

August 24, 2022

Mr. Robert O'Connor
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

**Re: Subsurface Investigation
Lampson Brook Farm – EZ1
275 Jackson Street
Belchertown, MA**

Dear Mr. O'Connor

Weston & Sampson Engineers, Inc. (Weston & Sampson) has prepared this Subsurface Investigation report for the above-referenced property in Belchertown, Massachusetts (the Site). The objective of the Subsurface Investigation was to evaluate the recognized environmental conditions (RECs) identified by Weston & Sampson in a draft Phase I Environmental Site Assessment (ESA) report, submitted to the Executive Office of Energy and Environmental Affairs (EOEEA) in March 2022.

BACKGROUND

The Site encompasses approximately 10.7 acres of land between Jackson Street and Lampson Brook in Belchertown, Massachusetts. Figure 1 shows the general location of the Site in Belchertown. For the purposes of this letter report, the "Site" refers only to the contiguous Enterprise Zone 1 (EZ1) area identified in Figure 1. The area surrounding the Site is a mix of rural and commercial/industrial use.

Access to the Site is achieved via Jackson Street to the north. Several structures related to former dairy farming operations are present in the central portion of the Site; however, the majority of the Site is vacant. One exception is the auto repair shop in the north central portion of the Site, which is currently occupied and shown on Figure 2 – Site Plan.

In general, the ground surface across the Site slopes gently, then moderately to the southeast, toward Lampson Brook. Groundcover is primarily grass and woody vegetation; however, some areas of the Site are paved with bituminous asphalt (eastern portion behind Site buildings) or imported gravel (roadways/trails surrounding Site buildings).

Weston & Sampson identified the following RECs in conjunction with the Site in the March 2022 draft Phase I ESA report:

- Empty drums of various sizes were observed at the Site. Stained soil was observed in the rear of the Site directly adjacent to an approximately 10-gallon uncovered container partially full of a dark, viscous material (see Figure 2). This spill as well as the material threat of release from other potentially compromised drums represented a REC.
- A portion of the Site is in use as storage of cars and as an auto repair facility. The presence of hazardous substances and/or petroleum products under conditions that pose a material threat of a future release to the environment due to the storage and repair of automobiles at the Site represented a REC.

This letter report documents our evaluation of the RECs identified above. Letter reports documenting the findings of the Hazardous Building Materials Survey (HBMI) and compost pile evaluation will be submitted under separate

cover. The methods, results, and conclusions of the June 2022 Subsurface Investigation are presented below. Sample locations are shown in Figure 2 – Site Plan.

SUBSURFACE INVESTIGATION

Soil

On June 7, 2022, Weston & Sampson oversaw the advancement of seven (7) soil borings (B-1 through B-7) at the Site using direct-push technology. Borings were advanced throughout EZ1 to depths of between 6.5 and 13 feet below ground surface (bgs). Three (3) of the seven boring locations were completed as groundwater monitoring wells in accordance with the Massachusetts Department of Environmental Protection (MassDEP) Standard References for Monitoring Wells (Policy WSC-310-91).

A Weston & Sampson representative screened soil at each boring continuously and logged soil descriptions using a modified Burmeister Soil Classification System. Each sample was field screened for visual and olfactory evidence of impacts, as well as total volatile organic compounds (VOCs) using a photoionization detector (PID) in accordance with the MassDEP jar headspace screening method. Soil boring logs are provided as Attachment A.

One (1) soil sample from each boring, collected at the 0-3 foot bgs depth interval, was submitted to Pace Analytical Services of East Longmeadow, Massachusetts (Pace) for analysis of Massachusetts Contingency Plan (MCP) 14 Metals (antimony, arsenic, barium, beryllium, cadmium, total chromium, nickel, lead, mercury, selenium, silver, thallium, vanadium, and zinc). PID readings did not exceed 1 parts per million by volume (ppmV) for any of the samples and no visual or olfactory evidence of petroleum impacts were observed; therefore, soil was not analyzed for VOCs or petroleum constituents. The staining noted in the drum storage area at the rear of the Site during the Phase I ESA site reconnaissance was evaluated with two soil borings, one of which was completed as a monitoring well. Observations indicate the staining noted on the ground surface was surficial and represents a *de minimis* condition.

As shown in Table 1, laboratory analysis of the soil samples did not identify concentrations of metals equal to or exceeding the applicable MCP Reportable Concentrations for S-1 soil (RCS-1). Laboratory analytical reports are provided as Attachment B.

Groundwater

Weston & Sampson conducted one round of groundwater gauging and sampling on June 27, 2022. Groundwater samples were collected from the three (3) newly installed monitoring wells (MW-1, MW-2, and MW-3) using low-flow sampling techniques in accordance with EPA's Region I "Low Stress (low flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells," EPASOP-GW 001 (Revision 4, September 19, 2017). Prior to sampling, wells were gauged to record depth to groundwater and depth to well bottom using an oil-water interface probe. Weston & Sampson collected the geographic coordinates with a handheld cellular device. Due to an equipment failure, we were not able to survey the relative elevations of the wells; however, we were able to estimate the elevation of each well using the geographic coordinates and Google Earth Pro. Based on the information available via Google Earth Pro and the depths to water recorded in June 2022, groundwater flows to the southwest, toward the Lampson Brook.

Groundwater samples were submitted to Pace for laboratory analysis of MCP 14 metals, extractable petroleum hydrocarbons (EPH), polycyclic aromatic hydrocarbons (PAHs), volatile petroleum hydrocarbons (VPH), and VOCs.

As shown in Table 2, laboratory analysis of the groundwater samples did not identify contaminant concentrations equal to or exceeding the applicable MCP Reportable Concentrations for GW-2 groundwater (RCGW-2). Laboratory analytical reports are provided as an attachment.

CONCLUSIONS

Weston & Sampson completed a Subsurface Investigation that included the advancement of seven (7) soil borings, the installation of three (3) groundwater monitoring wells, and the collection and analysis of seven (7) soil samples and three (3) groundwater samples. Soil borings were advanced to depths of 15 to 20 feet bgs, and no refusal was encountered during explorations. Groundwater at the three newly installed monitoring wells was observed to be between approximately 5 and approximately 17 feet bgs, and flows generally to the southeast toward Lampson Brook. The following table summarizes the RECs identified in the March 2022 draft Phase I ESA and the resulting conclusion based on this Subsurface Investigation:

Recognized Environmental Condition	Resolution
Unmarked drums / stained soil.	No contaminants detected above background in soil or groundwater in areas where drums were observed. Staining was observed to be surficial and therefore <i>de minimis</i> .
Vehicle storage and repair	No contaminants detected above background in soil or groundwater in areas where vehicles are stored or downgradient from the auto repair building. No evidence of impacts observed in subsurface soil or groundwater in the area.

In summary, no visual or olfactory evidence of petroleum impacts, consistent with a release to the environment, was observed in soil or groundwater. In addition, the results of laboratory analysis indicate the detection of low levels of several metals; however, the concentrations are less than the applicable Reportable Concentrations.

If you have any questions regarding this letter report, please do not hesitate to contact the undersigned at (978) 532-1900.

Sincerely,
WESTON & SAMPSON ENGINEERS, INC.



Joseph R. Spencer, CHMM
Project Manager



Prasanta Bhunia, Ph.D., LSP
Vice President

Attachments:

Figures: Figure 1 – Locus Map
 Figure 2 – Site Plan

Tables: Table 1 – Summary of Soil Analytical Results
 Table 2 – Summary of Groundwater Analytical Results

Attachment A: Soil Boring Logs
Attachment B: Laboratory Analytical Reports

FIGURES

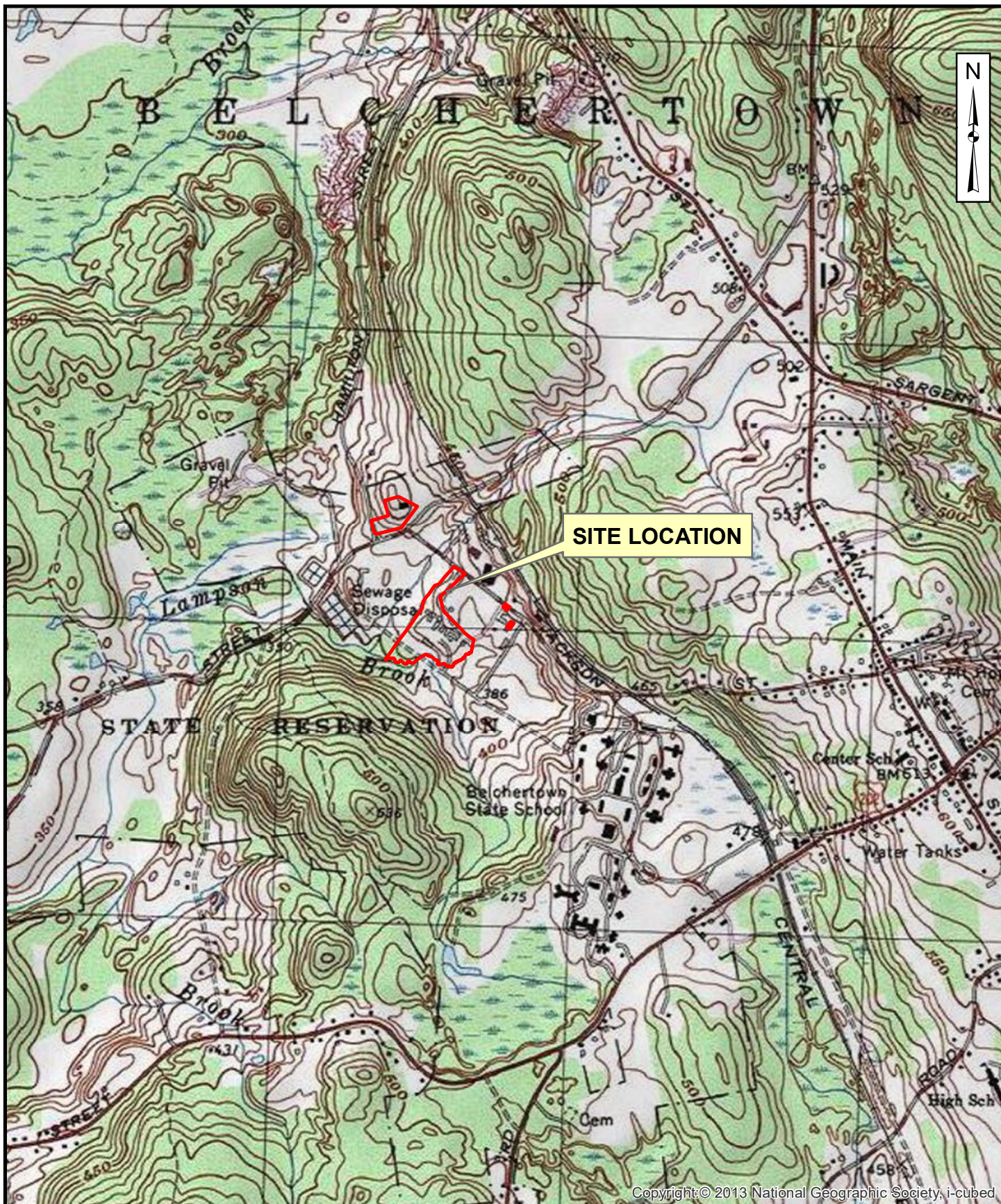
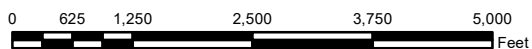


FIGURE 1
LAMPSON BROOK FARM
275 JACKSON STREET
BELCHERTOWN, MASSACHUSETTS

LOCUS MAP



<BOL>Path:~<BOL> C:\Users\spencerj\OneDrive - WESTON & SAMPSON ENGINEERS, Inc\Documents\ArcGIS\Lampson\Site Plan.mxd <BOL>User:~<BOL> SpencerJ <BOL>Saved:~<BOL> 8/23/2022 9:47:03 AM <BOL>Opened:~<BOL> 8/23/2022 9:47:18 AM

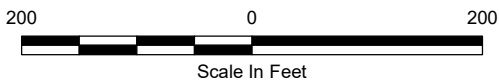


Legend

-  SOIL BORING
-  SOIL BORING / MONITORING WELL
-  SITE BOUNDARY (EZ1)

