug/kg	8.4	--	1
Acetone	ND		ug/kg	8.4	--	1
Carbon disulfide	ND		ug/kg	8.4	--	1
Methyl ethyl ketone	ND		ug/kg	8.4	--	1
Methyl isobutyl ketone	ND		ug/kg	8.4	--	1
2-Hexanone	ND		ug/kg	8.4	--	1
Bromochloromethane	ND		ug/kg	1.7	--	1
Tetrahydrofuran	ND		ug/kg	3.4	--	1
2,2-Dichloropropane	ND		ug/kg	1.7	--	1
1,2-Dibromoethane	ND		ug/kg	0.84	--	1
1,3-Dichloropropane	ND		ug/kg	1.7	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.42	--	1
Bromobenzene	ND		ug/kg	1.7	--	1
n-Butylbenzene	ND		ug/kg	0.84	--	1
sec-Butylbenzene	ND		ug/kg	0.84	--	1
tert-Butylbenzene	ND		ug/kg	1.7	--	1
o-Chlorotoluene	ND		ug/kg	1.7	--	1
p-Chlorotoluene	ND		ug/kg	1.7	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.5	--	1
Hexachlorobutadiene	ND		ug/kg	3.4	--	1
Isopropylbenzene	ND		ug/kg	0.84	--	1
p-Isopropyltoluene	ND		ug/kg	0.84	--	1
Naphthalene	ND		ug/kg	3.4	--	1
n-Propylbenzene	ND		ug/kg	0.84	--	1

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-03  
**Client ID:** 1804540B102(7)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 07:39  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
1,2,3-Trichlorobenzene	ND		ug/kg	1.7	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.7	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.7	--	1
Diethyl ether	ND		ug/kg	1.7	--	1
Diisopropyl Ether	ND		ug/kg	1.7	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.7	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.7	--	1
1,4-Dioxane	ND		ug/kg	68	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	107		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-05  
 Client ID: 1804540B103(14)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 09:02  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 97,8260C  
 Analytical Date: 07/18/19 23:16  
 Analyst: NLK  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	3.3	--	1
1,1-Dichloroethane	ND		ug/kg	0.66	--	1
Chloroform	ND		ug/kg	0.99	--	1
Carbon tetrachloride	ND		ug/kg	0.66	--	1
1,2-Dichloropropane	ND		ug/kg	0.66	--	1
Dibromochloromethane	ND		ug/kg	0.66	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.66	--	1
Tetrachloroethene	ND		ug/kg	0.33	--	1
Chlorobenzene	ND		ug/kg	0.33	--	1
Trichlorofluoromethane	ND		ug/kg	2.6	--	1
1,2-Dichloroethane	ND		ug/kg	0.66	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.33	--	1
Bromodichloromethane	ND		ug/kg	0.33	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.66	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.33	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.33	--	1
1,1-Dichloropropene	ND		ug/kg	0.33	--	1
Bromoform	ND		ug/kg	2.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.33	--	1
Benzene	ND		ug/kg	0.33	--	1
Toluene	ND		ug/kg	0.66	--	1
Ethylbenzene	ND		ug/kg	0.66	--	1
Chloromethane	ND		ug/kg	2.6	--	1
Bromomethane	ND		ug/kg	1.3	--	1
Vinyl chloride	ND		ug/kg	0.66	--	1
Chloroethane	ND		ug/kg	1.3	--	1
1,1-Dichloroethene	ND		ug/kg	0.66	--	1
trans-1,2-Dichloroethene	ND		ug/kg	0.99	--	1

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-05  
**Client ID:** 1804540B103(14)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 09:02  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
Trichloroethene	ND		ug/kg	0.33	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.3	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.3	--	1
Methyl tert butyl ether	ND		ug/kg	1.3	--	1
p/m-Xylene	ND		ug/kg	1.3	--	1
o-Xylene	ND		ug/kg	0.66	--	1
Xylenes, Total	ND		ug/kg	0.66	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.66	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.66	--	1
Dibromomethane	ND		ug/kg	1.3	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.3	--	1
Styrene	ND		ug/kg	0.66	--	1
Dichlorodifluoromethane	ND		ug/kg	6.6	--	1
Acetone	ND		ug/kg	6.6	--	1
Carbon disulfide	ND		ug/kg	6.6	--	1
Methyl ethyl ketone	ND		ug/kg	6.6	--	1
Methyl isobutyl ketone	ND		ug/kg	6.6	--	1
2-Hexanone	ND		ug/kg	6.6	--	1
Bromochloromethane	ND		ug/kg	1.3	--	1
Tetrahydrofuran	ND		ug/kg	2.6	--	1
2,2-Dichloropropane	ND		ug/kg	1.3	--	1
1,2-Dibromoethane	ND		ug/kg	0.66	--	1
1,3-Dichloropropane	ND		ug/kg	1.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.33	--	1
Bromobenzene	ND		ug/kg	1.3	--	1
n-Butylbenzene	ND		ug/kg	0.66	--	1
sec-Butylbenzene	ND		ug/kg	0.66	--	1
tert-Butylbenzene	ND		ug/kg	1.3	--	1
o-Chlorotoluene	ND		ug/kg	1.3	--	1
p-Chlorotoluene	ND		ug/kg	1.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.0	--	1
Hexachlorobutadiene	ND		ug/kg	2.6	--	1
Isopropylbenzene	ND		ug/kg	0.66	--	1
p-Isopropyltoluene	ND		ug/kg	0.66	--	1
Naphthalene	ND		ug/kg	2.6	--	1
n-Propylbenzene	ND		ug/kg	0.66	--	1

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-05  
**Client ID:** 1804540B103(14)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 09:02  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>MCP Volatile Organics by EPA 5035 Low - Westborough Lab</b>						
1,2,3-Trichlorobenzene	ND		ug/kg	1.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.3	--	1
Diethyl ether	ND		ug/kg	1.3	--	1
Diisopropyl Ether	ND		ug/kg	1.3	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.3	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.3	--	1
1,4-Dioxane	ND		ug/kg	53	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	109		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
Analytical Date: 07/18/19 17:35  
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,03,05 Batch: WG1261961-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
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	0.50	--

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
Analytical Date: 07/18/19 17:35  
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,03,05 Batch: WG1261961-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	10	--
Carbon disulfide	ND		ug/kg	10	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 97,8260C  
Analytical Date: 07/18/19 17:35  
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,03,05 Batch: WG1261961-5					
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
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	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
Diethyl ether	ND		ug/kg	2.0	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	107		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1299 BEACON STREET

