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January 12, 2018

Massachusetts Department of Environmental Protection  
Southeast Regional Office  
20 Riverside Street  
Lakeville, Massachusetts 02347

**RE: Phase I Initial Site Investigation Report and Tier Classification Appendix Resubmittal**  
Weymouth Compressor Station  
6 & 50 Bridge Street  
Weymouth, Massachusetts  
Release Tracking Numbers 4-26230 and 4-26243

To Whom It May Concern:

TRC Environmental Corporation (TRC) has identified a compromised pdf appendix in the Phase I Initial Site Investigation (ISI) Report provided to eDEP. Due to the size of the Phase I ISI, TRC could not upload the document to eDEP and therefore provided a cd to the Department of Environmental Protection (DEP) on July 27, 2017 for uploading. However, DEP contacted TRC and requested the Phase I ISI be uploaded in several sections in order to be placed on eDEP. At the request of DEP, TRC uploaded the Phase I ISI as several separate pdf files. Based on a review of files available on eDEP, TRC identified a compromised pdf (some of the analytical data pages were not readable) associated with the laboratory data appendix, which is believed to have occurred during the upload of the report onto the MassDEP website on August 3, 2017. Due to the compromised pdf appendix, Appendix C: Laboratory Analytical Reports is being re-uploaded in its entirety. No changes have been made to the original data. The analytical data as presented in the applicable tables in the Phase I ISI has not changed or been modified. No other Phase I ISI pdf appendices were identified as compromised.

If you have any questions concerning the Phase I ISI Report and Tier Classification Submittal, the resubmittal of the above mentioned appendix, please do not hesitate to contact the undersigned.

Sincerely,

**TRC Environmental Corporation**

Ryan Niles  
Project Manager

Kelley Race, P.G., LSP  
Program Manager

cc: Terry Doyle, Gary Davis; Algonquin

Attachment: Appendix C: Laboratory Analytical Reports

**APPENDIX C**

**LABORATORY REPORTS**



8100 Secura Way • Santa Fe Springs, CA 90670  
Telephone (562) 347-2500 • Fax (562) 907-3610

April 26, 2017

Ryan Niles  
TRC Environmental Corp  
650 Suffolk Street STE 200  
Lowell, MA 01854

Re: PTS File No: 46705R1  
Physical Properties Data –Revised Report  
Atlantic Bridge Project; 140143.0000.4903

Dear Mr. Niles:

Please find enclosed revised report for Physical Properties analyses conducted upon samples received from your Atlantic Bridge Project; 140143.0000.4903 project. The report was revised to add annotation to the analytical report documenting conditions under which the modified centrifugal test (Free Product Mobility) was conducted. All analyses were performed by applicable ASTM, EPA, or API methodologies.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,  
PTS Laboratories, Inc.

Michael Mark Brady, P.G.  
Laboratory Director

Encl.

Project Name: Atlantic Bridge Project  
 Project Number: 140143.0000.4903

PTS File No: 46705R1  
 Client: TRC Solutions

TEST PROGRAM - 20170127

CORE ID	Depth ft.	Core Recovery ft.	Slab and Core Photo	Grain Size Analyses	Pore Fluid Saturation Package	Free Product Mobility	O/W Imbibition Capillary Pressure Curve	NAPL Permeability API RP40	Hydraulic Conductivity API RP40	Comments
Date Received: 20161216		Plugs:	1/4:3/4	Grab	Vert. 1.5"	Vert. 1.5"	Vert. 1"	Vert. 1"	Vert. 1"	
B406A-A	8-10	0.95	1							
B406A-B	10-12	1.45	2		10.9-11.1	11.1-11.3	11.3-11.5	X	X	Labeled B406A-A, include hydraulic conductivity and LNAPL permeability
B406A-C	12-14	1.40	2	12.6-12.8	12-12.2	12.2-12.4	12.4-12.6			Labeled B406A-B
B406A-D	14-16	1.15	2		14-14.2	14.2-14.4	14.4-14.6			Labeled B406A-C
B406A-E	16-18	1.10	2							Labeled B406A-D
B404A-A	8-10	1.70	2							
B404A-B	10-12	0.80	1		10.2-10.4	10.4-10.6	10.6-10.8			
B404A-C	12-14	0.75	1		12-12.2	12.2-12.4	12.4-12.6	X	X	include hydraulic conductivity and LNAPL permeability
B404A-D	14-16	0.85	1	14.6-14.8	14-14.2	14.2-14.4	14.4-14.6			
B404A-E	16-18	0.85	1							
B412A-A	10-12	1.25	2							
B412A-B	12-14	1.35	2		12-12.2	12.2-12.4	12.4-12.6	X	X	include hydraulic conductivity and LNAPL permeability
B412A-C	14-16	0.90	1	14.6-14.8	14-14.2	14.2-14.4	14.4-14.6			
B412A-D	16-18	0.55	1		16-16.2	16.2-16.4	16.4-16.55			
B412A-E	18-20	0.90	1							
B413A-A	10-12	1.00	1							
B413A-B	12-14	0.90	1		12-12.2	12.2-12.4	12.4-12.6			
B413A-C	14-16	1.20	2	14.6-14.8	14-14.2	14.2-14.4	14.4-14.6	X	X	include hydraulic conductivity and LNAPL permeability
B413A-D	16-18	0.90	1		16-16.2	16.2-16.4	16.4-16.6			
B413A-E	18-20	0.65	1							
<b>TOTALS:</b>	<b>20 Cores</b>	<b>20.60</b>	<b>28</b>	<b>4</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>4</b>	<b>4</b>	<b>36</b>

Laboratory Test Program Notes

Contaminant identification: \_\_\_\_\_

Standard TAT for basic analysis is 10-15 business days.

Samples received cryogenically preserved will be stored frozen at standard core storage rates from sample date of receipt. Core storage charges will be billed monthly or quarterly depending upon project.

Sample locations to be selected by TRC Solutions personnel from core photography.

**Grain Size Analysis:** Laser or sieve method; includes tabular data, graphics and statistical sorting in Excel format.

**Pore Fluid Saturation Package:** API RP40 Dean-Stark Method: Includes initial pore fluid saturations, total porosity, air-filled porosity, grain density, dry bulk density and moisture content.

Hydraulic conductivity and LNAPL permeability added for four (4) O/W Imbibition Pc tests per C. Race/TRC 20170123. Use NAPL MW-201 (PTS File No. 47030).

**Free Product Mobility Package:** Applied centrifugal force demonstrates product mobility; includes residual saturations by Dean-Stark, total porosity, grain and dry bulk density.

Free Product Mobility – Extended Run tests are to be conducted at 30xG for 24 hours per C. Race/TRC 20170201.

Additional NAPL (MW-201, MW-410, MW-414 composite) received from TRC on 20170216 to complete remaining O/W Pc tests.

PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**PHYSICAL PROPERTIES DATA - PORE FLUID SATURATIONS**

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

SAMPLE ID.	DEPTH, ft.	METHODS: SAMPLE ORIENTATION (1)	API RP 40 /	API RP 40		API RP 40		API RP 40	
			ASTM D2216	DENSITY		POROSITY, %Vb (2)		PORE FLUID SATURATIONS, % Pv (3)	
			MOISTURE CONTENT, % weight	DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR FILLED	WATER	NAPL
B406A-B	11.0	V	23.6	1.05	2.38	55.9	31.0	28.4	16.3
B406A-C	12.1	V	17.5	1.62	2.60	37.8	9.0	42.1	34.1
B406A-D	14.1	V	18.8	1.60	2.68	40.2	9.6	36.3	39.8
B404A-B	10.3	V	29.6	1.27	2.42	47.5	9.7	59.8	19.7
B404A-C	12.1	V	17.7	1.61	2.54	36.8	8.3	65.7	11.8
B404A-D	14.1	V	25.3	1.18	2.30	48.8	18.9	59.2	2.0
B412A-B	12.1	V	31.9	1.25	2.36	46.8	6.5	55.7	30.5
B412A-C	14.1	V	20.2	1.36	2.51	45.7	18.0	52.7	7.8
B412A-D	16.1	V	20.3	1.30	2.43	46.3	19.8	49.7	7.5
B413A-B	12.1	V	30.4	1.24	2.40	48.5	10.6	53.5	24.6
B413A-C	14.1	V	29.2	1.27	2.41	47.6	10.1	38.7	40.1
B413A-D	16.1	V	27.3	1.22	2.31	47.1	13.6	59.0	12.2

(1) Sample Orientation: H = horizontal; V = vertical; R = remold  
 (2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.  
 (3) Fluid density used to calculate pore fluid saturations: Water = 0.9996 g/cc, NAPL = 0.9724 g/cc.  
 Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**FREE PRODUCT MOBILITY: INITIAL AND RESIDUAL SATURATIONS**  
 (Centrifugal method: samples spun under air for 24 hours)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	METHODS:		TOTAL POROSITY (2), %Vb	ASTM D425M, DEAN-STARK			
				API RP 40			PORE FLUID SATURATIONS (3), % Pv			
				DRY BULK, g/cc	GRAIN, g/cc		Initial Fluid Saturations		After Centrifuge at 30xG	
				WATER (Swi) SATURATION	NAPL (Soi) SATURATION	WATER (Srw) SATURATION	NAPL (Sor) SATURATION			
B406A-B	11.2	V	20170209	0.89	2.21	59.9	62.4	21.2	24.8	21.1
<b>NOTE: Trace dark brown LNAPL produced. Produced water clear.</b>										
B406A-C	12.3	V	20170209	1.57	2.68	41.4	34.6	49.8	14.4	22.0
<b>NOTE: Dark brown LNAPL produced. Produced water clear.</b>										
B406A-D	14.3	V	20170209	1.49	2.69	44.4	38.0	43.2	10.1	30.5
<b>NOTE: Dark brown LNAPL produced. Produced water clear.</b>										
B404A-B	10.5	V	20170209	1.40	2.46	43.3	52.4	20.1	24.5	20.1
<b>NOTE: No visible NAPL produced. Produced water cloudy with brown color and no hydrocarbon odor.</b>										
B404A-C	12.3	V	20170213	1.14	2.25	49.1	59.2	21.1	23.0	18.9
<b>NOTE: Dark brown DNAPL produced. Produced water clear.</b>										
B404A-D	14.3	V	20170213	1.41	2.38	40.7	78.2	1.8	32.8	1.8
<b>NOTE: No visible NAPL produced. Produced water clear with no hydrocarbon odor.</b>										
B412A-B	12.3	V	20170213	1.02	2.13	51.9	56.6	23.4	25.4	21.2
<b>NOTE: Dark brown LNAPL produced. Produced water clear.</b>										
B412A-C	14.3	V	20170213	1.48	2.44	39.4	80.7	12.0	30.6	11.6
<b>NOTE: Trace dark brown LNAPL produced. Produced water clear.</b>										

(1) Sample Orientation: H = horizontal; V = vertical; R = remold

(2) Total Porosity = all interconnected pore channels.

(3) Fluid density used to calculate pore fluid saturations: Water = 0.9996 g/cc, NAPL = 0.9724 g/cc.

Swi = Initial Water Saturation as received prior to centrifuging at 1000xG, Soi = Initial NAPL Saturation as received prior to centrifuging at 1000xG.

Srw = Residual Water Saturation after centrifuging at 1000xG, Sor = Residual NAPL Saturation after centrifuging at 1000xG.

Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**FREE PRODUCT MOBILITY: INITIAL AND RESIDUAL SATURATIONS**  
 (Centrifugal method: samples spun under air for 24 hours)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	METHODS:		TOTAL POROSITY (2), %Vb	ASTM D425M, DEAN-STARK			
				API RP 40			PORE FLUID SATURATIONS (3), % Pv			
				DENSITY			Initial Fluid Saturations		After Centrifuge at 30xG	
				DRY BULK, g/cc	GRAIN, g/cc	WATER (Swi) SATURATION	NAPL (Soi) SATURATION	WATER (Srw) SATURATION	NAPL (Sor) SATURATION	
B412A-D	16.3	V	20170214	1.27	2.39	46.7	66.8	8.7	19.7	7.8
NOTE: Dark brown LNAPL produced. Produced water clear.										
B413A-B	12.3	V	20170214	0.97	2.17	55.4	57.9	30.4	28.1	27.8
NOTE: Dark brown LNAPL produced. Produced water clear.										
B413A-C	14.3	V	20170214	1.08	2.31	53.1	57.2	31.8	24.9	30.0
NOTE: Brown LNAPL produced. Produced water clear.										
B413A-D	16.3	V	20170214	1.15	2.42	52.4	47.7	9.5	17.2	9.4
NOTE: Trace LNAPL produced. Produced water clear.										

(1) Sample Orientation: H = horizontal; V = vertical; R = remold

(2) Total Porosity = all interconnected pore channels.

(3) Fluid density used to calculate pore fluid saturations: Water = 0.9996 g/cc, NAPL = 0.9724 g/cc.

Swi = Initial Water Saturation as received prior to centrifuging at 1000xG, Soi = Initial NAPL Saturation as received prior to centrifuging at 1000xG.

Srw = Residual Water Saturation after centrifuging at 1000xG, Sor = Residual NAPL Saturation after centrifuging at 1000xG.

Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**SAMPLE PROPERTIES - OIL/WATER CAPILLARY PRESSURE**

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

SAMPLE ID.	DEPTH, ft.	METHODS: SAMPLE ORIENTATION (1)	API RP 40 / ASTM D2216	API RP 40		API RP 40		API RP 40
			MOISTURE CONTENT, % weight	DENSITY		POROSITY, %Vb (2)		TOTAL PORE FLUID SATURATIONS (3), % Pv
				DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR FILLED	
B406A-B	11.4	V	17.5	1.42	2.37	40.0	15.1	62.3
B406A-C	12.5	V	22.0	1.50	2.68	44.0	10.9	75.1
B406A-D	14.5	V	22.3	1.47	2.68	45.2	12.4	72.5
B404A-B	10.7	V	27.8	1.25	2.49	49.8	15.1	69.6
B404A-C	12.5	V	18.4	1.37	2.32	41.1	15.9	61.3
B404A-D	14.5	V	13.0	1.35	2.42	44.3	26.8	39.6
B412A-B	12.5	V	58.9	0.83	2.19	62.0	13.0	79.1
B412A-C	14.5	V	46.5	0.99	2.29	56.7	10.6	81.2
B412A-D	16.45	V	62.4	0.79	2.11	62.8	13.7	78.1
B413A-B	12.5	V	70.7	0.76	2.19	65.5	12.0	81.7
B413A-C	14.5	V	64.7	0.82	2.19	62.7	9.9	84.2
B413A-D	16.5	V	17.2	1.23	2.53	51.3	30.0	41.5

(1) Sample Orientation: H = horizontal; V = vertical; R = remold  
 (2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.  
 (3) Fluid densities used to calculate pore fluid saturations: Water = 0.9996 g/cc; MW-5 NAPL = 0.9724 g/cc  
 Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**PERMEABILITY DATA - OIL/WATER CAPILLARY PRESSURE**