**FIGURE 2
SITE PLAN**

**LAMPSON BROOK FARM
275 JACKSON STREET
BELCHERTOWN, MASSACHUSETTS**



TABLES

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
LAMPSON BROOK FARM
JUNE 7, 2022

Parameter	Units	Reportable	Sampling Location & Depth						
		Concentrations (RCs) ¹	B-1 (0-3)	B-2 (0-3)	B-3 (0-3)	B-4 (0-3)	B-5 (0-3)	B-6 (0-3)	B-7 (0-3)
Metals									
ANTIMONY	mg/kg	20	ND (0.55)	ND (0.52)	ND (0.49)	ND (0.54)	ND (0.55)	ND (0.55)	ND (0.52)
ARSENIC	mg/kg	20	2.9	ND (2.6)	ND (2.5)	ND (2.7)	ND (2.7)	ND (2.7)	ND (2.6)
BARIUM	mg/kg	1000	68	14	98	23	28	23	22
BERYLLIUM	mg/kg	90	ND (0.55)	ND (0.52)	ND (0.49)	ND (0.54)	ND (0.55)	ND (0.55)	ND (0.52)
CADMIUM	mg/kg	70	ND (0.55)	ND (0.52)	ND (0.49)	ND (0.54)	ND (0.55)	ND (0.55)	ND (0.52)
CHROMIUM	mg/kg	100	33	28	16	22	17	12	9.7
LEAD	mg/kg	200	34	5.3	19	5.2	10	6.3	5
MERCURY	mg/kg	20	ND (0.14)	ND (0.15)	ND (0.14)	ND (0.18)	ND (0.17)	ND (0.15)	ND (0.17)
NICKEL	mg/kg	600	19	17	8.1	16	12	10	6.2
SELENIUM	mg/kg	400	ND (5.5)	ND (5.2)	ND (4.9)	ND (5.4)	ND (5.5)	ND (5.5)	ND (5.2)
SILVER	mg/kg	100	ND (2.7)	ND (2.6)	ND (2.5)	ND (2.7)	ND (2.7)	ND (2.7)	ND (2.6)
THALLIUM	mg/kg	8	ND (0.55)	ND (0.52)	ND (0.49)	ND (0.54)	ND (0.55)	ND (0.55)	ND (0.52)
VANADIUM	mg/kg	400	21	15	11	12	16	12	9.8
ZINC	mg/kg	1000	42	14	23	20	32	14	23

Notes:

1. Standards are from the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000
mg/kg Milligrams per kilogram
ND(value) Parameter not detected above laboratory reporting limit shown
Bold Detected above laboratory reporting limit
Bold Detected above MCP RCS-1

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
LAMPSON BROOK FARM
JUNE 27, 2022

Parameter	Units	Reportable	Sampling Location			
		Concentrations (RCs) ¹				
		RCGW-2	MW-1	MW-2	MW-3	
Extractable Petroleum Hydrocarbons (EPH)						
C9-C18 ALIPHATICS	µg/L	5000	ND (96)	ND (95)	ND (98)	
C19-C36 ALIPHATICS	µg/L	50000	ND (96)	ND (95)	ND (98)	
C11-C22 AROMATICS	µg/L	5000	ND (96)	ND (95)	ND (98)	
Polycyclic Aromatic Hydrocarbons (PAHs)	µg/L					
ACENAPHTHENE	µg/L	6000	ND (1.9)	ND (1.9)	ND (2.0)	
ACENAPHTHYLENE	µg/L	40	ND (1.9)	ND (1.9)	ND (2.0)	
ANTHRACENE	µg/L	30	ND (1.9)	ND (1.9)	ND (2.0)	
BENZO(A)ANTHRACENE	µg/L	1000	ND (1.9)	ND (1.9)	ND (2.0)	
BENZO(A)PYRENE	µg/L	500	ND (1.9)	ND (1.9)	ND (2.0)	
BENZO(B)FLUORANTHENE	µg/L	400	ND (1.9)	ND (1.9)	ND (2.0)	
BENZO(G,H,I)PERYLENE	µg/L	20	ND (1.9)	ND (1.9)	ND (2.0)	
BENZO(K)FLUORANTHENE	µg/L	100	ND (1.9)	ND (1.9)	ND (2.0)	
CHRYSENE	µg/L	70	ND (1.9)	ND (1.9)	ND (2.0)	
DIBENZ(A,H)ANTHRACENE	µg/L	40	ND (1.9)	ND (1.9)	ND (2.0)	
FLUORANTHENE	µg/L	200	ND (1.9)	ND (1.9)	ND (2.0)	
FLUORENE	µg/L	40	ND (1.9)	ND (1.9)	ND (2.0)	
INDENO(1,2,3-CD)PYRENE	µg/L	100	ND (1.9)	ND (1.9)	ND (2.0)	
2-METHYLNAPHTHALENE	µg/L	2000	ND (1.9)	ND (1.9)	ND (2.0)	
NAPHTHALENE	µg/L	700	ND (1.9)	ND (1.9)	ND (2.0)	
PHENANTHRENE	µg/L	10000	ND (1.9)	ND (1.9)	ND (2.0)	
PYRENE	µg/L	20	ND (1.9)	ND (1.9)	ND (2.0)	
Volatile Petroleum Hydrocarbons (VPH)						
C5-C8 ALIPHATICS	µg/L	3000	ND (100)	ND (100)	ND (100)	
C9-C12 ALIPHATICS	µg/L	5000	ND (100)	ND (100)	ND (100)	
C9-C10 AROMATICS	µg/L	4000	ND (100)	ND (100)	ND (100)	
Metals						
ANTIMONY	µg/L	8000	ND (1.0)	ND (1.0)	ND (1.0)	
ARSENIC	µg/L	900	ND (0.80)	ND (0.80)	ND (0.80)	
BARIUM	µg/L	50000	360	140	66	
BERYLLIUM	µg/L	200	ND (0.40)	ND (0.40)	ND (0.40)	
CADMIUM	µg/L	4	ND (0.20)	ND (0.20)	ND (0.20)	
CHROMIUM	µg/L	300	5.8	2.0	1.5	
LEAD	µg/L	10	1.0	ND (0.50)	0.99	
MERCURY	mg/L	0.02	ND (0.00010)	ND (0.00010)	ND (0.00010)	
NICKEL	µg/L	200	12	5.1	5.3	
SELENIUM	µg/L	100	ND (5.0)	ND (5.0)	ND (5.0)	
SILVER	µg/L	7	ND (0.20)	ND (0.20)	ND (0.20)	
THALLIUM	µg/L	3000	ND (0.20)	ND (0.20)	ND (0.20)	
VANADIUM	µg/L	4000	ND (5.0)	ND (5.0)	ND (5.0)	
ZINC	µg/L	900	ND (10)	10	14	
Volatile Organic Compounds (VOCs)						
ACETONE	µg/L	50000	ND (10)	ND (10)	ND (10)	
BENZENE	µg/L	1000	ND (1.0)	ND (1.0)	ND (1.0)	
BROMOBENZENE	µg/L	10000	ND (1.0)	ND (1.0)	ND (1.0)	
BROMODICHLOROMETHANE	µg/L	6	ND (1.0)	ND (1.0)	ND (1.0)	
BROMOFORM	µg/L	700	ND (1.0)	ND (1.0)	ND (1.0)	
BROMOMETHANE	µg/L	7	ND (5.0)	ND (5.0)	ND (5.0)	
2-BUTANONE (MEK)	µg/L	50000	ND (10)	ND (10)	ND (10)	
TERT-BUTYLBENZENE	µg/L	10000	ND (1.0)	ND (1.0)	ND (1.0)	
CARBON DISULFIDE	µg/L	10000	ND (5.0)	ND (5.0)	ND (5.0)	
CARBON TETRACHLORIDE	µg/L	2	ND (1.0)	ND (1.0)	ND (1.0)	
CHLOROBENZENE	µg/L	200	ND (1.0)	ND (1.0)	ND (1.0)	
4-METHYL-2-PENTANONE (MIBK)	µg/L	50000	ND (10)	ND (10)	ND (10)	
NAPHTHALENE	µg/L	700	ND (2.0)	ND (2.0)	ND (2.0)	
N-PROPYLBENZENE	µg/L	10000	ND (1.0)	ND (1.0)	ND (1.0)	
STYRENE	µg/L	100	ND (1.0)	ND (1.0)	ND (1.0)	
1,1,1,2-TETRACHLOROETHANE	µg/L	10	ND (1.0)	ND (1.0)	ND (1.0)	
1,1,2,2-TETRACHLOROETHANE	µg/L	9	ND (0.50)	ND (0.50)	ND (0.50)	
TETRACHLOROETHYLENE	µg/L	50	ND (1.0)	ND (1.0)	ND (1.0)	
TETRAHYDROFURAN	µg/L	50000	ND (2.0)	ND (2.0)	ND (2.0)	
TOLUENE	µg/L	40000	ND (1.0)	ND (1.0)	ND (1.0)	
1,2,3-TRICHLOROBENZENE	µg/L	~	ND (2.0)	ND (2.0)	ND (2.0)	
1,2,4-TRICHLOROBENZENE	µg/L	200	ND (1.0)	ND (1.0)	ND (1.0)	
1,1,1-TRICHLOROETHANE	µg/L	4000	ND (1.0)	ND (1.0)	ND (1.0)	
1,1,2-TRICHLOROETHANE	µg/L	900	ND (1.0)	ND (1.0)	ND (1.0)	
TRICHLOROETHYLENE	µg/L	5	ND (1.0)	ND (1.0)	ND (1.0)	
TRICHLOROFLUOROMETHANE	µg/L	100000	ND (2.0)	ND (2.0)	ND (2.0)	
1,2,3-TRICHLOROPROPANE	µg/L	10000	ND (2.0)	ND (2.0)	ND (2.0)	
1,2,4-TRIMETHYLBENZENE	µg/L	100000	ND (1.0)	ND (1.0)	ND (1.0)	
1,3,5-TRIMETHYLBENZENE	µg/L	1000	ND (1.0)	ND (1.0)	ND (1.0)	
VINYL CHLORIDE	µg/L	2	ND (2.0)	ND (2.0)	ND (2.0)	
M/P-XYLENE	µg/L	3000	ND (2.0)	ND (2.0)	ND (2.0)	
O-XYLENE	µg/L	3000	ND (1.0)	ND (1.0)	ND (1.0)	

Notes:

1. Standards are from the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000

mg/L

Milligrams per liter

µg/L

Micrograms per liter

ND(value)

Parameter not detected above laboratory reporting limit shown

Bold

Detected above laboratory reporting limit

Bold

Detected above MCP RCGW-2

ATTACHMENT A
SOIL BORING LOGS



PROJECT
Lampson Brook Farm
Belchertown, MA

REPORT OF BORING No.
SHEET
Project No.
CHKD BY

B-1
1 OF 1
ENG22-0029
JRS

BORING Co. New England Geotech
FOREMAN Maynar Mendoza
WSE GEOLOGIST: Meghan Shanahan
BORING LOCATION See attached plan
GROUND SURFACE ELEV. Not Surveyed DATUM
DATE START 6/7/22 DATE END 6/7/22

SAMPLER: Grab
CASING: 2" PVC
CASING SIZE: 2" Method Direct Push
DRILL RIG: Geoprobe 7822DT
TOTAL DEPTH: 15'
DEPTH TO BEDROCK: N/A

DEPTH (feet)	CASING (lb/ft)	SAMPLE		PID (ppm)	Moisture	SAMPLE DESCRIPTION	Contact Interval	Sample Details
		PEN/REC (in)	DEPTH (ft)					
5		60/48		0.1	Dry	Burmister Classification		0-3' MCP-14 Metals
				0.1	Dry	Brown fine to medium Sand		
				0.1	Dry	Light brown/grey medium to coarse Sand		
				0.1	Dry			
				0.1	Dry			
10			5'	0.1	Dry			
		60/52		0.1	Dry	Red/light brown medium to coarse Sand		
				0.1	Dry			
				0.1	Dry			
				0.1	Dry			
15			10'	0.1	Dry			
		60/50		0.1	Dry	Red/light brown medium to coarse Sand		
				0.1	Dry			
				0.1	Dry			
				0.1	Dry			
20			15'	0.1	Dry			
						End of exploration 15.0'		
25								
30								
35								

REMARKS:
No evidence of contamination
Well MW-1 installed; bottom set at 23'
Sample B-1 (0-3') collected