Lab Number: L1929763

Project Number: 1804540

Report Date: 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03,05 Batch: WG1261961-3 WG1261961-4								
Methylene chloride	85		88		70-130	3		20
1,1-Dichloroethane	97		95		70-130	2		20
Chloroform	100		98		70-130	2		20
Carbon tetrachloride	113		109		70-130	4		20
1,2-Dichloropropane	93		91		70-130	2		20
Dibromochloromethane	90		90		70-130	0		20
1,1,2-Trichloroethane	79		80		70-130	1		20
Tetrachloroethene	94		92		70-130	2		20
Chlorobenzene	84		84		70-130	0		20
Trichlorofluoromethane	116		109		70-130	6		20
1,2-Dichloroethane	100		99		70-130	1		20
1,1,1-Trichloroethane	117		115		70-130	2		20
Bromodichloromethane	101		99		70-130	2		20
trans-1,3-Dichloropropene	92		89		70-130	3		20
cis-1,3-Dichloropropene	96		94		70-130	2		20
1,1-Dichloropropene	102		98		70-130	4		20
Bromoform	86		84		70-130	2		20
1,1,1,2,2-Tetrachloroethane	78		76		70-130	3		20
Benzene	91		89		70-130	2		20
Toluene	86		86		70-130	0		20
Ethylbenzene	93		92		70-130	1		20
Chloromethane	79		77		70-130	3		20
Bromomethane	108		104		70-130	4		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1299 BEACON STREET

Lab Number: L1929763

Project Number: 1804540

Report Date: 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03,05 Batch: WG1261961-3 WG1261961-4								
Vinyl chloride	81		77		70-130	5		20
Chloroethane	100		95		70-130	5		20
1,1-Dichloroethene	86		82		70-130	5		20
trans-1,2-Dichloroethene	96		94		70-130	2		20
Trichloroethene	99		96		70-130	3		20
1,2-Dichlorobenzene	82		80		70-130	2		20
1,3-Dichlorobenzene	83		82		70-130	1		20
1,4-Dichlorobenzene	81		80		70-130	1		20
Methyl tert butyl ether	97		97		70-130	0		20
p/m-Xylene	88		86		70-130	2		20
o-Xylene	86		86		70-130	0		20
cis-1,2-Dichloroethene	94		94		70-130	0		20
Dibromomethane	90		89		70-130	1		20
1,2,3-Trichloropropane	81		78		70-130	4		20
Styrene	88		87		70-130	1		20
Dichlorodifluoromethane	80		77		70-130	4		20
Acetone	125		111		70-130	12		20
Carbon disulfide	71		71		70-130	0		20
Methyl ethyl ketone	82		80		70-130	2		20
Methyl isobutyl ketone	87		82		70-130	6		20
2-Hexanone	87		84		70-130	4		20
Bromochloromethane	92		89		70-130	3		20
Tetrahydrofuran	102		81		70-130	23	Q	20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1299 BEACON STREET

Lab Number: L1929763

Project Number: 1804540

Report Date: 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03,05 Batch: WG1261961-3 WG1261961-4								
2,2-Dichloropropane	114		109		70-130	4		20
1,2-Dibromoethane	81		83		70-130	2		20
1,3-Dichloropropane	82		84		70-130	2		20
1,1,1,2-Tetrachloroethane	91		91		70-130	0		20
Bromobenzene	80		80		70-130	0		20
n-Butylbenzene	95		92		70-130	3		20
sec-Butylbenzene	89		86		70-130	3		20
tert-Butylbenzene	87		85		70-130	2		20
o-Chlorotoluene	90		87		70-130	3		20
p-Chlorotoluene	93		86		70-130	8		20
1,2-Dibromo-3-chloropropane	79		74		70-130	7		20
Hexachlorobutadiene	98		94		70-130	4		20
Isopropylbenzene	87		84		70-130	4		20
p-Isopropyltoluene	89		86		70-130	3		20
Naphthalene	80		78		70-130	3		20
n-Propylbenzene	90		88		70-130	2		20
1,2,3-Trichlorobenzene	83		82		70-130	1		20
1,2,4-Trichlorobenzene	86		84		70-130	2		20
1,3,5-Trimethylbenzene	88		85		70-130	3		20
1,2,4-Trimethylbenzene	88		85		70-130	3		20
Diethyl ether	82		81		70-130	1		20
Diisopropyl Ether	92		94		70-130	2		20
Ethyl-Tert-Butyl-Ether	96		96		70-130	0		20

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03,05 Batch: WG1261961-3 WG1261961-4								
Tertiary-Amyl Methyl Ether	89		89		70-130	0		20
1,4-Dioxane	135	Q	129		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		112		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	105		104		70-130
Dibromofluoromethane	107		107		70-130

# PETROLEUM HYDROCARBONS

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-01  
 Client ID: 1804540-B101(7.5)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 08:12  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Analytical Method: 131, VPH-18-2.1  
 Analytical Date: 07/17/19 15:29  
 Analyst: MKS  
 Percent Solids: 97%

Trap: EST, Carbo-pack B/Carboxen 1000&1001

Analytical Column: Restek, RTX-502.2,  
 105m, 0.53ID, 3um

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Yes (Covering the Soil)  
 Methanol ratio: 2.9:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Petroleum Hydrocarbons - Westborough Lab**

C5-C8 Aliphatics	ND		mg/kg	15.3	--	1
C9-C12 Aliphatics	ND		mg/kg	15.3	--	1
C9-C10 Aromatics	ND		mg/kg	15.3	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	15.3	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	15.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	116		70-130
2,5-Dibromotoluene-FID	117		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-02  
 Client ID: 1804540B101(5-10)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 08:14  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 07/21/19 20:10  
 Analyst: LL  
 Percent Solids: 96%

Extraction Method: EPA 3546  
 Extraction Date: 07/19/19 13:34  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 07/20/19

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	6.53	--	1
C19-C36 Aliphatics	ND		mg/kg	6.53	--	1
C11-C22 Aromatics	ND		mg/kg	6.53	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.53	--	1
Naphthalene	ND		mg/kg	0.326	--	1
2-Methylnaphthalene	ND		mg/kg	0.326	--	1
Acenaphthylene	ND		mg/kg	0.326	--	1
Acenaphthene	ND		mg/kg	0.326	--	1
Fluorene	ND		mg/kg	0.326	--	1
Phenanthrene	ND		mg/kg	0.326	--	1
Anthracene	ND		mg/kg	0.326	--	1
Fluoranthene	ND		mg/kg	0.326	--	1
Pyrene	ND		mg/kg	0.326	--	1
Benzo(a)anthracene	ND		mg/kg	0.326	--	1
Chrysene	ND		mg/kg	0.326	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.326	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.326	--	1
Benzo(a)pyrene	ND		mg/kg	0.326	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.326	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.326	--	1
Benzo(ghi)perylene	ND		mg/kg	0.326	--	1