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	METHODS: API RP 40; EPA 9100		
			25 PSI CONFINING STRESS		
			SPECIFIC PERMEABILITY TO WATER, millidarcy (2,3)	HYDRAULIC CONDUCTIVITY, cm/s (3)	SPECIFIC PERMEABILITY TO NAPL, millidarcy (4)
B406A-B	11.4	V	703	6.99E-04	491
B406A-C	12.5	V	Permeability Analyses Not Requested		
B406A-D	14.5	V	Permeability Analyses Not Requested		
B404A-B	10.7	V	Permeability Analyses Not Requested		
B404A-C	12.5	V	7320	7.29E-03	18000
B404A-D	14.5	V	Permeability Analyses Not Requested		
B412A-B	12.5	V	7950	7.89E-03	23700
B412A-C	14.5	V	Permeability Analyses Not Requested		
B412A-D	16.45	V	Permeability Analyses Not Requested		
B413A-B	12.5	V	Permeability Analyses Not Requested		
B413A-C	14.5	V	6790	6.72E-03	21900
B413A-D	16.5	V	Permeability Analyses Not Requested		

(1) Sample Orientation: H = horizontal; V = vertical; R = remold  
 (2) Effective (Native) = With as-received pore fluids in place.  
 (3) Permeability/conductivity measured at saturated condition.  
 (4) Specific (intrinsic) permeability.  
 Water = filtered Laboratory Fresh (tap) or Site water; NAPL = Client supplied

PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B406A-B at 11.4 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

			<b>Drainage - Oil Displacing Water</b>		
0.000	0.00	0.00	88.2	11.8	
0.887	62.4	75.2	68.8	31.2	
			<b>Spontaneous Imbibition</b>		
0.000	0.00	0.00	68.8	31.2	
0.000	0.00	0.00	68.8	31.2	
			<b>Imbibition - Water Displacing Oil</b>		
0.000	0.00	0.00	68.8	31.2	
-0.004	-0.31	0.38	68.8	31.2	
-0.009	-0.62	0.75	68.8	31.2	
-0.015	-1.06	1.28	68.8	31.2	
-0.023	-1.64	1.98	68.9	31.1	
-0.035	-2.48	3.00	69.1	30.9	
-0.048	-3.37	4.06	69.2	30.8	
-0.065	-4.54	5.47	69.4	30.6	
-0.097	-6.83	8.23	69.7	30.3	
-0.161	-11.4	13.7	70.6	29.4	
-0.244	-17.2	20.7	71.5	28.5	
-0.383	-26.9	32.5	72.2	27.8	
-0.860	-60.5	72.9	76.2	23.8	

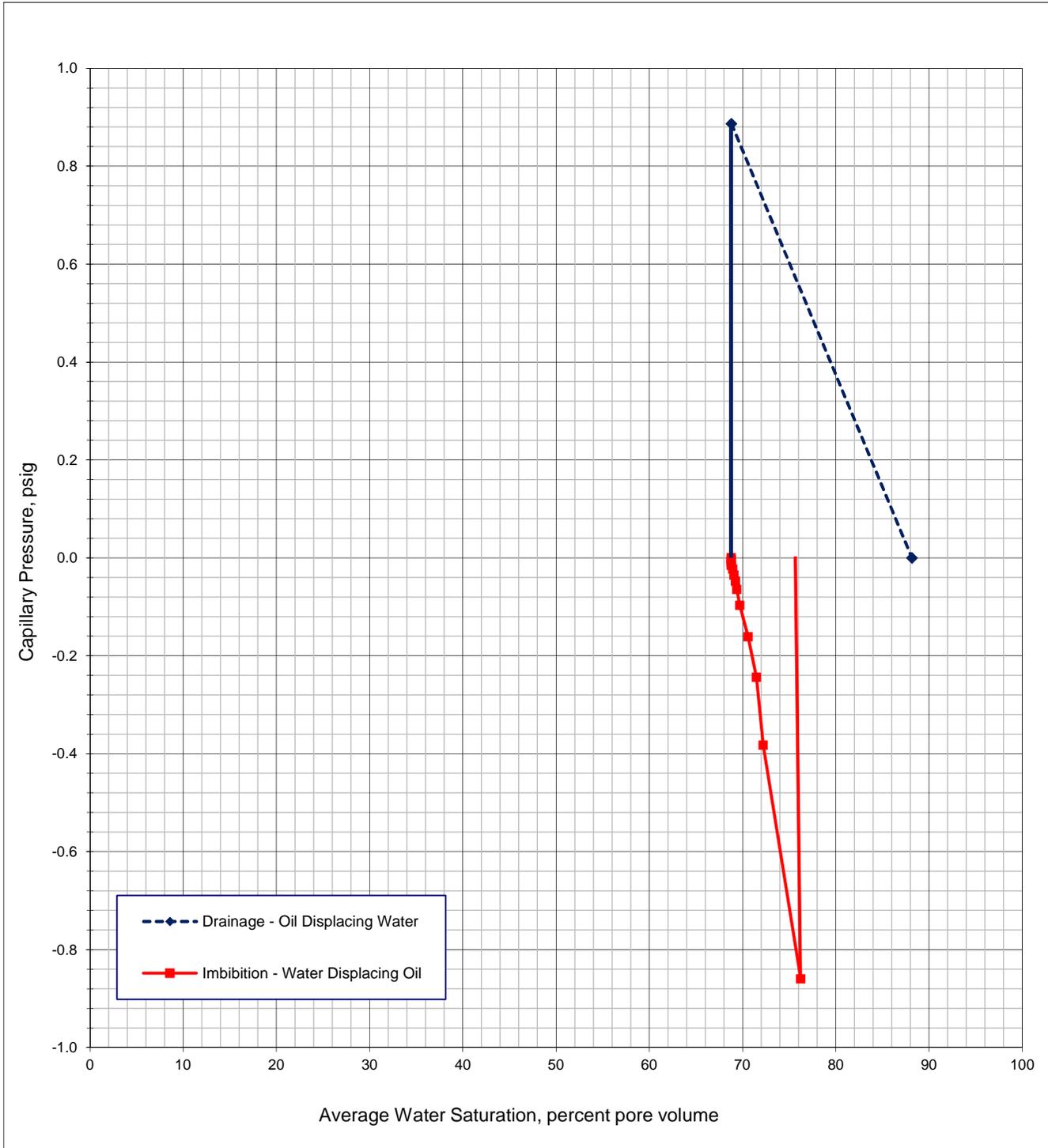
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B406A-B  
Depth, ft.: 11.4