NOTES:
BORING No. B-1



SAMPLER:	Grab	DRILL RIG:	Geoprobe 7822DT
CASING:	2" PVC	TOTAL DEPTH:	20'
CASING SIZE:	2" Method Direct Push	DEPTH TO BEDROCK:	N/A

DEPTH (feet)	CASING (lb/ft)	SAMPLE		PID (ppm)	Moisture	SAMPLE DESCRIPTION		Contact Interval	Sample Details
		PEN/REC (in)	DEPTH (ft)			Burmister Classification			
5		60/41		0	Dry	Brown/red medium to coarse Sand, trace asphalt			B-2 (0-3') MCP-14 Metals
				0.1	Dry				
				0.1	Dry				
				0.1	Dry				
			5'	0	Dry				
10		60/52		0.1	Dry	Brown/red medium to coarse Sand			
				0	Dry				
				0	Dry				
				0.1	Dry				
			10'	0	Dry				
15		60/56		0.1	Dry	Brown/red medium to coarse Sand			
				0.1	Dry				
				0.1	Dry				
				0.1	Dry				
			15'	0	Dry				
20		60/52		0.1	Dry	Brown/red medium to coarse Sand			
				0.1	Dry				
				0.1	Dry				
				0.2	Dry				
			20'	0.2	Dry				
25						End of exploration 20'			
30									
35									

NOTES:	BORING No. <u>B-2</u>
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PROJECT
Lampson Brook Farm
Belchertown, MA

REPORT OF BORING No.
SHEET
Project No.
CHKD BY

B-3
1 OF 1
ENG22-0029
JRS

BORING Co. New England Geotech
FOREMAN Maynar Mendoza
WSE GEOLOGIST: Meghan Shanahan
BORING LOCATION See attached plan
GROUND SURFACE ELEV. Not Surveyed
DATE START 6/7/22 DATE END 6/7/22

SAMPLER: Grab
CASING: 2" PVC
CASING SIZE: 2" Method Direct Push
DRILL RIG: Geoprobe 7822DT
TOTAL DEPTH: 15'
DEPTH TO BEDROCK: N/A

DEPTH (feet)	CASING (lb/ft)	SAMPLE		PID (ppm)	Moisture	SAMPLE DESCRIPTION	Contact Interval	Sample Details
		PEN/REC (in)	DEPTH (ft)					
5		60/51		0.2	Dry	Brown fine to medium Sand, trace asphalt		B-3 (0-3') MCP-14 Metals
				0.2	Dry			
				0.1	Dry			
				0.2	Dry			
			5'	0.2	Dry			
10		60/56		0.3	Dry	Red/brown medium to coarse Sand, trace asphalt		
				0.3	Dry			
				0.3	Dry			
				0.2	Dry			
			10'	0.2	Dry			
15		60/60		0.3	Dry	Red/brown fine to medium Sand		
				0.2	Dry			
				0.1	Dry			
				0.2	Dry			
			15'		Dry			
20						End of exploration 15'		
25								
30								
35								

REMARKS:
Depth to Groundwater:
Well Installed Yes No
Screen Interval to
Background PID was 0.2 or 0.3

NOTES:
BORING No. B-3

C:\Users\spencer\OneDrive - WESTON & SAMPSON ENGINEERS, Inc\Desktop\Lampson\Logs\Boring Logs DRAFT.xls\B-7

C:\Users\spencer\OneDrive - WESTON & SAMPSON ENGINEERS, Inc\Desktop\Lampson\Logs\Boring Logs DRAFT.xls\B-7



PROJECT
Lampson Brook Farm
Belchertown, MA

REPORT OF BORING No.
SHEET
Project No.
CHKD BY

B-6
1 OF 1
ENG22-0029
JRS

BORING Co. New England Geotech
FOREMAN Maynar Mendoza
WSE GEOLOGIST: Meghan Shanahan
BORING LOCATION See attached plan
GROUND SURFACE ELEV. Not Surveyed DATUM
DATE START 6/7/22 DATE END 6/7/22

SAMPLER: Grab
CASING: 2" PVC
CASING SIZE: 2" Method Direct Push
DRILL RIG: Geoprobe 7822DT
TOTAL DEPTH: 15'
DEPTH TO BEDROCK: N/A

DEPTH (feet)	CASING (lb/ft)	SAMPLE		PID (ppm)	Moisture	SAMPLE DESCRIPTION	Contact Interval	Sample Details
		PEN/REC (in)	DEPTH (ft)					
5		60/47		0.3	Dry	Light/medium brown fine to medium Sand		B-6 (0-3') MCP-14 Metals
				0.2	Dry			
				0.2	Dry			
				0.3	Dry			
			5'	0.3	Dry			
10		60/53		0.3	Dry	Red/brown medium to coarse Sand, trace asphalt		
				0.2	Dry			
				0.2	Dry			
				0.3	Dry			
			10'	0.3	Dry			
15		60/55		0.3	Dry	Red/brown medium to coarse Sand, trace asphalt		
				0.2	Dry			
				0.3	Dry			
				0.3	Dry			
			15'	0.3	Dry			
20						End of exploration 15'		
25								
30								
35								

REMARKS:
Depth to Groundwater: N/A
Well Installed Yes No
Screen Interval to
Background: 0.3

NOTES:
BORING No. B-6



PROJECT
Lampson Brook Farm
Belchertown, MA

REPORT OF BORING No.
SHEET
Project No.
CHKD BY

B-7
1 OF 1
ENG22-0029
JRS

BORING Co. New England Geotech
FOREMAN Maynar Mendoza
WSE GEOLOGIST: Meghan Shanahan
BORING LOCATION See attached plan
GROUND SURFACE ELEV. Not Surveyed DATUM
DATE START 6/7/22 DATE END 6/7/22

SAMPLER: Grab
CASING: 2" PVC
CASING SIZE: 2" Method Direct Push
DRILL RIG: Geoprobe 7822DT
TOTAL DEPTH: 15'
DEPTH TO BEDROCK: N/A

DEPTH (feet)	CASING (lb/ft)	SAMPLE		PID (ppm)	Moisture	SAMPLE DESCRIPTION	Contact Interval	Sample Details
		PEN/REC (in)	DEPTH (ft)			Burmister Classification		
5		60/44		0.2	Dry	Brown fine to medium Sand, trace asphalt at 4'		B-7 (0-3') MCP-14 Metals
				0.1	Dry			
				0.1	Dry			
				0.1	Dry			
			5'	0.1	Dry			
10		60/60		0.2	Dry	Brown fine to medium Sand		
				0.1	Dry			
				0	Dry			
				0.1	Dry			
			10'	0.2	Dry			
15		60/60		0.2	Dry	Brown fine to medium Sand, some gravel from 13-15'		
				0.1	Dry			
				0.1	Dry			
				0.1	Dry			
			15'	0.2	Dry			
20						End of exploration 15'		
25								
30								
35								

Depth to Groundwater: 4.5'
Well Installed Yes No Background: 0.2
Screen Interval to Well MW-3 installed at 10' with 8' screen

NOTES:
BORING No. B-7

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS

July 7, 2022

Joe Spencer
Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867

Project Location: Belchertown, MA
Client Job Number:
Project Number: ENG22-0029
Laboratory Work Order Number: 22F1733

Enclosed are results of analyses for samples as received by the laboratory on June 27, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kerry K. McGee
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867
ATTN: Joe Spencer

REPORT DATE: 7/7/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: ENG22-0029

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22F1733

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Belchertown, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	22F1733-01	Ground Water		MADEP EPH rev 2.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8260D	
MW-2	22F1733-02	Ground Water		MADEP EPH rev 2.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8260D	
MW-3	22F1733-03	Ground Water		MADEP EPH rev 2.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8260D	
TB-1	22F1733-04	Ground Water		SW-846 8260D	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method MA VPH, only hydrocarbon ranges were requested and reported.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

MADEP EPH rev 2.1**Qualifications:****L-07A**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Naphthalene**

B312167-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**2-Methylnaphthalene**

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], B312167-BLK1, B312167-BS1, B312167-BSD1

Naphthalene

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], B312167-BLK1, B312167-BS1

SW-846 6020B**Qualifications:****R-04**

Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).

Analyte & Samples(s) Qualified:**Nickel**

22F1733-01[MW-1], B311823-DUP1

SW-846 8260D**Qualifications:****L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Chloromethane**

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1

Naphthalene

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**2-Hexanone (MBK)**

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1

Hexachlorobutadiene

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1

RL-07

Elevated reporting limit based on lowest point in calibration.

MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:**Bromomethane**

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1]

Carbon Disulfide

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1]

Methylene Chloride

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1]

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V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:**1,2,3-Trichlorobenzene**

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1, S073291-CCV1

Chloromethane

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1, S073291-CCV1

Naphthalene

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1, S073291-CCV1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

S073291-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Bromomethane**

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1, S073291-CCV1

Chloromethane

22F1733-01[MW-1], 22F1733-02[MW-2], 22F1733-03[MW-3], 22F1733-04[TB-1], B311787-BLK1, B311787-BS1, B311787-BSD1, S073291-CCV1

MADEP-VPH-Feb 2018 Rev 2.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

Analytical column used for VPH analysis is Restek, Rtx-502.2, 105meter, 0.53mmID, 3um df. Trap used for VPH analysis is CarboSieve B/CarboSieveS-III.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-1

Sampled: 6/27/2022 11:30

Sample ID: 22F1733-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Bromomethane	ND	5.0	µg/L	1	RL-07, V-34	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Chloromethane	ND	2.0	µg/L	1	L-04, V-05, V-34	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-1

Sampled: 6/27/2022 11:30

Sample ID: 22F1733-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
2-Hexanone (MBK)	ND	10	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Naphthalene	ND	2.0	µg/L	1	L-04, V-05	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1	V-05	SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:16	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.7	70-130	6/28/22 13:16
Toluene-d8	99.2	70-130	6/28/22 13:16
4-Bromofluorobenzene	98.7	70-130	6/28/22 13:16

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-1

Sampled: 6/27/2022 11:30

Sample ID: 22F1733-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	96	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
C19-C36 Aliphatics	ND	96	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Unadjusted C11-C22 Aromatics	ND	96	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
C11-C22 Aromatics	ND	96	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Acenaphthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Acenaphthylene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Benzo(a)anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Benzo(a)pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Benzo(b)fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Benzo(g,h,i)perylene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Benzo(k)fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Chrysene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Dibenz(a,h)anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Fluorene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Indeno(1,2,3-cd)pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
2-Methylnaphthalene	ND	1.9	µg/L	1	R-05	MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Naphthalene	ND	1.9	µg/L	1	R-05	MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Phenanthrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH
Pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:38	TYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	71.2	40-140	
o-Terphenyl (OTP)	61.0	40-140	
2-Bromonaphthalene	97.4	40-140	
2-Fluorobiphenyl	94.8	40-140	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-1

Sampled: 6/27/2022 11:30

Sample ID: 22F1733-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:06	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:06	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:06	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:06	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:06	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	75.8	70-130							
2,5-Dibromotoluene (PID)	85.3	70-130							

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-1

Sampled: 6/27/2022 11:30

Sample ID: 22F1733-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Arsenic	ND	0.80	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Barium	360	10	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Chromium	5.8	1.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Lead	1.0	0.50	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/30/22	7/1/22 15:16	ATP
Nickel	12	5.0	µg/L	1	R-04	SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:10	QNW

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-2

Sampled: 6/27/2022 10:25

Sample ID: 22F1733-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Bromomethane	ND	5.0	µg/L	1	RL-07, V-34	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Chloromethane	ND	2.0	µg/L	1	L-04, V-05, V-34	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-2

Sampled: 6/27/2022 10:25

Sample ID: 22F1733-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
2-Hexanone (MBK)	ND	10	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Naphthalene	ND	2.0	µg/L	1	L-04, V-05	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1	V-05	SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 13:43	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.7	70-130	6/28/22 13:43
Toluene-d8	99.1	70-130	6/28/22 13:43
4-Bromofluorobenzene	97.1	70-130	6/28/22 13:43