**Project Name:** 1299 BEACON STREET**Lab Number:** L1929763**Project Number:** 1804540**Report Date:** 07/24/19**SAMPLE RESULTS**

Lab ID: L1929763-02

Date Collected: 07/08/19 08:14

Client ID: 1804540B101(5-10)

Date Received: 07/09/19

Sample Location: BROOKLINE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	84		40-140
2-Fluorobiphenyl	98		40-140
2-Bromonaphthalene	98		40-140

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-03  
 Client ID: 1804540B102(7)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 07:39  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Analytical Method: 131, VPH-18-2.1  
 Analytical Date: 07/17/19 16:00  
 Analyst: MKS  
 Percent Solids: 98%

Trap: EST, Carbo-pack B/Carboxen 1000&1001

Analytical Column: Restek, RTX-502.2,  
 105m, 0.53ID, 3um

**Quality Control Information**

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Were samples received in methanol?	Yes (Covering the Soil)
Methanol ratio:	3.0:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	15.5	--	1
C9-C12 Aliphatics	ND		mg/kg	15.5	--	1
C9-C10 Aromatics	ND		mg/kg	15.5	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	15.5	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	15.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	113		70-130
2,5-Dibromotoluene-FID	113		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-04  
 Client ID: 1804540B102(5-9)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 07:41  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 07/21/19 20:50  
 Analyst: LL  
 Percent Solids: 97%

Extraction Method: EPA 3546  
 Extraction Date: 07/19/19 13:34  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 07/20/19

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	6.63	--	1
C19-C36 Aliphatics	ND		mg/kg	6.63	--	1
C11-C22 Aromatics	ND		mg/kg	6.63	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.63	--	1
Naphthalene	ND		mg/kg	0.331	--	1
2-Methylnaphthalene	ND		mg/kg	0.331	--	1
Acenaphthylene	ND		mg/kg	0.331	--	1
Acenaphthene	ND		mg/kg	0.331	--	1
Fluorene	ND		mg/kg	0.331	--	1
Phenanthrene	ND		mg/kg	0.331	--	1
Anthracene	ND		mg/kg	0.331	--	1
Fluoranthene	ND		mg/kg	0.331	--	1
Pyrene	ND		mg/kg	0.331	--	1
Benzo(a)anthracene	ND		mg/kg	0.331	--	1
Chrysene	ND		mg/kg	0.331	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.331	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.331	--	1
Benzo(a)pyrene	ND		mg/kg	0.331	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.331	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.331	--	1
Benzo(ghi)perylene	ND		mg/kg	0.331	--	1

**Project Name:** 1299 BEACON STREET**Lab Number:** L1929763**Project Number:** 1804540**Report Date:** 07/24/19**SAMPLE RESULTS**

Lab ID: L1929763-04

Date Collected: 07/08/19 07:41

Client ID: 1804540B102(5-9)

Date Received: 07/09/19

Sample Location: BROOKLINE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	62		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	85		40-140

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-05  
 Client ID: 1804540B103(14)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 09:02  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Analytical Method: 131, VPH-18-2.1  
 Analytical Date: 07/17/19 16:30  
 Analyst: MKS  
 Percent Solids: 83%

Trap: EST, Carbo-pack B/Carboxen 1000&1001

Analytical Column: Restek, RTX-502.2,  
 105m, 0.53ID, 3um

**Quality Control Information**

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Were samples received in methanol?	Yes (Covering the Soil)
Methanol ratio:	2.2:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	14.5	--	1
C9-C12 Aliphatics	ND		mg/kg	14.5	--	1
C9-C10 Aromatics	ND		mg/kg	14.5	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	14.5	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	14.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	118		70-130
2,5-Dibromotoluene-FID	118		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-05  
 Client ID: 1804540B103(14)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 09:02  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 07/21/19 21:29  
 Analyst: LL  
 Percent Solids: 83%

Extraction Method: EPA 3546  
 Extraction Date: 07/19/19 13:34  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 07/20/19

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.89	--	1
C19-C36 Aliphatics	ND		mg/kg	7.89	--	1
C11-C22 Aromatics	ND		mg/kg	7.89	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.89	--	1
Naphthalene	ND		mg/kg	0.394	--	1
2-Methylnaphthalene	ND		mg/kg	0.394	--	1
Acenaphthylene	ND		mg/kg	0.394	--	1
Acenaphthene	ND		mg/kg	0.394	--	1
Fluorene	ND		mg/kg	0.394	--	1
Phenanthrene	ND		mg/kg	0.394	--	1
Anthracene	ND		mg/kg	0.394	--	1
Fluoranthene	ND		mg/kg	0.394	--	1
Pyrene	ND		mg/kg	0.394	--	1
Benzo(a)anthracene	ND		mg/kg	0.394	--	1
Chrysene	ND		mg/kg	0.394	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.394	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.394	--	1
Benzo(a)pyrene	ND		mg/kg	0.394	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.394	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.394	--	1
Benzo(ghi)perylene	ND		mg/kg	0.394	--	1

**Project Name:** 1299 BEACON STREET**Lab Number:** L1929763**Project Number:** 1804540**Report Date:** 07/24/19**SAMPLE RESULTS**

Lab ID: L1929763-05

Date Collected: 07/08/19 09:02

Client ID: 1804540B103(14)

Date Received: 07/09/19

Sample Location: BROOKLINE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	62		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	83		40-140

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 131,VPH-18-2.1  
Analytical Date: 07/17/19 09:20  
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01,03,05 Batch: WG1261014-4					
C5-C8 Aliphatics	ND		mg/kg	5.00	--
C9-C12 Aliphatics	ND		mg/kg	5.00	--
C9-C10 Aromatics	ND		mg/kg	5.00	--
C5-C8 Aliphatics, Adjusted	ND		mg/kg	5.00	--
C9-C12 Aliphatics, Adjusted	ND		mg/kg	5.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	114		70-130
2,5-Dibromotoluene-FID	114		70-130

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 07/21/19 19:31  
 Analyst: LL

Extraction Method: EPA 3546  
 Extraction Date: 07/19/19 13:34  
 Cleanup Method: EPH-04-1  
 Cleanup Date: 07/20/19