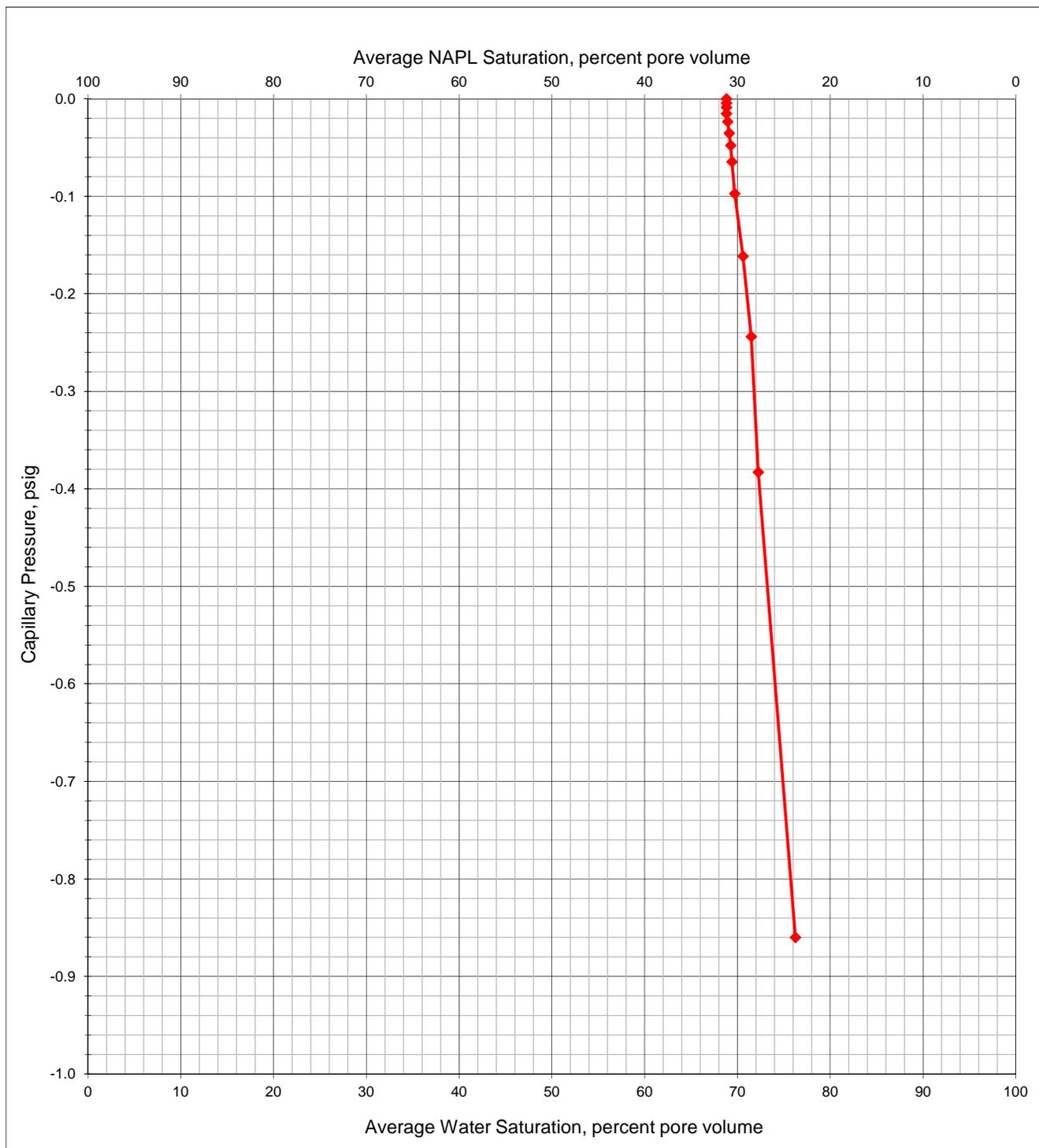
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B406A-B  
Depth, ft.: 11.4



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B406A-C at 12.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

<b>Drainage - Oil Displacing Water</b>					
0.000	0.00	0.00	73.0	27.0	
0.895	62.9	75.9	24.1	75.9	

<b>Spontaneous Imbibition</b>					
0.000	0.00	0.00	24.1	75.9	
0.000	0.00	0.00	24.1	75.9	

<b>Imbibition - Water Displacing Oil</b>					
0.000	0.00	0.00	24.1	75.9	
-0.005	-0.32	0.38	24.1	75.9	
-0.009	-0.63	0.76	24.1	75.9	
-0.015	-1.07	1.30	24.1	75.9	
-0.024	-1.65	2.00	24.3	75.7	
-0.036	-2.51	3.02	24.4	75.6	
-0.048	-3.40	4.10	25.0	75.0	
-0.065	-4.58	5.53	25.6	74.4	
-0.098	-6.89	8.31	26.4	73.6	
-0.163	-11.5	13.8	28.1	71.9	
-0.246	-17.3	20.9	31.5	68.5	
-0.387	-27.2	32.8	38.4	61.6	
-0.868	-61.0	73.6	57.0	43.0	

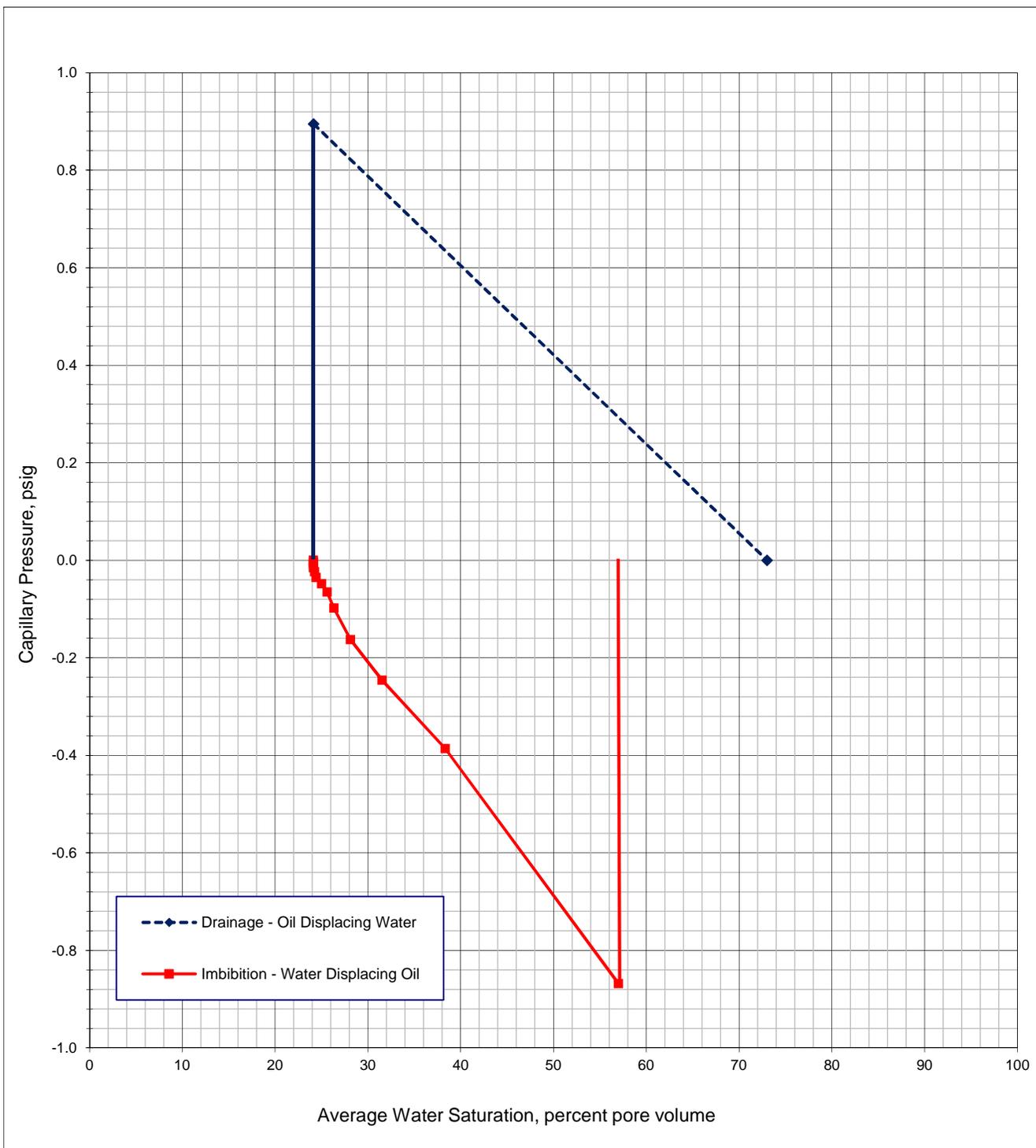
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B406A-C  
Depth, ft.: 12.5