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-2

Sampled: 6/27/2022 10:25

Sample ID: 22F1733-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	95	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
C19-C36 Aliphatics	ND	95	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Unadjusted C11-C22 Aromatics	ND	95	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
C11-C22 Aromatics	ND	95	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Acenaphthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Acenaphthylene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Benzo(a)anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Benzo(a)pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Benzo(b)fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Benzo(g,h,i)perylene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Benzo(k)fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Chrysene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Dibenz(a,h)anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Fluorene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Indeno(1,2,3-cd)pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
2-Methylnaphthalene	ND	1.9	µg/L	1	R-05	MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Naphthalene	ND	1.9	µg/L	1	R-05	MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Phenanthrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH
Pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 11:57	TYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	74.8	40-140	
o-Terphenyl (OTP)	62.9	40-140	
2-Bromonaphthalene	103	40-140	
2-Fluorobiphenyl	101	40-140	

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-2

Sampled: 6/27/2022 10:25

Sample ID: 22F1733-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:36	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:36	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:36	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:36	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 19:36	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	72.2	70-130							
2,5-Dibromotoluene (PID)	78.5	70-130							

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-2

Sampled: 6/27/2022 10:25

Sample ID: 22F1733-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Arsenic	ND	0.80	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Barium	140	10	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Chromium	2.0	1.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Lead	ND	0.50	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/30/22	7/1/22 15:18	ATP
Nickel	5.1	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW
Zinc	10	10	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:13	QNW

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-3

Sampled: 6/27/2022 09:25

Sample ID: 22F1733-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Bromomethane	ND	5.0	µg/L	1	RL-07, V-34	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Chloromethane	ND	2.0	µg/L	1	L-04, V-05, V-34	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-3

Sampled: 6/27/2022 09:25

Sample ID: 22F1733-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
2-Hexanone (MBK)	ND	10	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Naphthalene	ND	2.0	µg/L	1	L-04, V-05	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1	V-05	SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 14:09	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.8	70-130	6/28/22 14:09
Toluene-d8	98.2	70-130	6/28/22 14:09
4-Bromofluorobenzene	99.0	70-130	6/28/22 14:09

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-3

Sampled: 6/27/2022 09:25

Sample ID: 22F1733-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	98	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
C19-C36 Aliphatics	ND	98	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Unadjusted C11-C22 Aromatics	ND	98	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
C11-C22 Aromatics	ND	98	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Acenaphthene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Acenaphthylene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Anthracene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Chrysene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Fluoranthene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Fluorene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
2-Methylnaphthalene	ND	2.0	µg/L	1	R-05	MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Naphthalene	ND	2.0	µg/L	1	R-05	MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Phenanthrene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH
Pyrene	ND	2.0	µg/L	1		MADEP EPH rev 2.1	7/2/22	7/7/22 12:17	TYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	77.7	40-140	
o-Terphenyl (OTP)	63.7	40-140	
2-Bromonaphthalene	95.0	40-140	
2-Fluorobiphenyl	92.0	40-140	

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-3

Sampled: 6/27/2022 09:25

Sample ID: 22F1733-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 20:05	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 20:05	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 20:05	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 20:05	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/28/22	6/28/22 20:05	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	76.4	70-130							
2,5-Dibromotoluene (PID)	78.7	70-130							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: MW-3

Sampled: 6/27/2022 09:25

Sample ID: 22F1733-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Arsenic	ND	0.80	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Barium	66	10	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Chromium	1.5	1.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Lead	0.99	0.50	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/30/22	7/1/22 15:20	ATP
Nickel	5.3	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW
Zinc	14	10	µg/L	1		SW-846 6020B	6/28/22	6/29/22 17:16	QNW

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: TB-1

Sampled: 6/27/2022 00:00

Sample ID: 22F1733-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Bromomethane	ND	5.0	µg/L	1	RL-07, V-34	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Chloromethane	ND	2.0	µg/L	1	L-04, V-05, V-34	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD

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Project Location: Belchertown, MA

Sample Description:

Work Order: 22F1733

Date Received: 6/27/2022

Field Sample #: TB-1

Sampled: 6/27/2022 00:00

Sample ID: 22F1733-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
2-Hexanone (MBK)	ND	10	µg/L	1	R-05	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Naphthalene	ND	2.0	µg/L	1	L-04, V-05	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1	V-05	SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260D	6/28/22	6/28/22 12:24	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.4	70-130	6/28/22 12:24
Toluene-d8	99.3	70-130	6/28/22 12:24
4-Bromofluorobenzene	101	70-130	6/28/22 12:24

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Sample Extraction Data**Prep Method: SW-846 3510C Analytical Method: MADEP EPH rev 2.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22F1733-01 [MW-1]	B312167	990	1.90	07/02/22
22F1733-02 [MW-2]	B312167	995	1.90	07/02/22
22F1733-03 [MW-3]	B312167	970	1.90	07/02/22

Prep Method: MA VPH Analytical Method: MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22F1733-01 [MW-1]	B311819	5	5.00	06/28/22
22F1733-02 [MW-2]	B311819	5	5.00	06/28/22
22F1733-03 [MW-3]	B311819	5	5.00	06/28/22

Prep Method: SW-846 3005A Dissolved Analytical Method: SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22F1733-01 [MW-1]	B311823	50.0	50.0	06/28/22
22F1733-02 [MW-2]	B311823	50.0	50.0	06/28/22
22F1733-03 [MW-3]	B311823	50.0	50.0	06/28/22

Prep Method: SW-846 7470A Dissolved Analytical Method: SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22F1733-01 [MW-1]	B311997	10.0	10.0	06/30/22
22F1733-02 [MW-2]	B311997	10.0	10.0	06/30/22
22F1733-03 [MW-3]	B311997	10.0	10.0	06/30/22

Prep Method: SW-846 5030B Analytical Method: SW-846 8260D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22F1733-01 [MW-1]	B311787	5	5.00	06/28/22
22F1733-02 [MW-2]	B311787	5	5.00	06/28/22
22F1733-03 [MW-3]	B311787	5	5.00	06/28/22
22F1733-04 [TB-1]	B311787	5	5.00	06/28/22

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B311787 - SW-846 5030B										
Blank (B311787-BLK1)				Prepared & Analyzed: 06/28/22						
Acetone	ND	10	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							V-34
2-Butanone (MEK)	ND	10	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							L-04, V-05, V-34
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							R-05
2-Hexanone (MBK)	ND	10	µg/L							R-05
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							L-04, V-05

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B311787 - SW-846 5030B										
Blank (B311787-BLK1)										
Prepared & Analyzed: 06/28/22										
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							V-05
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	25.2		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	26.7		µg/L	25.0		107	70-130			
Surrogate: 4-Bromofluorobenzene	26.0		µg/L	25.0		104	70-130			
LCS (B311787-BS1)										
Prepared & Analyzed: 06/28/22										
Acetone	95.4	10	µg/L	100		95.4	40-160			†
tert-Amyl Methyl Ether (TAME)	10.0	0.50	µg/L	10.0		100	70-130			
Benzene	9.67	1.0	µg/L	10.0		96.7	70-130			
Bromobenzene	10.6	1.0	µg/L	10.0		106	70-130			
Bromochloromethane	10.7	1.0	µg/L	10.0		107	70-130			
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromoform	10.1	1.0	µg/L	10.0		101	70-130			
Bromomethane	13.4	2.0	µg/L	10.0		134	40-160			L-14, V-34 †
2-Butanone (MEK)	86.1	10	µg/L	100		86.1	40-160			†
n-Butylbenzene	9.10	1.0	µg/L	10.0		91.0	70-130			
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
tert-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130			
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130			
Carbon Disulfide	105	5.0	µg/L	100		105	70-130			
Carbon Tetrachloride	10.6	1.0	µg/L	10.0		106	70-130			
Chlorobenzene	10.0	1.0	µg/L	10.0		100	70-130			
Chlorodibromomethane	10.2	0.50	µg/L	10.0		102	70-130			
Chloroethane	11.4	2.0	µg/L	10.0		114	70-130			
Chloroform	9.89	2.0	µg/L	10.0		98.9	70-130			
Chloromethane	3.58	2.0	µg/L	10.0		35.8	* 40-160			L-04, V-05, V-34 †
2-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130			
4-Chlorotoluene	10.3	1.0	µg/L	10.0		103	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	7.69	2.0	µg/L	10.0		76.9	70-130			
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106	70-130			
Dibromomethane	11.2	1.0	µg/L	10.0		112	70-130			
1,2-Dichlorobenzene	8.22	1.0	µg/L	10.0		82.2	70-130			
1,3-Dichlorobenzene	9.64	1.0	µg/L	10.0		96.4	70-130			
1,4-Dichlorobenzene	9.52	1.0	µg/L	10.0		95.2	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B311787 - SW-846 5030B										
LCS (B311787-BS1)				Prepared & Analyzed: 06/28/22						
Dichlorodifluoromethane (Freon 12)	9.48	2.0	µg/L	10.0		94.8	40-160			†
1,1-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130			
1,2-Dichloroethane	12.1	1.0	µg/L	10.0		121	70-130			
1,1-Dichloroethylene	11.4	1.0	µg/L	10.0		114	70-130			
cis-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109	70-130			
trans-1,2-Dichloroethylene	11.2	1.0	µg/L	10.0		112	70-130			
1,2-Dichloropropane	10.7	1.0	µg/L	10.0		107	70-130			
1,3-Dichloropropane	11.0	0.50	µg/L	10.0		110	70-130			
2,2-Dichloropropane	10.7	1.0	µg/L	10.0		107	70-130			
1,1-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130			
cis-1,3-Dichloropropene	9.81	0.40	µg/L	10.0		98.1	70-130			
trans-1,3-Dichloropropene	9.95	0.40	µg/L	10.0		99.5	70-130			
Diethyl Ether	10.2	2.0	µg/L	10.0		102	70-130			
Diisopropyl Ether (DIPE)	10.3	0.50	µg/L	10.0		103	70-130			
1,4-Dioxane	99.7	50	µg/L	100		99.7	40-160			†
Ethylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
Hexachlorobutadiene	9.06	0.60	µg/L	10.0		90.6	70-130			R-05
2-Hexanone (MBK)	96.5	10	µg/L	100		96.5	40-160			R-05 †
Isopropylbenzene (Cumene)	10.5	1.0	µg/L	10.0		105	70-130			
p-Isopropyltoluene (p-Cymene)	10.6	1.0	µg/L	10.0		106	70-130			
Methyl tert-Butyl Ether (MTBE)	10.4	1.0	µg/L	10.0		104	70-130			
Methylene Chloride	10.6	5.0	µg/L	10.0		106	70-130			
4-Methyl-2-pentanone (MIBK)	103	10	µg/L	100		103	40-160			†
Naphthalene	6.81	2.0	µg/L	10.0		68.1	* 70-130			L-04, V-05
n-Propylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
Styrene	10.4	1.0	µg/L	10.0		104	70-130			
1,1,1,2-Tetrachloroethane	10.9	1.0	µg/L	10.0		109	70-130			
1,1,2,2-Tetrachloroethane	9.82	0.50	µg/L	10.0		98.2	70-130			
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106	70-130			
Tetrahydrofuran	9.82	2.0	µg/L	10.0		98.2	70-130			
Toluene	10.2	1.0	µg/L	10.0		102	70-130			
1,2,3-Trichlorobenzene	7.37	2.0	µg/L	10.0		73.7	70-130			V-05
1,2,4-Trichlorobenzene	8.51	1.0	µg/L	10.0		85.1	70-130			
1,1,1-Trichloroethane	10.5	1.0	µg/L	10.0		105	70-130			
1,1,2-Trichloroethane	10.4	1.0	µg/L	10.0		104	70-130			
Trichloroethylene	11.2	1.0	µg/L	10.0		112	70-130			
Trichlorofluoromethane (Freon 11)	10.5	2.0	µg/L	10.0		105	70-130			
1,2,3-Trichloropropane	10.7	2.0	µg/L	10.0		107	70-130			
1,2,4-Trimethylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
Vinyl Chloride	9.32	2.0	µg/L	10.0		93.2	70-130			
m+p Xylene	21.6	2.0	µg/L	20.0		108	70-130			
o-Xylene	10.3	1.0	µg/L	10.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.4		µg/L	25.0		97.4	70-130			
Surrogate: Toluene-d8	24.9		µg/L	25.0		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.4	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B311787 - SW-846 5030B										
LCS Dup (B311787-BSD1)										
Prepared & Analyzed: 06/28/22										
Acetone	92.9	10	µg/L	100		92.9	40-160	2.64	20	†
tert-Amyl Methyl Ether (TAME)	9.75	0.50	µg/L	10.0		97.5	70-130	2.53	20	
Benzene	9.67	1.0	µg/L	10.0		96.7	70-130	0.00	20	
Bromobenzene	11.4	1.0	µg/L	10.0		114	70-130	7.37	20	
Bromochloromethane	10.4	1.0	µg/L	10.0		104	70-130	1.99	20	
Bromodichloromethane	10.9	1.0	µg/L	10.0		109	70-130	4.87	20	
Bromoform	11.0	1.0	µg/L	10.0		110	70-130	9.02	20	
Bromomethane	14.5	2.0	µg/L	10.0		145	40-160	7.83	20	L-14, V-34 †
2-Butanone (MEK)	85.9	10	µg/L	100		85.9	40-160	0.233	20	†
n-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	10.0	20	
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130	3.28	20	
tert-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130	0.894	20	
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130	0.197	20	
Carbon Disulfide	103	5.0	µg/L	100		103	70-130	1.73	20	
Carbon Tetrachloride	11.7	1.0	µg/L	10.0		117	70-130	9.87	20	
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	5.80	20	
Chlorodibromomethane	12.1	0.50	µg/L	10.0		121	70-130	16.9	20	
Chloroethane	11.3	2.0	µg/L	10.0		113	70-130	1.41	20	
Chloroform	10.1	2.0	µg/L	10.0		101	70-130	1.70	20	
Chloromethane	3.92	2.0	µg/L	10.0		39.2	* 40-160	9.07	20	L-04, V-05, V-34 †
2-Chlorotoluene	11.1	1.0	µg/L	10.0		111	70-130	6.72	20	
4-Chlorotoluene	11.2	1.0	µg/L	10.0		112	70-130	9.01	20	
1,2-Dibromo-3-chloropropane (DBCP)	7.61	2.0	µg/L	10.0		76.1	70-130	1.05	20	
1,2-Dibromoethane (EDB)	12.4	0.50	µg/L	10.0		124	70-130	14.9	20	
Dibromomethane	12.2	1.0	µg/L	10.0		122	70-130	9.08	20	
1,2-Dichlorobenzene	9.52	1.0	µg/L	10.0		95.2	70-130	14.7	20	
1,3-Dichlorobenzene	10.0	1.0	µg/L	10.0		100	70-130	3.97	20	
1,4-Dichlorobenzene	9.70	1.0	µg/L	10.0		97.0	70-130	1.87	20	
Dichlorodifluoromethane (Freon 12)	9.62	2.0	µg/L	10.0		96.2	40-160	1.47	20	†
1,1-Dichloroethane	10.5	1.0	µg/L	10.0		105	70-130	0.857	20	
1,2-Dichloroethane	12.0	1.0	µg/L	10.0		120	70-130	0.831	20	
1,1-Dichloroethylene	11.7	1.0	µg/L	10.0		117	70-130	2.33	20	
cis-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	1.11	20	
trans-1,2-Dichloroethylene	10.7	1.0	µg/L	10.0		107	70-130	4.92	20	
1,2-Dichloropropane	11.7	1.0	µg/L	10.0		117	70-130	8.40	20	
1,3-Dichloropropane	12.4	0.50	µg/L	10.0		124	70-130	12.1	20	
2,2-Dichloropropane	10.3	1.0	µg/L	10.0		103	70-130	3.63	20	
1,1-Dichloropropene	11.4	0.50	µg/L	10.0		114	70-130	8.37	20	
cis-1,3-Dichloropropene	10.4	0.40	µg/L	10.0		104	70-130	5.65	20	
trans-1,3-Dichloropropene	10.4	0.40	µg/L	10.0		104	70-130	4.23	20	
Diethyl Ether	10.6	2.0	µg/L	10.0		106	70-130	3.46	20	
Diisopropyl Ether (DIPE)	9.91	0.50	µg/L	10.0		99.1	70-130	4.15	20	
1,4-Dioxane	102	50	µg/L	100		102	40-160	1.89	20	†
Ethylbenzene	10.9	1.0	µg/L	10.0		109	70-130	4.80	20	
Hexachlorobutadiene	7.36	0.60	µg/L	10.0		73.6	70-130	20.7	* 20	R-05
2-Hexanone (MBK)	119	10	µg/L	100		119	40-160	20.6	* 20	R-05 †
Isopropylbenzene (Cumene)	11.2	1.0	µg/L	10.0		112	70-130	6.43	20	
p-Isopropyltoluene (p-Cymene)	11.0	1.0	µg/L	10.0		110	70-130	3.34	20	
Methyl tert-Butyl Ether (MTBE)	10.5	1.0	µg/L	10.0		105	70-130	0.382	20	
Methylene Chloride	10.5	5.0	µg/L	10.0		105	70-130	0.380	20	
4-Methyl-2-pentanone (MIBK)	106	10	µg/L	100		106	40-160	3.17	20	†
Naphthalene	6.16	2.0	µg/L	10.0		61.6	* 70-130	10.0	20	L-04, V-05