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02,04-05 Batch: WG1262124-1					
C9-C18 Aliphatics	ND		mg/kg	6.36	--
C19-C36 Aliphatics	ND		mg/kg	6.36	--
C11-C22 Aromatics	ND		mg/kg	6.36	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.36	--
Naphthalene	ND		mg/kg	0.318	--
2-Methylnaphthalene	ND		mg/kg	0.318	--
Acenaphthylene	ND		mg/kg	0.318	--
Acenaphthene	ND		mg/kg	0.318	--
Fluorene	ND		mg/kg	0.318	--
Phenanthrene	ND		mg/kg	0.318	--
Anthracene	ND		mg/kg	0.318	--
Fluoranthene	ND		mg/kg	0.318	--
Pyrene	ND		mg/kg	0.318	--
Benzo(a)anthracene	ND		mg/kg	0.318	--
Chrysene	ND		mg/kg	0.318	--
Benzo(b)fluoranthene	ND		mg/kg	0.318	--
Benzo(k)fluoranthene	ND		mg/kg	0.318	--
Benzo(a)pyrene	ND		mg/kg	0.318	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.318	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.318	--
Benzo(ghi)perylene	ND		mg/kg	0.318	--

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 07/21/19 19:31  
Analyst: LL

Extraction Method: EPA 3546  
Extraction Date: 07/19/19 13:34  
Cleanup Method: EPH-04-1  
Cleanup Date: 07/20/19

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02,04-05					Batch: WG1262124-1

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	97		40-140

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01,03,05 Batch: WG1261014-2 WG1261014-3								
C5-C8 Aliphatics	100		100		70-130	0		25
C9-C12 Aliphatics	101		101		70-130	0		25
C9-C10 Aromatics	100		100		70-130	0		25
Benzene	102		103		70-130	1		25
Toluene	102		103		70-130	1		25
Ethylbenzene	104		105		70-130	1		25
p/m-Xylene	105		105		70-130	0		25
o-Xylene	99		99		70-130	0		25
Methyl tert butyl ether	103		107		70-130	4		25
Naphthalene	107		108		70-130	1		25
1,2,4-Trimethylbenzene	99		100		70-130	0		25
Pentane	95		94		70-130	0		25
2-Methylpentane	104		104		70-130	0		25
2,2,4-Trimethylpentane	99		100		70-130	0		25
n-Nonane	102		102		30-130	0		25
n-Decane	97		96		70-130	1		25
n-Butylcyclohexane	104		104		70-130	0		25

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	106		105		70-130
2,5-Dibromotoluene-FID	106		105		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1299 BEACON STREET

Lab Number: L1929763

Project Number: 1804540

Report Date: 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02,04-05 Batch: WG1262124-2 WG1262124-3								
C9-C18 Aliphatics	63		70		40-140	11		25
C19-C36 Aliphatics	66		69		40-140	4		25
C11-C22 Aromatics	93		71		40-140	27	Q	25
Naphthalene	78		62		40-140	23		25
2-Methylnaphthalene	77		62		40-140	22		25
Acenaphthylene	83		66		40-140	23		25
Acenaphthene	88		70		40-140	23		25
Fluorene	88		69		40-140	24		25
Phenanthrene	92		71		40-140	26	Q	25
Anthracene	91		70		40-140	26	Q	25
Fluoranthene	90		69		40-140	26	Q	25
Pyrene	92		71		40-140	26	Q	25
Benzo(a)anthracene	89		68		40-140	27	Q	25
Chrysene	91		69		40-140	28	Q	25
Benzo(b)fluoranthene	89		68		40-140	27	Q	25
Benzo(k)fluoranthene	88		66		40-140	29	Q	25
Benzo(a)pyrene	86		65		40-140	28	Q	25
Indeno(1,2,3-cd)Pyrene	86		66		40-140	26	Q	25
Dibenzo(a,h)anthracene	88		67		40-140	27	Q	25
Benzo(ghi)perylene	84		63		40-140	29	Q	25
Nonane (C9)	56		62		30-140	10		25
Decane (C10)	61		68		40-140	11		25
Dodecane (C12)	60		66		40-140	10		25

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1299 BEACON STREET

Lab Number: L1929763

Project Number: 1804540

Report Date: 07/24/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02,04-05 Batch: WG1262124-2 WG1262124-3								
Tetradecane (C14)	59		64		40-140	8		25
Hexadecane (C16)	58		62		40-140	7		25
Octadecane (C18)	58		62		40-140	7		25
Nonadecane (C19)	57		61		40-140	7		25
Eicosane (C20)	57		62		40-140	8		25
Docosane (C22)	57		61		40-140	7		25
Tetracosane (C24)	57		62		40-140	8		25
Hexacosane (C26)	59		64		40-140	8		25
Octacosane (C28)	61		66		40-140	8		25
Triacontane (C30)	63		68		40-140	8		25
Hexatriacontane (C36)	65		70		40-140	7		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	58		60		40-140
o-Terphenyl	78		59		40-140
2-Fluorobiphenyl	95		75		40-140
2-Bromonaphthalene	96		75		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

# PCBS

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-02  
**Client ID:** 1804540B101(5-10)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 08:14  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Soil  
**Analytical Method:** 97,8082A  
**Analytical Date:** 07/24/19 12:48  
**Analyst:** WR  
**Percent Solids:** 96%

**Extraction Method:** EPA 3546  
**Extraction Date:** 07/19/19 14:02  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 07/19/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 07/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>MCP Polychlorinated Biphenyls - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	33.5	--	1	A
Aroclor 1221	ND		ug/kg	33.5	--	1	A
Aroclor 1232	ND		ug/kg	33.5	--	1	A
Aroclor 1242	ND		ug/kg	33.5	--	1	A
Aroclor 1248	ND		ug/kg	33.5	--	1	A
Aroclor 1254	ND		ug/kg	33.5	--	1	B
Aroclor 1260	ND		ug/kg	33.5	--	1	A
Aroclor 1262	ND		ug/kg	33.5	--	1	A
Aroclor 1268	ND		ug/kg	33.5	--	1	A
PCBs, Total	ND		ug/kg	33.5	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	61		30-150	B
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	52		30-150	A

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-04  
 Client ID: 1804540B102(5-9)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 07:41  
 Date Received: 07/09/19  
 Field Prep: Not Specified

## Sample Depth:

Matrix: Soil  
 Analytical Method: 97,8082A  
 Analytical Date: 07/24/19 13:01  
 Analyst: WR  
 Percent Solids: 97%