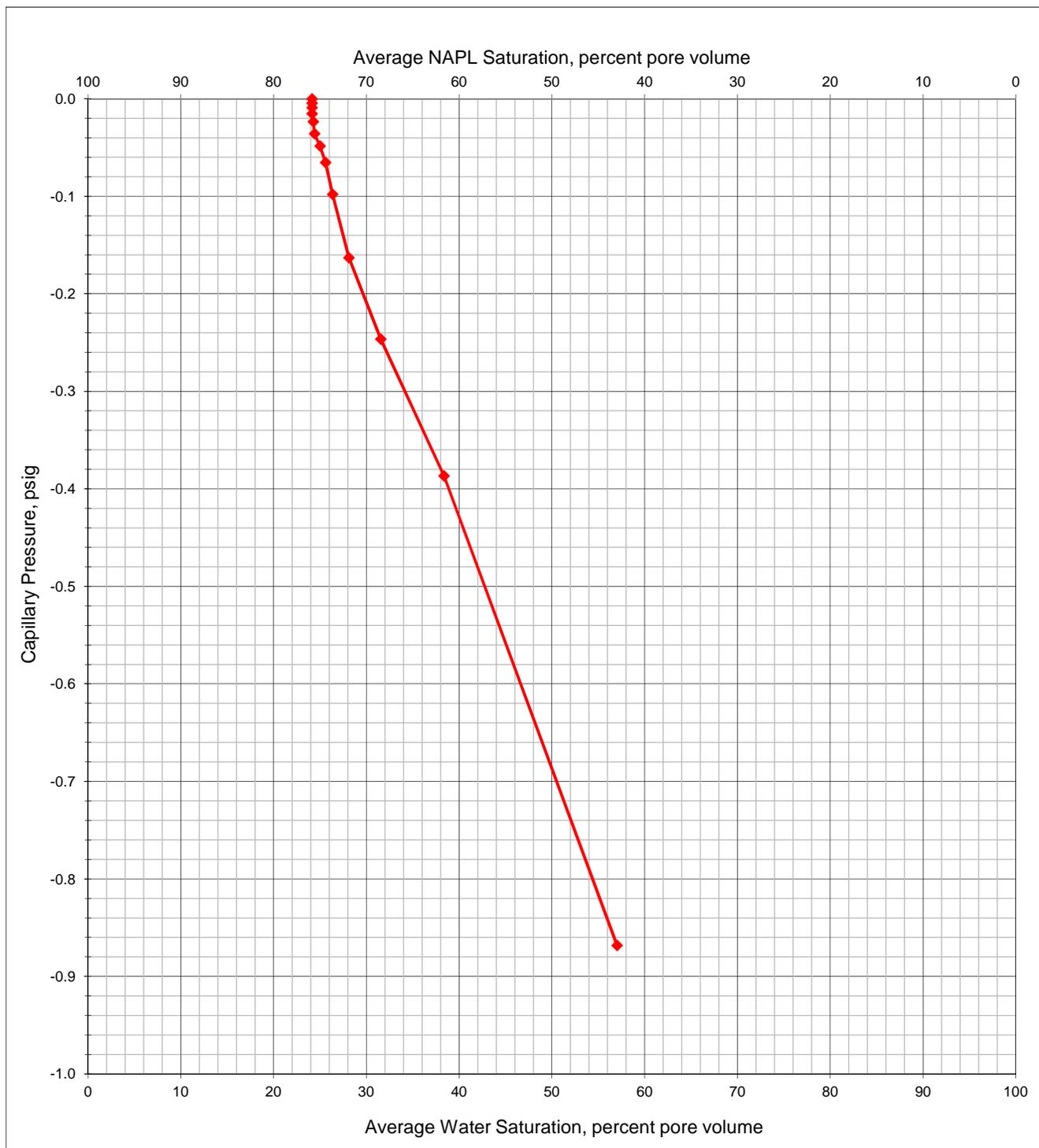
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Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B406A-C  
Depth, ft.: 12.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID	
			B406A-D at 14.5 ft.	
			Average Saturation, % pore volume	
psi	cm water		Water	Oil (NAPL)

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	68.4	31.6
0.888	62.5	75.3	17.8	82.2

**Spontaneous Imbibition**

0.000	0.00	0.00	17.8	82.2
0.000	0.00	0.00	17.8	82.2

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	17.8	82.2
-0.004	-0.31	0.38	17.8	82.2
-0.009	-0.62	0.75	17.8	82.2
-0.015	-1.07	1.29	18.6	81.4
-0.023	-1.64	1.98	23.7	76.3
-0.035	-2.49	3.00	25.2	74.8
-0.048	-3.37	4.07	25.9	74.1
-0.065	-4.54	5.48	27.2	72.8
-0.097	-6.83	8.24	29.2	70.8
-0.162	-11.4	13.7	33.2	66.8
-0.244	-17.2	20.7	38.2	61.8
-0.383	-27.0	32.5	45.2	54.8
-0.861	-60.5	73.0	69.1	30.9

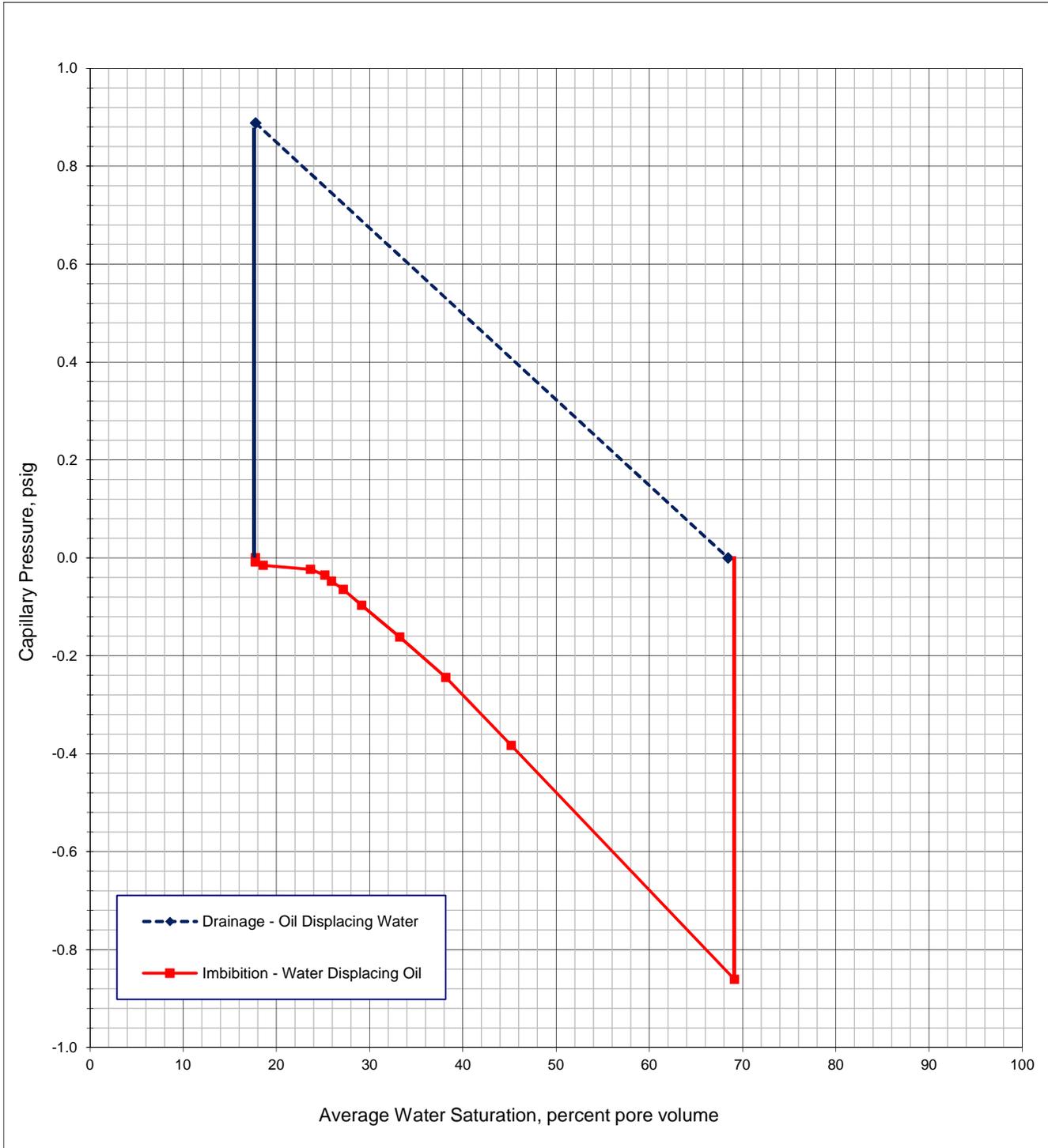
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B406A-D  
Depth, ft.: 14.5