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B311787 - SW-846 5030B										
LCS Dup (B311787-BSD1)				Prepared & Analyzed: 06/28/22						
n-Propylbenzene	10.8	1.0	µg/L	10.0		108	70-130	6.09	20	
Styrene	11.2	1.0	µg/L	10.0		112	70-130	6.67	20	
1,1,1,2-Tetrachloroethane	11.3	1.0	µg/L	10.0		113	70-130	4.23	20	
1,1,2,2-Tetrachloroethane	10.4	0.50	µg/L	10.0		104	70-130	5.64	20	
Tetrachloroethylene	12.5	1.0	µg/L	10.0		125	70-130	16.1	20	
Tetrahydrofuran	8.76	2.0	µg/L	10.0		87.6	70-130	11.4	20	
Toluene	11.7	1.0	µg/L	10.0		117	70-130	13.5	20	
1,2,3-Trichlorobenzene	7.27	2.0	µg/L	10.0		72.7	70-130	1.37	20	V-05
1,2,4-Trichlorobenzene	7.22	1.0	µg/L	10.0		72.2	70-130	16.4	20	
1,1,1-Trichloroethane	10.6	1.0	µg/L	10.0		106	70-130	1.32	20	
1,1,2-Trichloroethane	12.2	1.0	µg/L	10.0		122	70-130	16.5	20	
Trichloroethylene	11.9	1.0	µg/L	10.0		119	70-130	6.66	20	
Trichlorofluoromethane (Freon 11)	10.8	2.0	µg/L	10.0		108	70-130	2.25	20	
1,2,3-Trichloropropane	11.3	2.0	µg/L	10.0		113	70-130	5.47	20	
1,2,4-Trimethylbenzene	10.9	1.0	µg/L	10.0		109	70-130	0.647	20	
1,3,5-Trimethylbenzene	11.2	1.0	µg/L	10.0		112	70-130	9.51	20	
Vinyl Chloride	9.85	2.0	µg/L	10.0		98.5	70-130	5.53	20	
m+p Xylene	22.6	2.0	µg/L	20.0		113	70-130	4.66	20	
o-Xylene	10.9	1.0	µg/L	10.0		109	70-130	5.93	20	
Surrogate: 1,2-Dichloroethane-d4	23.5		µg/L	25.0		93.9	70-130			
Surrogate: Toluene-d8	25.3		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		µg/L	25.0		100	70-130			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B312167 - SW-846 3510C
Blank (B312167-BLK1)

Prepared: 07/02/22 Analyzed: 07/06/22

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							R-05
Naphthalene	ND	2.0	µg/L							R-05
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							

Surrogate: Chlorooctadecane (COD)	81.9		µg/L	100		81.9	40-140			
Surrogate: o-Terphenyl (OTP)	66.6		µg/L	100		66.6	40-140			
Surrogate: 2-Bromonaphthalene	89.0		µg/L	100		89.0	40-140			
Surrogate: 2-Fluorobiphenyl	83.5		µg/L	100		83.5	40-140			

LCS (B312167-BS1)

Prepared: 07/02/22 Analyzed: 07/06/22

C9-C18 Aliphatics	383	100	µg/L	600		63.8	0-200			
C19-C36 Aliphatics	665	100	µg/L	800		83.1	0-200			
Unadjusted C11-C22 Aromatics	1380	100	µg/L	1700		81.1	0-200			
Acenaphthene	65.2	2.0	µg/L	100		65.2	40-140			
Acenaphthylene	59.0	2.0	µg/L	100		59.0	40-140			
Anthracene	74.5	2.0	µg/L	100		74.5	40-140			
Benzo(a)anthracene	87.7	2.0	µg/L	100		87.7	40-140			
Benzo(a)pyrene	84.7	2.0	µg/L	100		84.7	40-140			
Benzo(b)fluoranthene	82.2	2.0	µg/L	100		82.2	40-140			
Benzo(g,h,i)perylene	76.5	2.0	µg/L	100		76.5	40-140			
Benzo(k)fluoranthene	81.3	2.0	µg/L	100		81.3	40-140			
Chrysene	85.6	2.0	µg/L	100		85.6	40-140			
Dibenz(a,h)anthracene	83.9	2.0	µg/L	100		83.9	40-140			
Fluoranthene	79.6	2.0	µg/L	100		79.6	40-140			
Fluorene	71.3	2.0	µg/L	100		71.3	40-140			
Indeno(1,2,3-cd)pyrene	78.3	2.0	µg/L	100		78.3	40-140			
2-Methylnaphthalene	57.8	2.0	µg/L	100		57.8	40-140			R-05
Naphthalene	52.5	2.0	µg/L	100		52.5	40-140			R-05
Phenanthrene	73.7	2.0	µg/L	100		73.7	40-140			
Pyrene	81.3	2.0	µg/L	100		81.3	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	81.3		µg/L	100		81.3	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B312167 - SW-846 3510C											
LCS (B312167-BS1)			Prepared: 07/02/22 Analyzed: 07/06/22								
Surrogate: o-Terphenyl (OTP)	76.1		µg/L	100		76.1	40-140				
Surrogate: 2-Bromonaphthalene	84.9		µg/L	100		84.9	40-140				
Surrogate: 2-Fluorobiphenyl	81.9		µg/L	100		81.9	40-140				
LCS Dup (B312167-BSD1)			Prepared: 07/02/22 Analyzed: 07/06/22								
C9-C18 Aliphatics	348	100	µg/L	600		58.0	0-200	9.57			
C19-C36 Aliphatics	643	100	µg/L	800		80.4	0-200	3.25			
Unadjusted C11-C22 Aromatics	1170	100	µg/L	1700		68.8	0-200	16.4			
Acenaphthene	53.0	2.0	µg/L	100		53.0	40-140	20.7	25		
Acenaphthylene	46.5	2.0	µg/L	100		46.5	40-140	23.8	25		
Anthracene	63.2	2.0	µg/L	100		63.2	40-140	16.4	25		
Benzo(a)anthracene	75.4	2.0	µg/L	100		75.4	40-140	15.1	25		
Benzo(a)pyrene	73.6	2.0	µg/L	100		73.6	40-140	14.1	25		
Benzo(b)fluoranthene	71.0	2.0	µg/L	100		71.0	40-140	14.6	25		
Benzo(g,h,i)perylene	66.9	2.0	µg/L	100		66.9	40-140	13.4	25		
Benzo(k)fluoranthene	70.7	2.0	µg/L	100		70.7	40-140	14.0	25		
Chrysene	73.5	2.0	µg/L	100		73.5	40-140	15.1	25		
Dibenz(a,h)anthracene	73.0	2.0	µg/L	100		73.0	40-140	13.9	25		
Fluoranthene	68.1	2.0	µg/L	100		68.1	40-140	15.7	25		
Fluorene	58.6	2.0	µg/L	100		58.6	40-140	19.6	25		
Indeno(1,2,3-cd)pyrene	67.7	2.0	µg/L	100		67.7	40-140	14.5	25		
2-Methylnaphthalene	44.4	2.0	µg/L	100		44.4	40-140	26.3	*	25 R-05	
Naphthalene	38.8	2.0	µg/L	100		38.8	*	40-140	29.8	*	25 L-07A
Phenanthrene	62.1	2.0	µg/L	100		62.1	40-140	17.1	25		
Pyrene	69.8	2.0	µg/L	100		69.8	40-140	15.3	25		
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5				
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5				
Surrogate: Chlorooctadecane (COD)	79.3		µg/L	100		79.3	40-140				
Surrogate: o-Terphenyl (OTP)	66.1		µg/L	100		66.1	40-140				
Surrogate: 2-Bromonaphthalene	87.1		µg/L	100		87.1	40-140				
Surrogate: 2-Fluorobiphenyl	85.2		µg/L	100		85.2	40-140				