Extraction Method: EPA 3546  
 Extraction Date: 07/19/19 14:02  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 07/19/19  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 07/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>MCP Polychlorinated Biphenyls - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	33.3	--	1	A
Aroclor 1221	ND		ug/kg	33.3	--	1	A
Aroclor 1232	ND		ug/kg	33.3	--	1	A
Aroclor 1242	ND		ug/kg	33.3	--	1	A
Aroclor 1248	ND		ug/kg	33.3	--	1	A
Aroclor 1254	ND		ug/kg	33.3	--	1	A
Aroclor 1260	ND		ug/kg	33.3	--	1	A
Aroclor 1262	ND		ug/kg	33.3	--	1	A
Aroclor 1268	ND		ug/kg	33.3	--	1	A
PCBs, Total	ND		ug/kg	33.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	59		30-150	B
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	51		30-150	A

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-05  
 Client ID: 1804540B103(14)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 09:02  
 Date Received: 07/09/19  
 Field Prep: Not Specified

## Sample Depth:

Matrix: Soil  
 Analytical Method: 97,8082A  
 Analytical Date: 07/24/19 13:13  
 Analyst: WR  
 Percent Solids: 83%

Extraction Method: EPA 3546  
 Extraction Date: 07/19/19 14:02  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 07/19/19  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 07/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>MCP Polychlorinated Biphenyls - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	39.1	--	1	A
Aroclor 1221	ND		ug/kg	39.1	--	1	A
Aroclor 1232	ND		ug/kg	39.1	--	1	A
Aroclor 1242	ND		ug/kg	39.1	--	1	A
Aroclor 1248	ND		ug/kg	39.1	--	1	A
Aroclor 1254	ND		ug/kg	39.1	--	1	B
Aroclor 1260	ND		ug/kg	39.1	--	1	A
Aroclor 1262	ND		ug/kg	39.1	--	1	A
Aroclor 1268	ND		ug/kg	39.1	--	1	A
PCBs, Total	ND		ug/kg	39.1	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	59		30-150	B
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	50		30-150	A

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 97,8082A  
 Analytical Date: 07/19/19 02:59  
 Analyst: WR

Extraction Method: EPA 3546  
 Extraction Date: 07/18/19 14:11  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 07/18/19  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 07/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 02,04-05 Batch: WG1261621-1						
Aroclor 1016	ND		ug/kg	32.6	--	A
Aroclor 1221	ND		ug/kg	32.6	--	A
Aroclor 1232	ND		ug/kg	32.6	--	A
Aroclor 1242	ND		ug/kg	32.6	--	A
Aroclor 1248	ND		ug/kg	32.6	--	A
Aroclor 1254	ND		ug/kg	32.6	--	A
Aroclor 1260	ND		ug/kg	32.6	--	A
Aroclor 1262	ND		ug/kg	32.6	--	A
Aroclor 1268	ND		ug/kg	32.6	--	A
PCBs, Total	ND		ug/kg	32.6	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	84		30-150	B
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	62		30-150	A

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 02,04-05 Batch: WG1261621-2 WG1261621-3									
Aroclor 1016	86		92		40-140	7		30	A
Aroclor 1260	60		61		40-140	2		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		91		30-150	B
Decachlorobiphenyl	69		79		30-150	B
2,4,5,6-Tetrachloro-m-xylene	85		99		30-150	A
Decachlorobiphenyl	52		60		30-150	A

## METALS

**Project Name:** 1299 BEACON STREET**Lab Number:** L1929763**Project Number:** 1804540**Report Date:** 07/24/19**SAMPLE RESULTS**

Lab ID: L1929763-02

Date Collected: 07/08/19 08:14

Client ID: 1804540B101(5-10)

Date Received: 07/09/19

Sample Location: BROOKLINE, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Mansfield Lab</b>											
Antimony, Total	ND		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Arsenic, Total	2.34		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Barium, Total	22.4		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Beryllium, Total	ND		mg/kg	0.204	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Chromium, Total	8.32		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Lead, Total	7.68		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.066	--	1	07/18/19 07:20	07/20/19 16:02	EPA 7471B	97,7471B	BV
Nickel, Total	8.14		mg/kg	1.02	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Selenium, Total	ND		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Thallium, Total	ND		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Vanadium, Total	22.9		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC
Zinc, Total	28.6		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:02	EPA 3050B	97,6010D	LC



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-04  
 Client ID: 1804540B102(5-9)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 07:41  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Mansfield Lab</b>											
Antimony, Total	ND		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Arsenic, Total	3.40		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Barium, Total	23.2		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Beryllium, Total	ND		mg/kg	0.204	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Chromium, Total	11.2		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Lead, Total	12.9		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.065	--	1	07/18/19 07:20	07/20/19 16:04	EPA 7471B	97,7471B	BV
Nickel, Total	8.89		mg/kg	1.02	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Selenium, Total	ND		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Thallium, Total	ND		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Vanadium, Total	19.8		mg/kg	0.409	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC
Zinc, Total	31.9		mg/kg	2.04	--	1	07/17/19 23:44	07/19/19 12:06	EPA 3050B	97,6010D	LC



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

Lab ID: L1929763-05  
 Client ID: 1804540B103(14)  
 Sample Location: BROOKLINE, MA

Date Collected: 07/08/19 09:02  
 Date Received: 07/09/19  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Mansfield Lab</b>											
Antimony, Total	ND		mg/kg	2.35	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Arsenic, Total	3.68		mg/kg	0.470	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Barium, Total	59.2		mg/kg	0.470	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Beryllium, Total	0.296		mg/kg	0.235	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.470	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Chromium, Total	10.1		mg/kg	0.470	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Lead, Total	4.24		mg/kg	2.35	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.076	--	1	07/18/19 07:20	07/20/19 16:06	EPA 7471B	97,7471B	BV
Nickel, Total	10.0		mg/kg	1.18	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Selenium, Total	ND		mg/kg	2.35	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.470	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Thallium, Total	ND		mg/kg	2.35	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Vanadium, Total	17.0		mg/kg	0.470	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC
Zinc, Total	27.2		mg/kg	2.35	--	1	07/17/19 23:44	07/19/19 12:10	EPA 3050B	97,6010D	LC