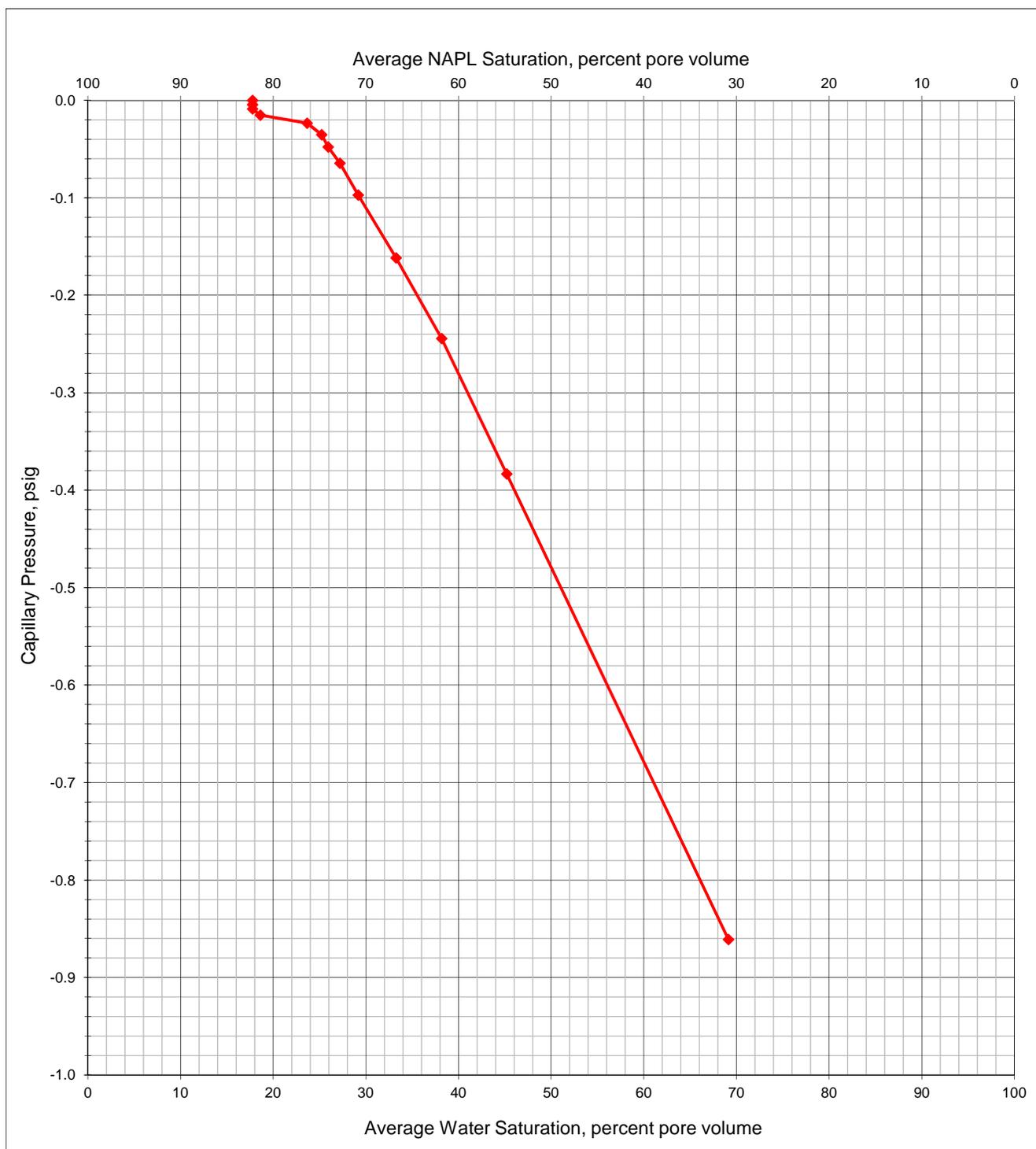
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Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B406A-D  
Depth, ft.: 14.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID	
			B404A-B at 10.7 ft.	
Average Saturation, % pore volume				
psi	cm water		Water	Oil (NAPL)

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	64.8	35.2
0.859	60.4	72.9	33.7	66.3

**Spontaneous Imbibition**

0.000	0.00	0.00	33.7	66.3
0.000	0.00	0.00	33.7	66.3

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	33.7	66.3
-0.004	-0.30	0.37	33.7	66.3
-0.009	-0.60	0.72	33.9	66.1
-0.015	-1.03	1.24	34.0	66.0
-0.023	-1.59	1.91	34.1	65.9
-0.034	-2.40	2.90	34.3	65.7
-0.046	-3.26	3.93	34.6	65.4
-0.062	-4.39	5.29	35.0	65.0
-0.094	-6.60	7.96	36.0	64.0
-0.156	-11.0	13.2	38.7	61.3
-0.236	-16.6	20.0	41.2	58.8
-0.370	-26.0	31.4	44.6	55.4
-0.832	-58.5	70.5	50.4	49.6

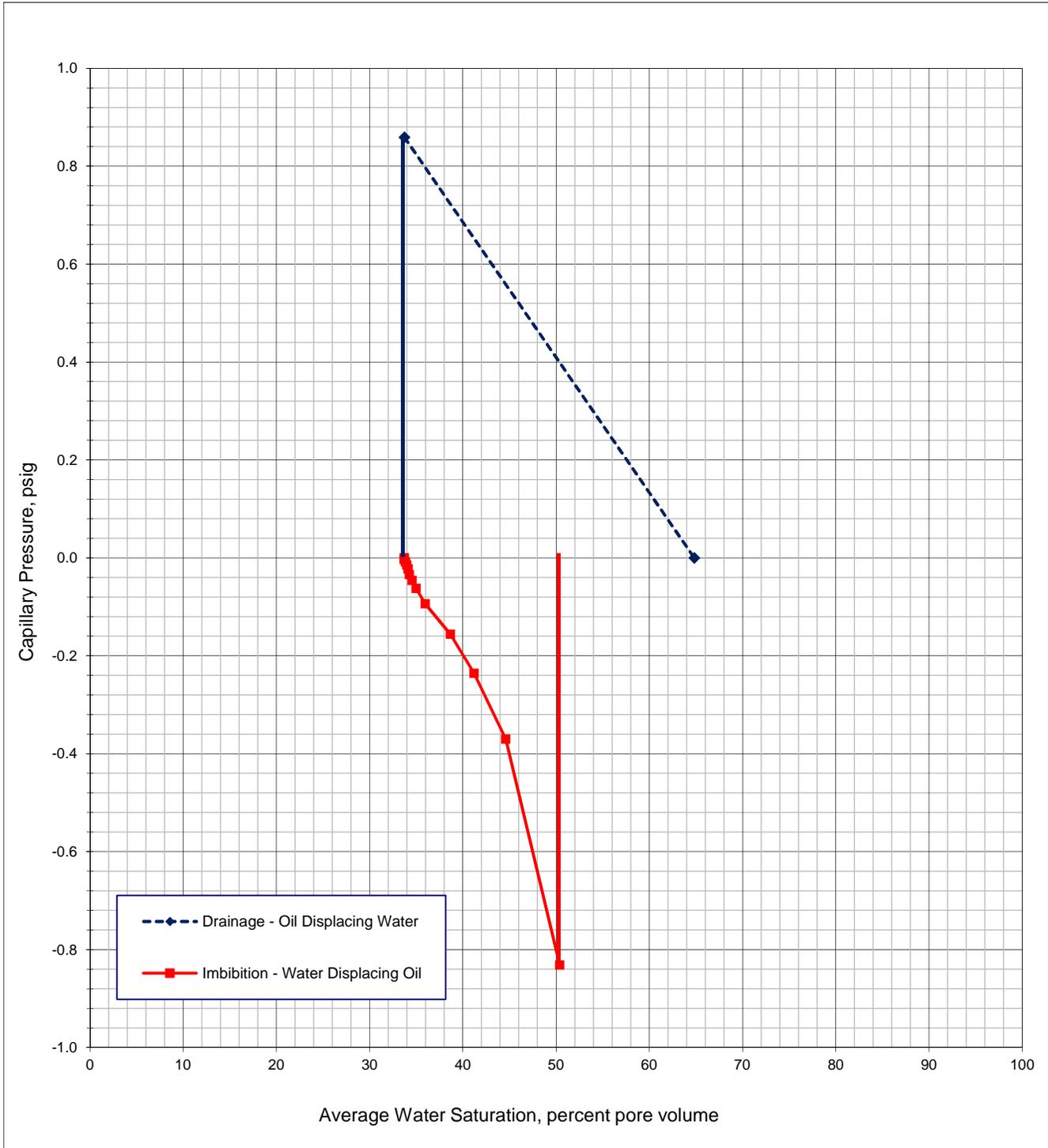
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B404A-B  
Depth, ft.: 10.7