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B311819 - MA VPH										
Blank (B311819-BLK1)										
Prepared & Analyzed: 06/28/22										
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	29.6		µg/L	40.0		73.9	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	33.2		µg/L	40.0		82.9	70-130			
LCS (B311819-BS1)										
Prepared & Analyzed: 06/28/22										
Benzene	46.7	1.0	µg/L	50.0		93.4	70-130			
Butylcyclohexane	61.4	1.0	µg/L	50.0		123	70-130			
Decane	45.4	1.0	µg/L	50.0		90.7	70-130			
Ethylbenzene	46.7	1.0	µg/L	50.0		93.4	70-130			
Methyl tert-Butyl Ether (MTBE)	48.6	1.0	µg/L	50.0		97.2	70-130			
2-Methylpentane	42.2	1.0	µg/L	50.0		84.3	70-130			
Naphthalene	45.9	5.0	µg/L	50.0		91.8	70-130			
Nonane	62.3	1.0	µg/L	50.0		125	70-130			
Pentane	39.2	1.0	µg/L	50.0		78.4	70-130			
Toluene	46.1	1.0	µg/L	50.0		92.2	70-130			
1,2,4-Trimethylbenzene	46.5	1.0	µg/L	50.0		92.9	70-130			
2,2,4-Trimethylpentane	43.4	1.0	µg/L	50.0		86.7	70-130			
m+p Xylene	91.9	2.0	µg/L	100		91.9	70-130			
o-Xylene	47.8	1.0	µg/L	50.0		95.6	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	37.2		µg/L	40.0		93.0	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	40.8		µg/L	40.0		102	70-130			
LCS Dup (B311819-BSD1)										
Prepared & Analyzed: 06/28/22										
Benzene	43.9	1.0	µg/L	50.0		87.8	70-130	6.16	25	
Butylcyclohexane	59.4	1.0	µg/L	50.0		119	70-130	3.29	25	
Decane	45.0	1.0	µg/L	50.0		90.0	70-130	0.759	25	
Ethylbenzene	46.1	1.0	µg/L	50.0		92.1	70-130	1.35	25	
Methyl tert-Butyl Ether (MTBE)	49.2	1.0	µg/L	50.0		98.4	70-130	1.18	25	
2-Methylpentane	42.0	1.0	µg/L	50.0		84.0	70-130	0.356	25	
Naphthalene	47.2	5.0	µg/L	50.0		94.4	70-130	2.83	25	
Nonane	60.8	1.0	µg/L	50.0		122	70-130	2.44	25	
Pentane	39.0	1.0	µg/L	50.0		78.0	70-130	0.596	25	
Toluene	44.8	1.0	µg/L	50.0		89.7	70-130	2.74	25	
1,2,4-Trimethylbenzene	45.3	1.0	µg/L	50.0		90.5	70-130	2.62	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B311819 - MA VPH
LCS Dup (B311819-BSD1)

Prepared & Analyzed: 06/28/22

2,2,4-Trimethylpentane	41.8	1.0	µg/L	50.0		83.6	70-130	3.61	25	
m+p Xylene	91.0	2.0	µg/L	100		91.0	70-130	1.02	25	
o-Xylene	45.2	1.0	µg/L	50.0		90.5	70-130	5.53	25	
Surrogate: 2,5-Dibromotoluene (FID)	37.8		µg/L	40.0		94.4	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	43.1		µg/L	40.0		108	70-130			

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QUALITY CONTROL
Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B311823 - SW-846 3005A Dissolved
Blank (B311823-BLK1)

Prepared: 06/28/22 Analyzed: 06/29/22

Antimony	ND	1.0	µg/L						
Arsenic	ND	0.80	µg/L						
Barium	ND	10	µg/L						
Beryllium	ND	0.40	µg/L						
Cadmium	ND	0.20	µg/L						
Chromium	ND	1.0	µg/L						
Lead	ND	0.50	µg/L						
Nickel	ND	5.0	µg/L						
Selenium	ND	5.0	µg/L						
Silver	ND	0.20	µg/L						
Thallium	ND	0.20	µg/L						
Vanadium	ND	5.0	µg/L						
Zinc	ND	10	µg/L						

LCS (B311823-BS1)

Prepared: 06/28/22 Analyzed: 06/29/22

Antimony	524	10	µg/L	500		105	80-120		
Arsenic	503	8.0	µg/L	500		101	80-120		
Barium	503	100	µg/L	500		101	80-120		
Beryllium	484	4.0	µg/L	500		96.9	80-120		
Cadmium	510	2.0	µg/L	500		102	80-120		
Chromium	521	10	µg/L	500		104	80-120		
Lead	501	5.0	µg/L	500		100	80-120		
Nickel	513	50	µg/L	500		103	80-120		
Selenium	480	50	µg/L	500		96.0	80-120		
Silver	504	2.0	µg/L	500		101	80-120		
Thallium	508	2.0	µg/L	500		102	80-120		
Vanadium	530	50	µg/L	500		106	80-120		
Zinc	1050	100	µg/L	1000		105	80-120		

LCS Dup (B311823-BSD1)

Prepared: 06/28/22 Analyzed: 06/29/22

Antimony	537	10	µg/L	500		107	80-120	2.45	20
Arsenic	518	8.0	µg/L	500		104	80-120	3.05	20
Barium	513	100	µg/L	500		103	80-120	1.95	20
Beryllium	504	4.0	µg/L	500		101	80-120	3.94	20
Cadmium	521	2.0	µg/L	500		104	80-120	2.27	20
Chromium	524	10	µg/L	500		105	80-120	0.550	20
Lead	512	5.0	µg/L	500		102	80-120	2.11	20
Nickel	515	50	µg/L	500		103	80-120	0.361	20
Selenium	492	50	µg/L	500		98.3	80-120	2.36	20
Silver	505	2.0	µg/L	500		101	80-120	0.123	20
Thallium	523	2.0	µg/L	500		105	80-120	3.01	20
Vanadium	539	50	µg/L	500		108	80-120	1.73	20
Zinc	1070	100	µg/L	1000		107	80-120	1.96	20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B311823 - SW-846 3005A Dissolved

Duplicate (B311823-DUP1)		Source: 22F1733-01			Prepared: 06/28/22 Analyzed: 06/29/22					
Antimony	ND	1.0	µg/L		ND		NC	20		
Arsenic	ND	0.80	µg/L		ND		NC	20		
Barium	357	10	µg/L		357		0.0903	20		
Beryllium	ND	0.40	µg/L		ND		NC	20		
Cadmium	ND	0.20	µg/L		ND		NC	20		
Chromium	5.70	1.0	µg/L		5.81		1.93	20		
Lead	1.04	0.50	µg/L		1.01		2.73	20		
Nickel	18.2	5.0	µg/L		12.3		38.6 *	20		R-04
Selenium	ND	5.0	µg/L		ND		NC	20		
Silver	ND	0.20	µg/L		ND		NC	20		
Thallium	ND	0.20	µg/L		ND		NC	20		
Vanadium	ND	5.0	µg/L		ND		NC	20		
Zinc	ND	10	µg/L		ND		NC	20		

Matrix Spike (B311823-MS1)		Source: 22F1733-01			Prepared: 06/28/22 Analyzed: 06/29/22					
Antimony	538	10	µg/L	500	ND	108	75-125			
Arsenic	512	8.0	µg/L	500	ND	102	75-125			
Barium	886	100	µg/L	500	357	106	75-125			
Beryllium	502	4.0	µg/L	500	ND	100	75-125			
Cadmium	518	2.0	µg/L	500	ND	104	75-125			
Chromium	527	10	µg/L	500	ND	105	75-125			
Lead	513	5.0	µg/L	500	ND	103	75-125			
Nickel	525	50	µg/L	500	12.3	102	75-125			
Selenium	492	50	µg/L	500	ND	98.4	75-125			
Silver	501	2.0	µg/L	500	ND	100	75-125			
Thallium	520	2.0	µg/L	500	ND	104	75-125			
Vanadium	538	50	µg/L	500	ND	108	75-125			
Zinc	1070	100	µg/L	1000	ND	107	75-125			

Batch B311997 - SW-846 7470A Dissolved

Blank (B311997-BLK1)		Prepared: 06/30/22 Analyzed: 07/01/22								
Mercury	ND	0.00010	mg/L							
LCS (B311997-BS1)		Prepared: 06/30/22 Analyzed: 07/01/22								
Mercury	0.00403	0.00010	mg/L	0.00402	100	80-120				
LCS Dup (B311997-BSD1)		Prepared: 06/30/22 Analyzed: 07/01/22								
Mercury	0.00395	0.00010	mg/L	0.00402	98.2	80-120	2.17	20		

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
R-04	Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-07	Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP EPH rev 2.1 in Soil</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>MADEP EPH rev 2.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>MADEP-VPH-Feb 2018 Rev 2.1 in Water</i>	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
MADEP-VPH-Feb 2018 Rev 2.1 in Water	
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
SW-846 6020B in Water	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Beryllium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
Thallium	CT,NH,NY,NC,ME,VA
Vanadium	CT,NH,NY,NC,ME,VA
Zinc	CT,NH,NY,NC,ME,VA
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8260D in Water	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260D in Water</i>	
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

http://www.paceanalytical.com

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 5_07/13/2021

Phone: 413-525-2332
Fax: 413-525-6405

Access, COC's and Support Requests

Address: 55 Walker Brook Rd, Leachman, MA

Project Location: Leachman Brook Farm
Project Number: Belcham, MA

Project Manager: Joseph Spencer

Invoice Recipient: Joseph Spencer

Sampled By: Richard Marchand

Pace Work Order#

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Comp/Grab

Matrix Code

Conc Code

VIALS

GLASS

PLASTIC

BACTERIA

ENCORE

SOXHLET

NON SOXHLET

Format: PDF EXCEL

Other: CLP Like Data Pkg Required:

Email To: spencer@paceinc.com

Fax To #:

7-Day PFAS 10-Day (std) 10-Day Due Date:

1-Day 2-Day 3-Day 4-Day

Field Filtered Lab to Filter

Field Filtered Lab to Filter

PCB ONLY

ANALYSIS REQUESTED

Preservation Code

Total Number Of:

VIALS GLASS PLASTIC BACTERIA ENCORE

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

1 Matrix Codes:

GW = Ground Water

WW = Waste Water

DW = Drinking Water

A = Air

S = Soil

SL = Sludge

SOL = Solid

O = Other (please define)

2 Preservation Codes:

I = Iced

H = HCL

M = Methanol

N = Nitric Acid

S = Sulfuric Acid

B = Sodium Bisulfate

X = Sodium Hydroxide

T = Sodium Thiosulfate

O = Other (please define)

Client Comments:

Date/Time: 6/27/12 12:45

Date/Time: 6/27/12 12:45

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I Have Not Confirmed Sample Container
Numbers With Lab Staff Before Relinquishing
Over Samples _____

Pace

Doc# 277 Rev 5 2017

Pace

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False
Statement will be brought to the attention of the Client - State True or False

Client Western Intl Sampler

Received By LA

Date 6/27/22

Time 1245

How were the samples received? In Cooler T No Cooler F On Ice A No Ice _____
Direct from Sampling F Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 5.2

By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? MA Were Samples Tapered with? F

Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all Client T Analysis T Sampler Name T

pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? T

Proper Media/Containers Used? T

Were trip blanks received? T

Do all samples have the proper pH? T

Acid _____ Base _____

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.	<u>2</u>	1 Liter Plastic		16 oz Amb.
HCL-	<u>1F</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	<u>3</u>	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test, a Pace Analytical Laboratory				Project #: 22F1733	
Project Location: Belchertown, MA				RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 22F1733-01 thru 22F1733-04					
Matrices: Water					
CAM Protocol (check all that below)					
8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH (GC/PID/FID) CAM IV A (X)	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()
8270 SVOC CAM II B ()	7010 Metals CAM III C ()	MassDEP VPH (GC/MS) CAM IV C ()	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
6010 Metals CAM III A ()	6020 Metals CAM III D (X)	MassDEP EPH CAM IV B (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
Affirmative response to Questions A through F is required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				☒ Yes ☐ No ¹
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 ☐ No ¹
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 ☐ No ¹
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 ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?				☐ Yes ☐ No ¹
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 ☐ No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				☐ Yes ☒ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				☐ Yes ☒ No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: <u>Lisa Worthington</u>		Position: <u>Technical Representative</u>			
Printed Name: <u>Lisa A. Worthington</u>		Date: <u>07/07/22</u>			

Laboratory Report



Absolute Resource *associates*

124 Heritage Avenue Portsmouth NH 03801

Joe Spencer
Weston & Sampson
55 Walkers Brook Drive
Reading, MA 01867

PO Number: None
Job ID: 61505
Date Received: 6/13/22

Project: Lampson Farm ENG22-0029

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below. The reported results apply to the sample(s) in the condition as received at the time the laboratory took custody. This report shall not be reproduced except in full, without written approval of the laboratory. The liability of ARA is limited to the cost of the requested analyses, unless otherwise agreed upon in writing.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

A handwritten signature in dark ink that reads "Alex Alterisio". The signature is fluid and cursive, with the first name "Alex" and last name "Alterisio" clearly distinguishable.