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 02,04-05 Batch: WG1261143-1									
Antimony, Total	ND	mg/kg	2.00	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Arsenic, Total	ND	mg/kg	0.400	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Barium, Total	ND	mg/kg	0.400	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Beryllium, Total	ND	mg/kg	0.200	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Cadmium, Total	ND	mg/kg	0.400	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Chromium, Total	ND	mg/kg	0.400	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Lead, Total	ND	mg/kg	2.00	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Nickel, Total	ND	mg/kg	1.00	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Selenium, Total	ND	mg/kg	2.00	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Silver, Total	ND	mg/kg	0.400	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Thallium, Total	ND	mg/kg	2.00	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Vanadium, Total	ND	mg/kg	0.400	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC
Zinc, Total	ND	mg/kg	2.00	--	1	07/17/19 23:44	07/19/19 10:52	97,6010D	LC

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 02,04-05 Batch: WG1261310-1									
Mercury, Total	ND	mg/kg	0.083	--	1	07/18/19 07:20	07/20/19 15:38	97,7471B	BV

### Prep Information

Digestion Method: EPA 7471B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1299 BEACON STREET

Project Number: 1804540

Lab Number: L1929763

Report Date: 07/24/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Total Metals - Mansfield Lab Associated sample(s): 02,04-05 Batch: WG1261143-2 WG1261143-3 SRM Lot Number: D105-540								
Antimony, Total	149		136		19-249	9		30
Arsenic, Total	103		103		70-130	0		30
Barium, Total	90		94		75-125	4		30
Beryllium, Total	93		98		75-125	5		30
Cadmium, Total	90		100		75-125	11		30
Chromium, Total	87		88		70-130	1		30
Lead, Total	90		92		71-128	2		30
Nickel, Total	92		94		70-131	2		30
Selenium, Total	101		99		63-137	2		30
Silver, Total	94		96		69-131	2		30
Thallium, Total	90		96		68-132	6		30
Vanadium, Total	86		86		65-135	0		30
Zinc, Total	92		93		70-130	1		30
MCP Total Metals - Mansfield Lab Associated sample(s): 02,04-05 Batch: WG1261310-2 WG1261310-3 SRM Lot Number: D105-540								
Mercury, Total	90		108		60-141	18		30

# **INORGANICS & MISCELLANEOUS**

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-01  
**Client ID:** 1804540-B101(7.5)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 08:12  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	97.2		%	0.100	NA	1	-	07/10/19 11:10	121,2540G	RI



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-02  
**Client ID:** 1804540B101(5-10)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 08:14  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	96.4		%	0.100	NA	1	-	07/10/19 11:10	121,2540G	RI
pH (H)	7.8		SU	-	NA	1	-	07/10/19 03:02	1,9045D	JW



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-03  
**Client ID:** 1804540B102(7)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 07:39  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	97.7		%	0.100	NA	1	-	07/10/19 11:10	121,2540G	RI



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-04  
**Client ID:** 1804540B102(5-9)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 07:41  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	96.8		%	0.100	NA	1	-	07/10/19 11:10	121,2540G	RI
pH (H)	7.0		SU	-	NA	1	-	07/10/19 03:02	1,9045D	JW



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

**SAMPLE RESULTS**

**Lab ID:** L1929763-05  
**Client ID:** 1804540B103(14)  
**Sample Location:** BROOKLINE, MA

**Date Collected:** 07/08/19 09:02  
**Date Received:** 07/09/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	83.1		%	0.100	NA	1	-	07/10/19 11:10	121,2540G	RI
pH (H)	7.0		SU	-	NA	1	-	07/10/19 03:02	1,9045D	JW



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 1299 BEACON STREET

**Lab Number:** L1929763

**Project Number:** 1804540

**Report Date:** 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04-05 Batch: WG1257867-1								
pH	99		-		99-101	-		

**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Serial\_No:**07241916:26  
**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**

**Cooler**                      **Custody Seal**  
A                                      Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1929763-01A	Vial MeOH preserved	A	NA		4.7	Y	Absent		MCP-8260HLW-10(14),VPH-18(28)
L1929763-01B	Vial water preserved	A	NA		4.7	Y	Absent	09-JUL-19 22:58	MCP-8260HLW-10(14)
L1929763-01C	Vial water preserved	A	NA		4.7	Y	Absent	09-JUL-19 22:58	MCP-8260HLW-10(14)
L1929763-01D	Plastic 2oz unreserved for TS	A	NA		4.7	Y	Absent		TS(7)
L1929763-02A	Metals Only-Glass 60mL/2oz unreserved	A	NA		4.7	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1929763-02B	Glass 250ml/8oz unreserved	A	NA		4.7	Y	Absent		MCP-8082-10(365),TS(7),PH-9045(1),EPH-DELUX-10(14)
L1929763-03A	Vial MeOH preserved	A	NA		4.7	Y	Absent		MCP-8260HLW-10(14),VPH-18(28)
L1929763-03B	Vial water preserved	A	NA		4.7	Y	Absent	09-JUL-19 22:58	MCP-8260HLW-10(14)
L1929763-03C	Vial water preserved	A	NA		4.7	Y	Absent	09-JUL-19 22:58	MCP-8260HLW-10(14)
L1929763-03D	Plastic 2oz unreserved for TS	A	NA		4.7	Y	Absent		TS(7)
L1929763-04A	Metals Only-Glass 60mL/2oz unreserved	A	NA		4.7	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1929763-04B	Glass 250ml/8oz unreserved	A	NA		4.7	Y	Absent		MCP-8082-10(365),TS(7),PH-9045(1),EPH-DELUX-10(14)
L1929763-05A	Vial MeOH preserved	A	NA		4.7	Y	Absent		MCP-8260HLW-10(14),VPH-18(28)
L1929763-05B	Vial water preserved	A	NA		4.7	Y	Absent	09-JUL-19 22:58	MCP-8260HLW-10(14)
L1929763-05C	Vial water preserved	A	NA		4.7	Y	Absent	09-JUL-19 22:58	MCP-8260HLW-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Serial\_No:**07241916:26  
**Lab Number:** L1929763  
**Report Date:** 07/24/19

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1929763-05D	Plastic 2oz unpreserved for TS	A	NA		4.7	Y	Absent		TS(7)
L1929763-05E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.7	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1929763-05F	Glass 250ml/8oz unpreserved	A	NA		4.7	Y	Absent		MCP-8082-10(365),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

## GLOSSARY

### Acronyms

DL	- 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
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.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

Report Format: Data Usability Report



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

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

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

**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.

### 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.
- 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.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- 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.

Report Format: Data Usability Report



**Project Name:** 1299 BEACON STREET  
**Project Number:** 1804540

**Lab Number:** L1929763  
**Report Date:** 07/24/19

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 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.
- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 131 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, February 2018, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, June 1, 2018.

## 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

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

### Westborough Facility

**EPA 624/624.1:** m/p-xylene, o-xylene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 6860:** SCM: Perchlorate

**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

**SM 2540D:** TSS

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**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.