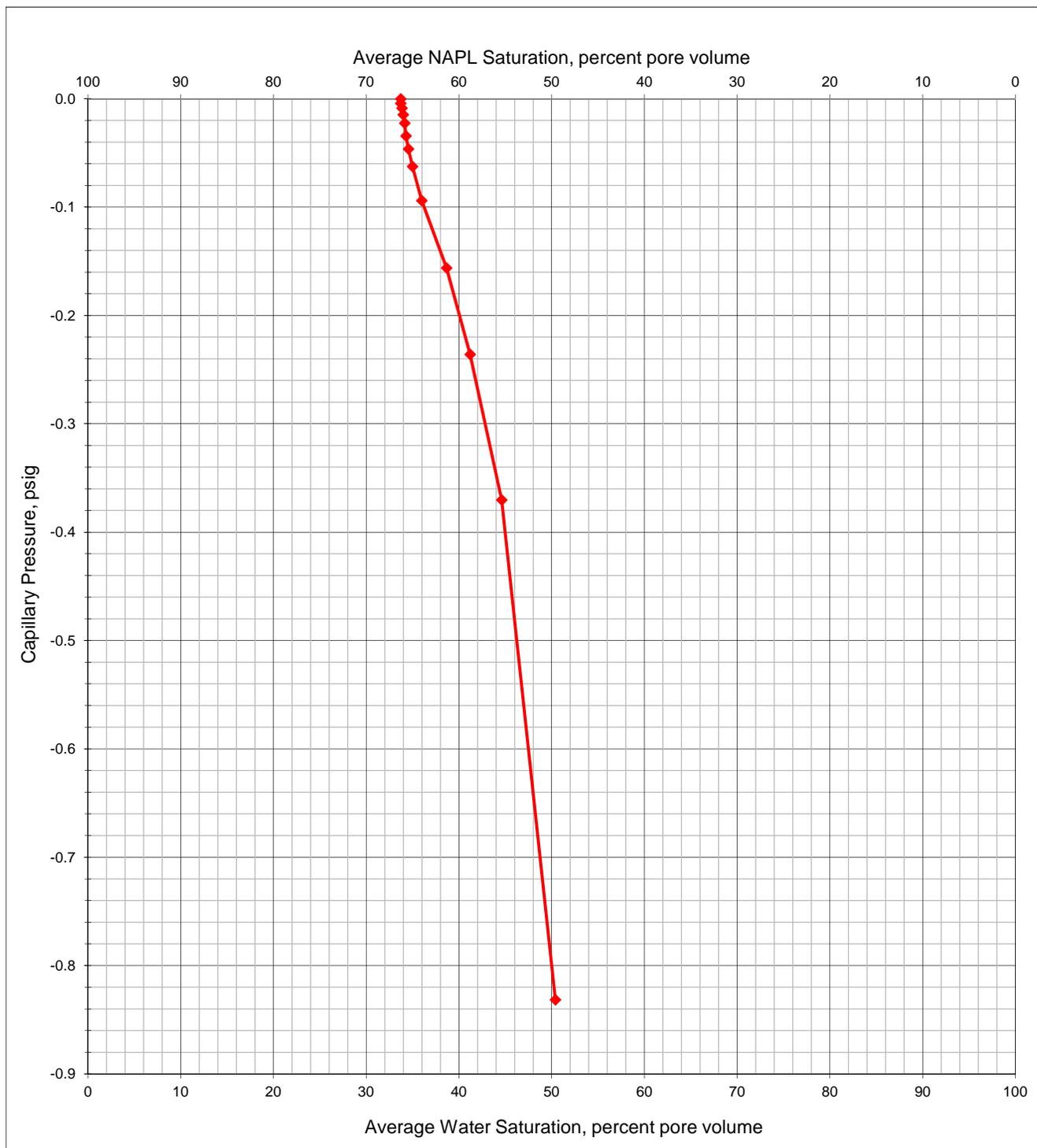
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Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B404A-B  
Depth, ft.: 10.7



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B404A-C at 12.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	78.9	21.1
0.933	65.6	79.2	33.5	66.5

**Spontaneous Imbibition**

0.000	0.00	0.00	33.5	66.5
0.000	0.00	0.00	33.5	66.5

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	33.5	66.5
-0.005	-0.32	0.39	33.5	66.5
-0.009	-0.64	0.78	33.5	66.5
-0.017	-1.21	1.46	33.6	66.4
-0.025	-1.72	2.08	33.7	66.3
-0.036	-2.53	3.05	34.9	65.1
-0.051	-3.60	4.34	38.6	61.4
-0.063	-4.41	5.32	42.4	57.6
-0.105	-7.38	8.90	45.8	54.2
-0.171	-12.0	14.5	50.5	49.5
-0.258	-18.1	21.9	55.9	44.1
-0.404	-28.4	34.2	60.0	40.0
-0.912	-64.1	77.3	67.5	32.5