Alex Alterisio
Authorized Signature

Date of Approval: 6/23/2022
Total number of pages: 17

Absolute Resource Associates Certifications

New Hampshire 1732
Maine NH902

Massachusetts M-NH902

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
B-1(0-3')	Solid	6/7/2022 9:15	61505-001	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020
B-2(0-3')	Solid	6/7/2022 9:45	61505-002	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020
B-3(0-3')	Solid	6/7/2022 10:00	61505-003	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
B-4(0-3')	Solid	6/7/2022 10:20	61505-004	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020
B-5(0-3')	Solid	6/7/2022 11:00	61505-005	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020
B-6(0-3')	Solid	6/7/2022 11:30	61505-006	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
B-7(0-3')	Solid	6/7/2022 12:00	61505-007	Antimony in solids by 6020 Arsenic in solids by 6020 Barium in solids by 6020 Beryllium in solids by 6020 Cadmium in solids by 6020 Chromium in solids by 6020 Combo: 14 MA MCP Metals Lead in solids by 6020 Mercury in solids by 7471 Nickel in solids by 6020 Selenium in solids by 6020 Silver in solids by 6020 Solids Digestion for ICPMS Analysis Thallium in solids by 6020 Vanadium in solids by 6020 Zinc in solids by 6020

Project ID: Lampson Farm ENG22-0029

Job ID: 61505

Sample#: 61505-001

Sample ID: B-1(0-3')

Matrix: Solid

Percent Dry: 89.3% Results expressed on a dry weight basis.

Sampled: 6/7/22 9:15

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Arsenic	2.9	2.7	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Barium	68	5.5	ug/g	5	AGN	6/17/22	15135	6/18/22	2:25	SW3051A6020A
Beryllium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Cadmium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	2:25	SW3051A6020A
Chromium	33	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Lead	34	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	2:25	SW3051A6020A
Mercury	< 0.14	0.14	ug/g	1	EEB	6/17/22	15136	6/21/22	14:06	SW7471B
Nickel	19	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Selenium	< 5.5	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	2:25	SW3051A6020A
Thallium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	2:25	SW3051A6020A
Vanadium	21	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A
Zinc	42	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	17:49	SW3051A6020A

Sample#: 61505-002

Sample ID: B-2(0-3')

Matrix: Solid

Percent Dry: 89.7% Results expressed on a dry weight basis.

Sampled: 6/7/22 9:45

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/18/22	2:34	SW3051A6020A
Arsenic	< 2.6	2.6	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A
Barium	14	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	2:34	SW3051A6020A
Beryllium	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A
Cadmium	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/18/22	2:34	SW3051A6020A
Chromium	28	5.2	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A
Lead	5.3	2.6	ug/g	5	AGN	6/17/22	15135	6/18/22	2:34	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	EEB	6/17/22	15136	6/21/22	14:08	SW7471B
Nickel	17	5.2	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A
Selenium	< 5.2	5.2	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A
Silver	< 2.6	2.6	ug/g	5	AGN	6/17/22	15135	6/18/22	2:34	SW3051A6020A
Thallium	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/18/22	2:34	SW3051A6020A
Vanadium	15	5.2	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A
Zinc	14	5.2	ug/g	5	AGN	6/17/22	15135	6/20/22	17:57	SW3051A6020A

Project ID: Lampson Farm ENG22-0029

Job ID: 61505

Sample#: 61505-003

Sample ID: B-3(0-3')

Matrix: Solid

Percent Dry: 83.1% Results expressed on a dry weight basis.

Sampled: 6/7/22 10:00

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.49	0.49	ug/g	5	AGN	6/17/22	15135	6/18/22	2:43	SW3051A6020A
Arsenic	< 2.5	2.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A
Barium	98	4.9	ug/g	5	AGN	6/17/22	15135	6/18/22	2:43	SW3051A6020A
Beryllium	< 0.49	0.49	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A
Cadmium	< 0.49	0.49	ug/g	5	AGN	6/17/22	15135	6/18/22	2:43	SW3051A6020A
Chromium	16	4.9	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A
Lead	19	2.5	ug/g	5	AGN	6/17/22	15135	6/18/22	2:43	SW3051A6020A
Mercury	< 0.14	0.14	ug/g	1	EEB	6/17/22	15136	6/21/22	14:10	SW7471B
Nickel	8.1	4.9	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A
Selenium	< 4.9	4.9	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A
Silver	< 2.5	2.5	ug/g	5	AGN	6/17/22	15135	6/18/22	2:43	SW3051A6020A
Thallium	< 0.49	0.49	ug/g	5	AGN	6/17/22	15135	6/18/22	2:43	SW3051A6020A
Vanadium	11	4.9	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A
Zinc	23	4.9	ug/g	5	AGN	6/17/22	15135	6/20/22	18:06	SW3051A6020A

Sample#: 61505-004

Sample ID: B-4(0-3')

Matrix: Solid

Percent Dry: 93.4% Results expressed on a dry weight basis.

Sampled: 6/7/22 10:20

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.54	0.54	ug/g	5	AGN	6/17/22	15135	6/18/22	2:52	SW3051A6020A
Arsenic	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A
Barium	23	5.4	ug/g	5	AGN	6/17/22	15135	6/18/22	2:52	SW3051A6020A
Beryllium	< 0.54	0.54	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A
Cadmium	< 0.54	0.54	ug/g	5	AGN	6/17/22	15135	6/18/22	2:52	SW3051A6020A
Chromium	22	5.4	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A
Lead	5.2	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	2:52	SW3051A6020A
Mercury	< 0.18	0.18	ug/g	1	EEB	6/17/22	15136	6/21/22	14:15	SW7471B
Nickel	16	5.4	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A
Selenium	< 5.4	5.4	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	2:52	SW3051A6020A
Thallium	< 0.54	0.54	ug/g	5	AGN	6/17/22	15135	6/18/22	2:52	SW3051A6020A
Vanadium	12	5.4	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A
Zinc	20	5.4	ug/g	5	AGN	6/17/22	15135	6/20/22	18:41	SW3051A6020A

Project ID: Lampson Farm ENG22-0029

Job ID: 61505

Sample#: 61505-005

Sample ID: B-5(0-3')

Matrix: Solid

Percent Dry: 83.2% Results expressed on a dry weight basis.

Sampled: 6/7/22 11:00

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	3:27	SW3051A6020A
Arsenic	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A
Barium	28	5.5	ug/g	5	AGN	6/17/22	15135	6/18/22	3:27	SW3051A6020A
Beryllium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A
Cadmium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	3:27	SW3051A6020A
Chromium	17	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A
Lead	10	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	3:27	SW3051A6020A
Mercury	< 0.17	0.17	ug/g	1	EEB	6/17/22	15136	6/21/22	14:17	SW7471B
Nickel	12	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A
Selenium	< 5.5	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	3:27	SW3051A6020A
Thallium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	3:27	SW3051A6020A
Vanadium	16	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A
Zinc	32	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:50	SW3051A6020A

Sample#: 61505-006

Sample ID: B-6(0-3')

Matrix: Solid

Percent Dry: 91.5% Results expressed on a dry weight basis.

Sampled: 6/7/22 11:30

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	3:36	SW3051A6020A
Arsenic	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A
Barium	23	5.5	ug/g	5	AGN	6/17/22	15135	6/18/22	3:36	SW3051A6020A
Beryllium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A
Cadmium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	3:36	SW3051A6020A
Chromium	12	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A
Lead	6.3	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	3:36	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	EEB	6/17/22	15136	6/21/22	14:19	SW7471B
Nickel	10	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A
Selenium	< 5.5	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	6/17/22	15135	6/18/22	3:36	SW3051A6020A
Thallium	< 0.55	0.55	ug/g	5	AGN	6/17/22	15135	6/18/22	3:36	SW3051A6020A
Vanadium	12	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A
Zinc	14	5.5	ug/g	5	AGN	6/17/22	15135	6/20/22	18:59	SW3051A6020A

Project ID: Lampson Farm ENG22-0029

Job ID: 61505

Sample#: 61505-007

Sample ID: B-7(0-3')

Matrix: Solid Percent Dry: 91.3% Results expressed on a dry weight basis.

Sampled: 6/7/22 12:00

Parameter	Reporting		Instr Dil'n		Prep		Analysis			Reference
	Result	Limit	Units	Factor	Analyst	Date	Batch	Date	Time	
Antimony	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Arsenic	< 2.6	2.6	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Barium	22	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Beryllium	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/20/22	19:07	SW3051A6020A
Cadmium	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Chromium	9.7	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Lead	5.0	2.6	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Mercury	< 0.17	0.17	ug/g	1	EEB	6/17/22	15136	6/21/22	14:21	SW7471B
Nickel	6.2	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Selenium	< 5.2	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Silver	< 2.6	2.6	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Thallium	< 0.52	0.52	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Vanadium	9.8	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A
Zinc	23	5.2	ug/g	5	AGN	6/17/22	15135	6/18/22	3:44	SW3051A6020A

Quality Control Report



124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: Absolute Resource Associates

Project #: ENG 22-0029

Project Location: Massachusetts

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 61505

Matrices: ☐ Groundwater/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☒	MassDEP VPH (GC/PID/FID) CAM IV A ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☒	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
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 ☐ No
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 ☐ No
E	VPH, EPH, APH, and TO-15 only 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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
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 ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

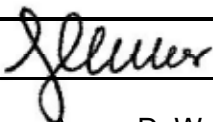
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹
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Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☒ Yes ☐ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹

¹All negative responses must be addressed in an attached laboratory narrative.

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

Signature: 

Position: Chief Operating Officer

Printed Name: Aaron DeWees

Date: 06/21/22

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to $\leq 6^{\circ}\text{C}$ 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol <u>and</u> 1 unpreserved container for percent moisture	Cool to $\leq 6^{\circ}\text{C}$ Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to $\leq 6^{\circ}\text{C}$ 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol <u>and</u> 1 unpreserved container for percent moisture	Cool to $\leq 6^{\circ}\text{C}$ Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$ 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to $\leq 6^{\circ}\text{C}$ (NH_4) $_2$ SO $_4$ buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to $\leq 6^{\circ}\text{C}$ 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to $\leq 6^{\circ}\text{C}$	14 Days

Absolute Resource Associates
124 Heritage Avenue Unit 16
Portsmouth, NH 03801
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Case Narrative

Lab # 61505

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, between 0 and 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

Not applicable.

Laboratory Control Sample Results

No exceptions noted.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

No other exceptions noted.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.

Question G: The CAM protocol reporting limits were not achieved for this project; however, the reporting limits used meet the requirements of the most stringent MA action limits. Box G is "No."