**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Chloride, 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, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** 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 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

**EPA 522.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

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

<b>Chain-of-Custody Record</b>				Laboratory: ALPHA				Laboratory Job # <b>L1929763</b> <small>(Lab use only)</small>												
 <b>GEI</b> Consultants 400 Unicorn Park Drive Woburn, MA 01801 PH: 781.721.4000 FX: 781.721.4073		<b>Project Information</b>								Page 1 of 1										
		Project Name: 1299 Beacon Street				Project Location: Brookline, MA				Sample Handling Samples Field Filtered YES NO NA Sampled Shipped With Ice YES NO										
		Project Number: 1804540				Project Manager: Cathy Johnson														
Send Report to: Molly Greer				<b>Preservative</b>				Sample Specific Remarks												
Send EDD to: labdata@geiconsultants.com				DI (H2)	MeOH	None	None			None										
<b>MCP PRESUMPTIVE CERTAINTY REQUIRED -- YES NO</b>				VOCs (low level)	VOCs (high) and VPH	% Solid	PCBs, EPH, and pH			MCP 14 Metals										
If Yes, Are MCP Analytical Methods Required? YES NO NA																				
If Yes, Are Drinking Water Samples Submitted? YES NO NA																				
If Yes, Have You Met Minimum Field QC Requirements? YES NO NA																				
Lab Sample Number	GEI Sample ID	Collection		Matrix	No. of Bottles	Sampler(s) Initials	VOCs (low level)	VOCs (high) and VPH	% Solid	PCBs, EPH, and pH	MCP 14 Metals									
		Date	Time																	
29763-01	1804540-B101(7.5)	7/8/2019	8:12	Soil	4	MEG	x	x	x											
-02	1804540B101(5-10)	7/8/2019	8:14	Soil	2	MEG				x	x									
-03	1804540B102(7)	7/8/2019	7:39	Soil	4	MEG	x	x	x											
-04	1804540B102(5-9)	7/8/2019	7:41	Soil	2	MEG				x	x									
-05	1804540B103(14)	7/8/2019	9:02	Soil	6	MEG	x	x	x	x	x									
												Before submitting rush turnaround samples, you <b>must</b> notify the laboratory to confirm that the TAT can be achieved.								
Relinquished by: (signature)		Date:	Time:	Received by: (signature)		Normal <input checked="" type="checkbox"/> Other _____ 10-Day _____ 7-Day _____ 5-Day <input checked="" type="checkbox"/> 3-Day _____				Additional Requirements/Comments/Remarks:										
1. <i>Molly Greer</i>		7/8/19	1130	1. GEI Sample Fridge																
Relinquished by: (signature)		Date:	Time:	Received by: (signature)																
2. GEI Sample Fridge		7/9/19	1200	2. <i>Molly Greer</i>																
Relinquished by: (signature)		Date:	Time:	Received by: (signature)																
3. <i>Molly Greer</i>		7/9/19	1200	3. <i>[Signature]</i> AAL																
Relinquished by: (signature)		Date:	Time:	Received by: (signature)																
4. <i>[Signature]</i>		7/9/19	1838	4. <i>[Signature]</i> 7/9/19 1838																

**Method Blank Summary  
Form 4  
Volatiles**

<b>Client</b>	<b>: GEI Consultants</b>	<b>Lab Number</b>	<b>: L1929763</b>
<b>Project Name</b>	<b>: 1299 BEACON STREET</b>	<b>Project Number</b>	<b>: 1804540</b>
<b>Lab Sample ID</b>	<b>: WG1261961-5</b>	<b>Lab File ID</b>	<b>: V04190718B05</b>
<b>Instrument ID</b>	<b>: VOA104</b>		
<b>Matrix</b>	<b>: SOIL</b>	<b>Analysis Date</b>	<b>: 07/18/19 17:35</b>

<b>Client Sample No.</b>	<b>Lab Sample ID</b>	<b>Analysis Date</b>
WG1261961-3LCS	WG1261961-3	07/18/19 15:31
WG1261961-4LCSD	WG1261961-4	07/18/19 16:02
1804540-B101(7.5)	L1929763-01	07/18/19 22:16
1804540B102(7)	L1929763-03	07/18/19 22:47
1804540B103(14)	L1929763-05	07/18/19 23:16

## Calibration Verification Summary

### Form 7

### Volatiles

Client : GEI Consultants  
 Project Name : 1299 BEACON STREET  
 Instrument ID : VOA104  
 Lab File ID : V04190718B01  
 Sample No : WG1261961-2  
 Channel :

Lab Number : L1929763  
 Project Number : 1804540  
 Calibration Date : 07/18/19 15:31  
 Init. Calib. Date(s) : 05/07/19 05/07/19  
 Init. Calib. Times : 00:37 04:23

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	61	0
Dichlorodifluoromethane	0.265	0.213	-	19.6	20	45	0
Chloromethane	0.41	0.322	-	21.5*	20	48	0
Vinyl chloride	0.334	0.27	-	19.2	20	47	0
Bromomethane	0.134	0.144	-	-7.5	20	60	0
Chloroethane	0.134	0.135	-	-0.7	20	53	0
Trichlorofluoromethane	0.295	0.343	-	-16.3	20	62	0
Ethyl ether	0.094	0.077	-	18.1	20	49	0
1,1-Dichloroethene	0.207	0.177	-	14.5	20	48	0
Carbon disulfide	0.774	0.549	-	29.1*	20	42	0
Freon-113	0.219	0.181	-	17.4	20	44	0
Acrolein	0.038	0.035*	-	7.9	20	57	0
Methylene chloride	0.259	0.221	-	14.7	20	52	0
Acetone	20	25.088	-	-25.4*	20	72	0
trans-1,2-Dichloroethene	0.253	0.243	-	4	20	55	0
Methyl acetate	0.131	0.119	-	9.2	20	54	0
Methyl tert-butyl ether	0.549	0.531	-	3.3	20	57	0
tert-Butyl alcohol	0.024	0.022*	-	8.3	20	57	0
Diisopropyl ether	0.994	0.913	-	8.1	20	54	0
1,1-Dichloroethane	0.55	0.535	-	2.7	20	57	0
Halothane	0.197	0.19	-	3.6	20	57	0
Acrylonitrile	0.066	0.056	-	15.2	20	54	0
Ethyl tert-butyl ether	0.882	0.843	-	4.4	20	56	0
Vinyl acetate	0.47	0.535	-	-13.8	20	68	0
cis-1,2-Dichloroethene	0.276	0.259	-	6.2	20	54	0
2,2-Dichloropropane	0.364	0.417	-	-14.6	20	66	0
Bromochloromethane	0.123	0.113	-	8.1	20	53	0
Cyclohexane	0.492	0.537	-	-9.1	20	59	0
Chloroform	0.449	0.451	-	-0.4	20	59	0
Ethyl acetate	0.22	0.183	-	16.8	20	36	0
Carbon tetrachloride	0.338	0.381	-	-12.7	20	64	0
Tetrahydrofuran	0.062	0.064	-	-3.2	20	65	0
Dibromofluoromethane	0.253	0.271	-	-7.1	20	64	0
1,1,1-Trichloroethane	0.374	0.439	-	-17.4	20	67	0
2-Butanone	0.083	0.068*	-	18.1	20	53	0
1,1-Dichloropropene	0.329	0.336	-	-2.1	20	58	0
Benzene	0.989	0.902	-	8.8	20	53	0
tert-Amyl methyl ether	0.618	0.553	-	10.5	20	54	0
1,2-Dichloroethane-d4	0.242	0.272	-	-12.4	20	69	0
1,2-Dichloroethane	0.333	0.335	-	-0.6	20	59	0
Methyl cyclohexane	0.385	0.384	-	0.3	20	54	0
Trichloroethene	0.268	0.264	-	1.5	20	58	0
Dibromomethane	0.139	0.124	-	10.8	20	53	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : GEI Consultants  
 Project Name : 1299 BEACON STREET  
 Instrument ID : VOA104  
 Lab File ID : V04190718B01  
 Sample No : WG1261961-2  
 Channel :

Lab Number : L1929763  
 Project Number : 1804540  
 Calibration Date : 07/18/19 15:31  
 Init. Calib. Date(s) : 05/07/19 05/07/19  
 Init. Calib. Times : 00:37 04:23

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.307	0.285	-	7.2	20	55	0
2-Chloroethyl vinyl ether	0.14	0.126	-	10	20	53	0
Bromodichloromethane	0.328	0.332	-	-1.2	20	60	0
1,4-Dioxane	0.00173	0.00234*	-	-35.3*	20	79	0
cis-1,3-Dichloropropene	0.381	0.366	-	3.9	20	55	0
Chlorobenzene-d5	1	1	-	0	20	66	0
Toluene-d8	1.306	1.301	-	0.4	20	66	0
Toluene	0.837	0.717	-	14.3	20	55	0
4-Methyl-2-pentanone	0.112	0.098*	-	12.5	20	57	0
Tetrachloroethene	0.366	0.342	-	6.6	20	59	0
trans-1,3-Dichloropropene	0.425	0.389	-	8.5	20	58	0
Ethyl methacrylate	0.305	0.257	-	15.7	20	53	0
1,1,2-Trichloroethane	0.221	0.175	-	20.8*	20	51	0
Chlorodibromomethane	0.325	0.291	-	10.5	20	58	0
1,3-Dichloropropane	0.431	0.353	-	18.1	20	53	0
1,2-Dibromoethane	0.259	0.209	-	19.3	20	52	0
2-Hexanone	0.175	0.152	-	13.1	20	54	0
Chlorobenzene	0.951	0.799	-	16	20	53	0
Ethylbenzene	1.578	1.468	-	7	20	58	0
1,1,1,2-Tetrachloroethane	0.335	0.307	-	8.4	20	58	0
p/m Xylene	0.601	0.53	-	11.8	20	54	0
o Xylene	0.593	0.509	-	14.2	20	53	0
Styrene	0.919	0.813	-	11.5	20	54	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	68	0
Bromoform	0.375	0.321	-	14.4	20	58	0
Isopropylbenzene	3.067	2.678	-	12.7	20	57	0
4-Bromofluorobenzene	0.947	0.991	-	-4.6	20	72	0
Bromobenzene	0.787	0.629	-	20.1*	20	53	0
n-Propylbenzene	3.625	3.278	-	9.6	20	59	0
1,4-Dichlorobutane	0.998	0.888	-	11	20	59	0
1,1,2,2-Tetrachloroethane	0.614	0.478	-	22.1*	20	51	0
4-Ethyltoluene	3.07	2.692	-	12.3	20	57	0
2-Chlorotoluene	2.152	1.932	-	10.2	20	59	0
1,3,5-Trimethylbenzene	2.583	2.284	-	11.6	20	57	0
1,2,3-Trichloropropane	0.456	0.369	-	19.1	20	54	0
trans-1,4-Dichloro-2-buten	0.173	0.162	-	6.4	20	64	0
4-Chlorotoluene	2.224	2.064	-	7.2	20	61	0
tert-Butylbenzene	2.212	1.929	-	12.8	20	57	0
1,2,4-Trimethylbenzene	2.58	2.26	-	12.4	20	58	0
sec-Butylbenzene	3.289	2.918	-	11.3	20	57	0
p-Isopropyltoluene	2.819	2.522	-	10.5	20	57	0
1,3-Dichlorobenzene	1.507	1.257	-	16.6	20	55	0
1,4-Dichlorobenzene	1.524	1.24	-	18.6	20	55	0

\* Value outside of QC limits.



## Calibration Verification Summary Form 7 Volatiles

Client : GEI Consultants  
 Project Name : 1299 BEACON STREET  
 Instrument ID : VOA104  
 Lab File ID : V04190718B01  
 Sample No : WG1261961-2  
 Channel :

Lab Number : L1929763  
 Project Number : 1804540  
 Calibration Date : 07/18/19 15:31  
 Init. Calib. Date(s) : 05/07/19 05/07/19  
 Init. Calib. Times : 00:37 04:23

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.707	1.507	-	11.7	20	57	0
n-Butylbenzene	2.551	2.413	-	5.4	20	60	0
1,2-Dichlorobenzene	1.381	1.136	-	17.7	20	54	0
1,2,4,5-Tetramethylbenzene	2.656	2.394	-	9.9	20	58	0
1,2-Dibromo-3-chloropropan	0.095	0.075	-	21.1*	20	53	0
1,3,5-Trichlorobenzene	1.123	0.987	-	12.1	20	57	0
Hexachlorobutadiene	0.528	0.514	-	2.7	20	64	0
1,2,4-Trichlorobenzene	0.962	0.822	-	14.6	20	56	0
Naphthalene	1.838	1.475	-	19.7	20	54	0
1,2,3-Trichlorobenzene	0.876	0.726	-	17.1	20	55	0

\* Value outside of QC limits.