GLOSSARY

%R	Percent Recovery
BLK	Blank (Method Blank, Preparation Blank)
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRM	Certified Reference Material (associated with solid Metals samples)
CRMD	Certified Reference Material Duplicate (associated with solid Metals samples)
Dil'n	Dilution
DL	Detection Limit
DUP	Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MB	Methanol Blank (associated with solid VOC samples)
MLCS	Methanol Laboratory Control Sample (associated with solid VOC samples)
MLCSD	Methanol Laboratory Control Sample Duplicate (associated with solid VOC samples)
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PB	Preparation Blank
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference
SUR	Surrogate



124 Heritage Avenue Unit 16
Portsmouth, NH 03801

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- QC Report -

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW3051A6020A	BLK15135	Silver	<	2.5	ug/g					
		Arsenic	<	2.5	ug/g					
		Barium	<	5.0	ug/g					
		Beryllium	<	0.50	ug/g					
		Cadmium	<	0.50	ug/g					
		Chromium	<	5.0	ug/g					
		Nickel	<	5.0	ug/g					
		Lead	<	2.5	ug/g					
		Antimony	<	0.50	ug/g					
		Selenium	<	5.0	ug/g					
		Thallium	<	0.50	ug/g					
		Vanadium	<	5.0	ug/g					
		Zinc	<	5.0	ug/g					
SW3051A6020A	CRM15135	Silver		30.8	ug/g	28.8		18.2	35.6	
		Arsenic		94.9	ug/g	99.4		63.5	118	
		Barium		254	ug/g	249		180	300	
		Beryllium		145	ug/g	135		93.2	155	
		Cadmium		79.7	ug/g	75.9		52.9	88.2	
		Chromium		46.9	ug/g	53.8		37	68.7	
		Nickel		137	ug/g	143		92.6	172	
		Lead		83.0	ug/g	80.9		51.2	98.2	
		Antimony		123	ug/g	138		13.8	182	
		Selenium		149	ug/g	143		84.5	170	
		Thallium		87.6	ug/g	86.1		51	106	
		Vanadium		80.8	ug/g	92.8		58.6	120	
		Zinc		229	ug/g	244		162	300	
SW3051A6020A	CRMD15135	Silver		29.9	ug/g	28.8		18.2	35.6	3
		Arsenic		93.8	ug/g	99.4		63.5	118	1
		Barium		267	ug/g	249		180	300	5
		Beryllium		140	ug/g	135		93.2	155	3
		Cadmium		77.8	ug/g	75.9		52.9	88.2	2
		Chromium		48.6	ug/g	53.8		37	68.7	4
		Nickel		139	ug/g	143		92.6	172	1
		Lead		82.7	ug/g	80.9		51.2	98.2	0
		Antimony		129	ug/g	138		13.8	182	5
		Selenium		140	ug/g	143		84.5	170	6
		Thallium		86.1	ug/g	86.1		51	106	2
		Vanadium		80.5	ug/g	92.8		58.6	120	0
		Zinc		227	ug/g	244		162	300	1

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW3051A6020A	DUP15135	Silver	61499-001	<	2.9	ug/g				20
		Arsenic	61499-001		6.1	ug/g			2	20
		Barium	61499-001		50	ug/g			16	20
		Cadmium	61499-001	<	0.57	ug/g				20
		Chromium	61499-001		23	ug/g			11	20
		Lead	61499-001		8.6	ug/g			95 *	20
		Selenium	61499-001	<	5.7	ug/g				20
SW3051A6020A	MS15135	Silver	61499-001		150	ug/g	140	103	75	125
		Arsenic	61499-001		260	ug/g	280	91	75	125
		Barium	61499-001		330	ug/g	280	102	75	125
		Cadmium	61499-001		280	ug/g	280	101	75	125
		Chromium	61499-001		300	ug/g	280	97	75	125
		Lead	61499-001		300	ug/g	280	100	75	125
		Selenium	61499-001		270	ug/g	280	95	75	125
SW7471B	BLK15136	Mercury		<	0.14	ug/g				
SW7471B	CRM15136	Mercury			0.175	ug/g	0.221		0.0908	0.351
SW7471B	CRMD15136	Mercury			0.172	ug/g	0.221		0.0908	0.351
SW7471B	DUP15136	Mercury	61426-003	<	0.36	ug/g				35
SW7471B	MS15136	Mercury	61426-003		1.2	ug/g	0.8	81	80	120

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124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001

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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

61505

ANALYSIS REQUEST

Company Name: <u>Weston + Simpson</u>	Project Name: <u>Secret</u>
Company Address: <u>55 Walkers Beach Drive, Portsmouth, NH 03801</u>	Project #: <u>ENG-22-0029</u>
Report To: <u>Joe Spencer</u>	Project Location: <u>NH MA ME VT</u>
Phone #: <u>978-548-6256</u>	Accreditation Required? <u>N/A</u>
Invoice to: <u>spencerj@wseinc.com</u>	Protocol: <u>RCRA</u> <u>SDWA</u> <u>NPDES</u> <u>MCP</u> <u>NHDES</u> <u>DOD</u>
Email: <u>spencerj@wseinc.com</u>	Reporting Limits: <u>QAPP</u> <u>GW-1</u> <u>S-1</u>
PO #:	Quote #
	☐ NH Reimbursement Pricing

Lampson Farm per JS 6/6/14/22	☐ VOC 8260	☐ VOC 8260 NHDES	☐ VOC 8260 MADEP
	☐ VOC 624.1	☐ VOC BTEX MBE, only	☐ VOC 8021VT
	☐ VPH MADEP	☐ GRO 8015	☐ 1,4-Dioxane
	☐ VOC 524.2	☐ VOC 524.2 NH List	☐ Gases-List:
	☐ TPH 8100	☐ DR0 8015	☐ EPH MADEP
	☐ 8270PAH	☐ 8270ABN	☐ 625.1
	☐ 8082 PCB	☐ 8081 Pesticides	☐ 608.3 Pest/PCB
	☐ PFAS 537.1	☐ PFAS 533	☐ PFAS isotope dilution
	☐ O&G 1664	☐ Mineral O&G 1664	
	☐ pH	☐ BOD	☐ Conductivity
	☐ TSS	☐ TDS	☐ TS
	☐ RCRA Metals	☐ Priority Pollutant Metals	☐ TAL Metals
	☐ Total Metals-list:		
	☐ Dissolved Metals-list:		
	☐ Ammonia	☐ COD	☐ TKN
	☐ T-Phosphorus	☐ Bacteria P/A	☐ Bacteria MPN
	☐ Cyanide	☐ Sulfide	☐ Nitrate + Nitrite
	☐ Nitrate	☐ Nitrite	☐ Chloride
	☐ Corrosivity	☐ Ignitibility/FP	
	☐ TCLP Metals	☐ TCLP VOC	☐ TCLP SVOC
	☐ Subcontract:	☐ Grain Size	☐ Herbicides
	☐ Asbestos		

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix			Preservation Method					Sampling		
			WATER	SOLID	OTHER	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	DATE	TIME	SAMPLER
61505-01	B-1(0-3')	1		X							6/7/22	0915	M
-02	B-2(0-3')	1		X								0945	
-03	B-3(0-3')			X								1000	
-04	B-4(0-3')			X								1020	
-05	B-5(0-3')			X								1100	
-06	B-6(0-3')			X								1130	
-07	B-7(0-3')			X								1200	

TAT REQUESTED Priority (24 hr)* ☐ Expedited (48 hr)* ☐ Standard (10 Business Days) ☒ *Date Needed _____	See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.	SPECIAL INSTRUCTIONS _____	
	REPORTING INSTRUCTIONS ☒ PDF (e-mail address) <u>spencerj@wseinc.com</u>		RECEIVED ON ICE ☒ YES ☐ NO
	☐ HARD COPY REQUIRED ☐ EDD _____		TEMPERATURE _____ °C
CUSTODY RECORD QSD-01 Revision 09/16/2021	Relinquished by Sampler: _____ Date: <u>6/8/22</u> Time: <u>0915</u>	Received by: _____ Date: <u>6/8/22</u> Time: <u>0915</u>	Date: <u>6/8/22</u> Time: <u>0915</u>
	Relinquished by: _____ Date: <u>6/9/22</u> Time: <u>10:00</u>	Received by: _____ Date: <u>6/9/22</u> Time: <u>10:00</u>	Date: <u>6/9/22</u> Time: <u>10:00</u>
	Relinquished by: _____ Date: <u>6/13/22</u> Time: <u>9:40</u>	Received by Laboratory: _____ Date: <u>6/13/22</u> Time: <u>9:40</u>	Date: <u>6/13/22</u> Time: <u>13:20</u>

Sample Receipt Condition Report

61505

Absolute Resource Associates

Job Number:

Samples Received from: ☐-UPS ☐-FedEx ☐-USPS ☒-Lab Courier ☐-Client Drop-off ☐-
 Custody Seals - present & intact: ☐-Yes ☐-No ☒-N/A CoC signed: ☒-Yes ☐-No
 Receipt Temp: 4 °C Samples on ice? ☒-Yes ☐-No ☐-N/A Sampled < 24 hrs ago? ☐-Yes ☒-No
 PFAS-only real ice? ☐-Yes ☐-No ☒-N/A Any signs of freezing? ☐-Yes ☒-No

Comments:

Preservation / Analysis	Bottle Size/Type & Quantity						Check pH for ALL applicable* samples and document:
HCl	40mL(G)	250mL(P)	500mL(P)	1L(G)			
HNO ₃	125mL(P)	250mL(P)	500mL(P)				
H ₂ SO ₄	40mL(G)	60mL(P)	125mL(P)	250mL(P)	500mL(P)		
NaOH	125mL(P)	250mL(P)					
(NH ₄) ₂ SO ₄	60mL(P)	125mL(P)	250mL(P)				
ZnAc-NaOH	125mL(P)	250mL(P)					
Trizma	125mL(P)	250mL(P)					
NH ₄ Ac	125mL(P)	250mL(P)					
Na ₂ S ₂ O ₃	40mL(G)	120mL(P)					
MeOH	20mL(G)	40mL(G)					
None (solid)	2oz(G)	4oz(G)	7	8oz(G)	Syringe		
None (water)	40ml (G)	60mL(P)		125mL(P)	250mL(P)	500mL(P)	
Mold	Cassette	Bulk	Plate	Tape Lift			
Asbestos	Cassette	Bulk					
Lead	Cassette	Bulk	Wipe				

*pH ✓by analyst: VOC, PFAS, TOC, O&G
 Residual Cl not present:
 ABN625 Pest608
 Bacteria ResCl ✓by analyst
 PC Dry applicable? (Y) N
 1L(G) 1L(P)

Login Review	Yes	No	NA	Comments
Proper lab sample containers/enough volume/correct preservative?	☒			
Analyses marked on COC match bottles received?	☒			
VOC & TOC Water-no headspace?			☒	
VOC Solid-MeOH covers solid, no leaks, Prep Expiration OK?			☒	
PFAS: ARA bottles & samples/FRB same Lot#? QC rec'd, if req'd?			☒	Lot ID#: _____
Bacteria bottles provided by ARA?			☒	
Samples within holding time?	☒			
Immediate tests communicated in writing: NO ₃ , NO ₂ -o-PO ₄ , pH, BOD, Coliform/E. coli (P/A or MPN), Enterococci, Color Surfactants, Turbidity, Odor, CrVI, Ferrous Iron, Dissolved Oxygen, Unpres 624			☒	
Date, time & ID on samples match CoC?	☒			
Rushes communicated to analyst in writing?			☒	
Subcontracted samples sent to sub lab?			☒	Date Prep'd: _____ Date sent: _____
Pesticides EPA 608 pH5-9?			☒	
Compliance samples have no discrepancies/require no flags?			☒	(Or must be rejected)
Log-in Supervisor notified immediately of following items:			☒	Discrepancies, compliance samples (NHDES, MADEP, DoD etc.) or uncommon requests.

Inspected and Received By: K.W.Date/Time: 6/13/22 14:55

Peer Review Checklist			
☐ Client ID/Project Manager	☐ On Ice, Temperature OK?	☐ Sample IDs	☐ Analyses in Correctly
☐ Project Name	☐ PO# (if provided)	☐ Matrix	-references
☐ TAT/rushes communicated	☐ Sub samples sent? Shipping Charge?	☐ Date/Time collected	-wastewater methods
☐ Received Date/Time	☐ Issues noted above communicated?	☐ Short HTs communicated	☐ Notes from CoC in LIMS
Reviewed By: _____		Date: _____	

Notes: (continue on back as needed)

Initials Date What was sent?
 Uploaded / PDF _____ Report / Data / EDD / Invoice
 Uploaded / PDF _____ Report / Data / EDD / Invoice
 Uploaded / PDF _____ Report / Data / EDD / Invoice