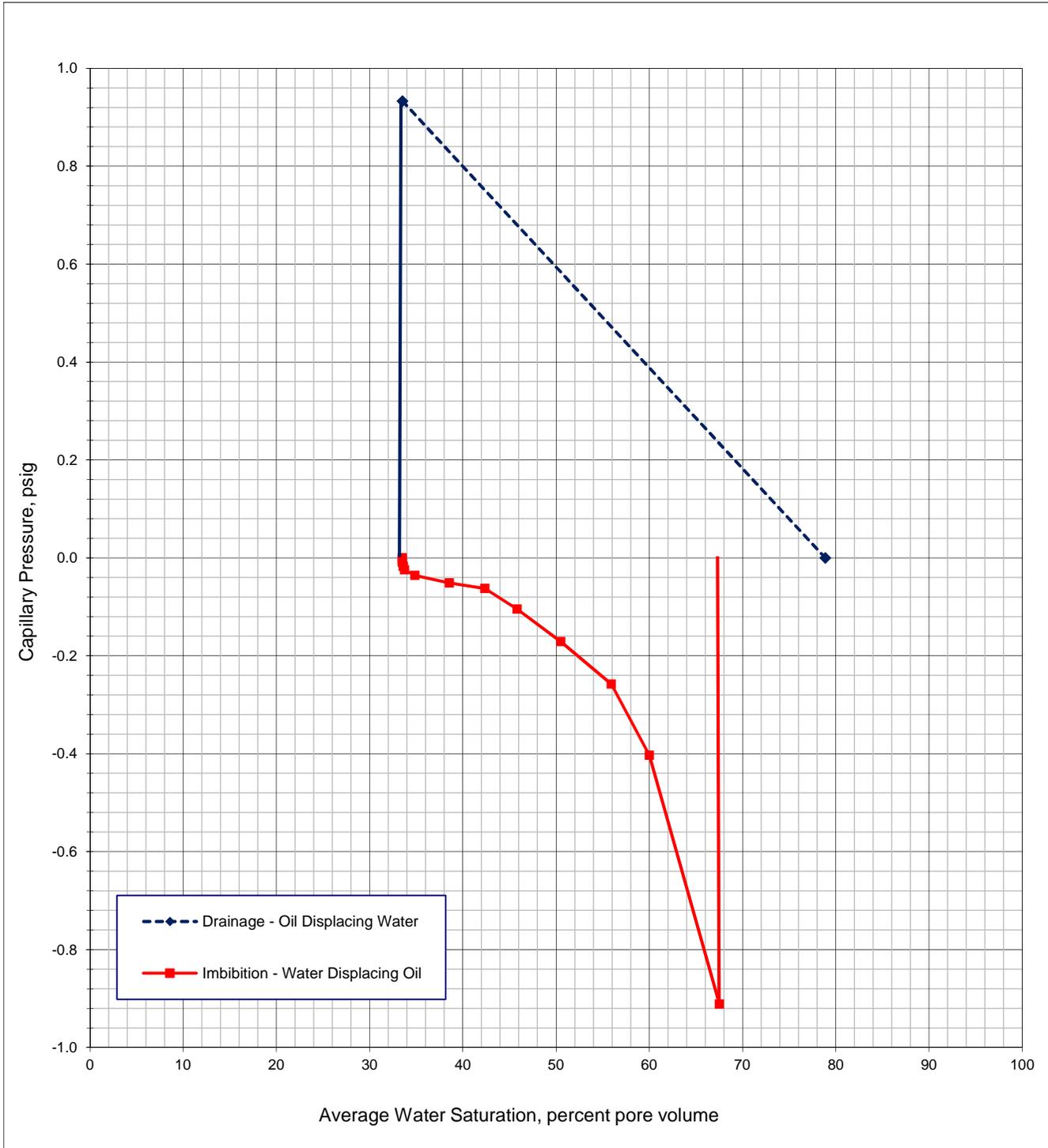
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B404A-C  
Depth, ft.: 12.5



PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B404A-C  
Depth, ft.: 12.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID	
			B404A-D at 14.5 ft.	
		Average Saturation, % pore volume		
psi	cm water		Water	Oil (NAPL)

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	96.5	3.5
0.892	62.7	75.6	38.7	61.3

**Spontaneous Imbibition**

0.000	0.00	0.00	38.7	61.3
0.000	0.00	0.00	38.7	61.3

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	38.7	61.3
-0.004	-0.32	0.38	38.7	61.3
-0.009	-0.62	0.75	39.0	61.0
-0.015	-1.07	1.29	40.8	59.2
-0.023	-1.65	1.99	46.1	53.9
-0.036	-2.50	3.01	49.9	50.1
-0.048	-3.39	4.08	52.9	47.1
-0.065	-4.56	5.50	55.8	44.2
-0.098	-6.86	8.28	61.2	38.8
-0.162	-11.4	13.8	69.1	30.9
-0.245	-17.2	20.8	74.1	25.9
-0.385	-27.1	32.7	78.9	21.1
-0.865	-60.8	73.3	83.6	16.4

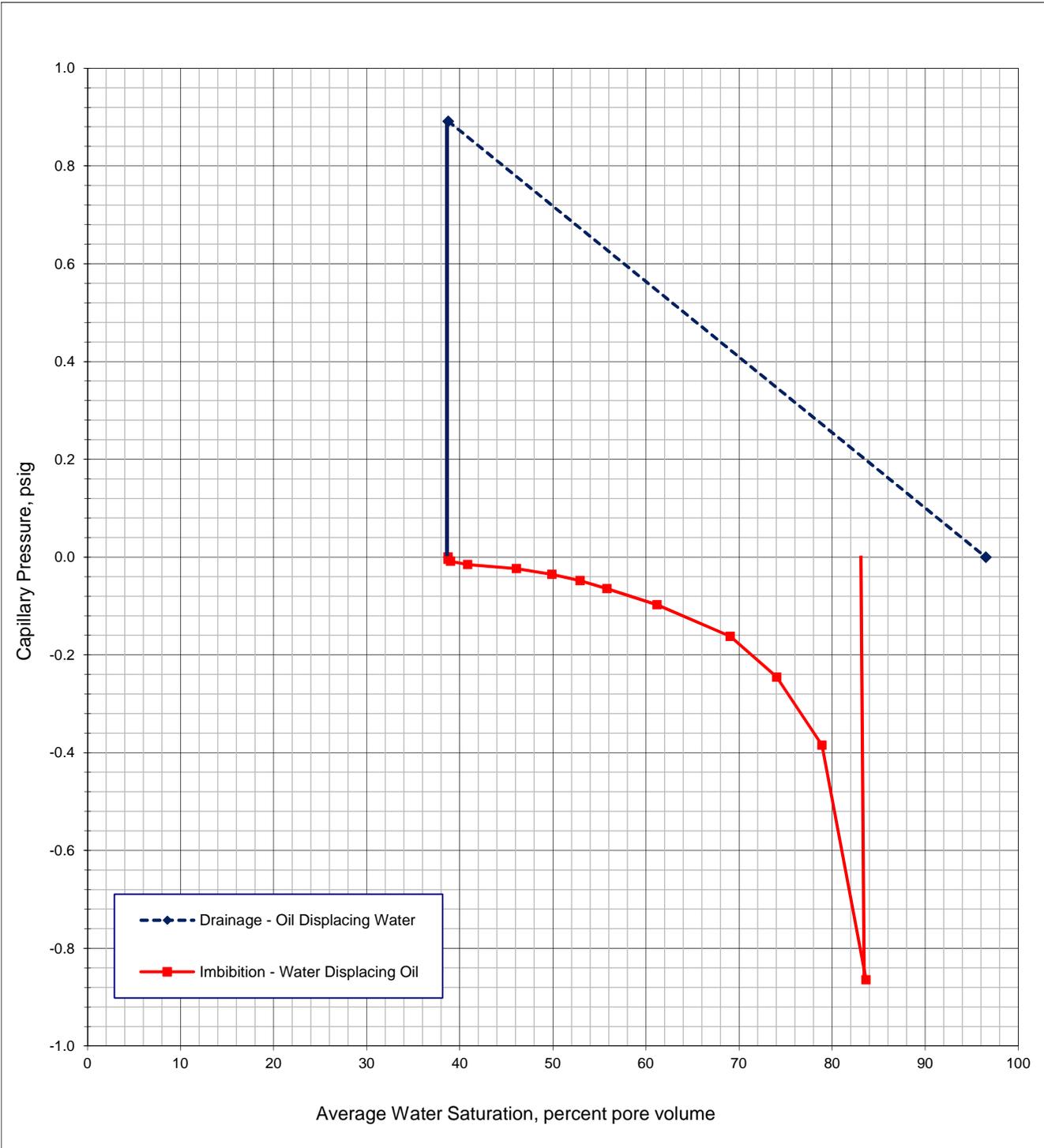
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B404A-D  
Depth, ft.: 14.5



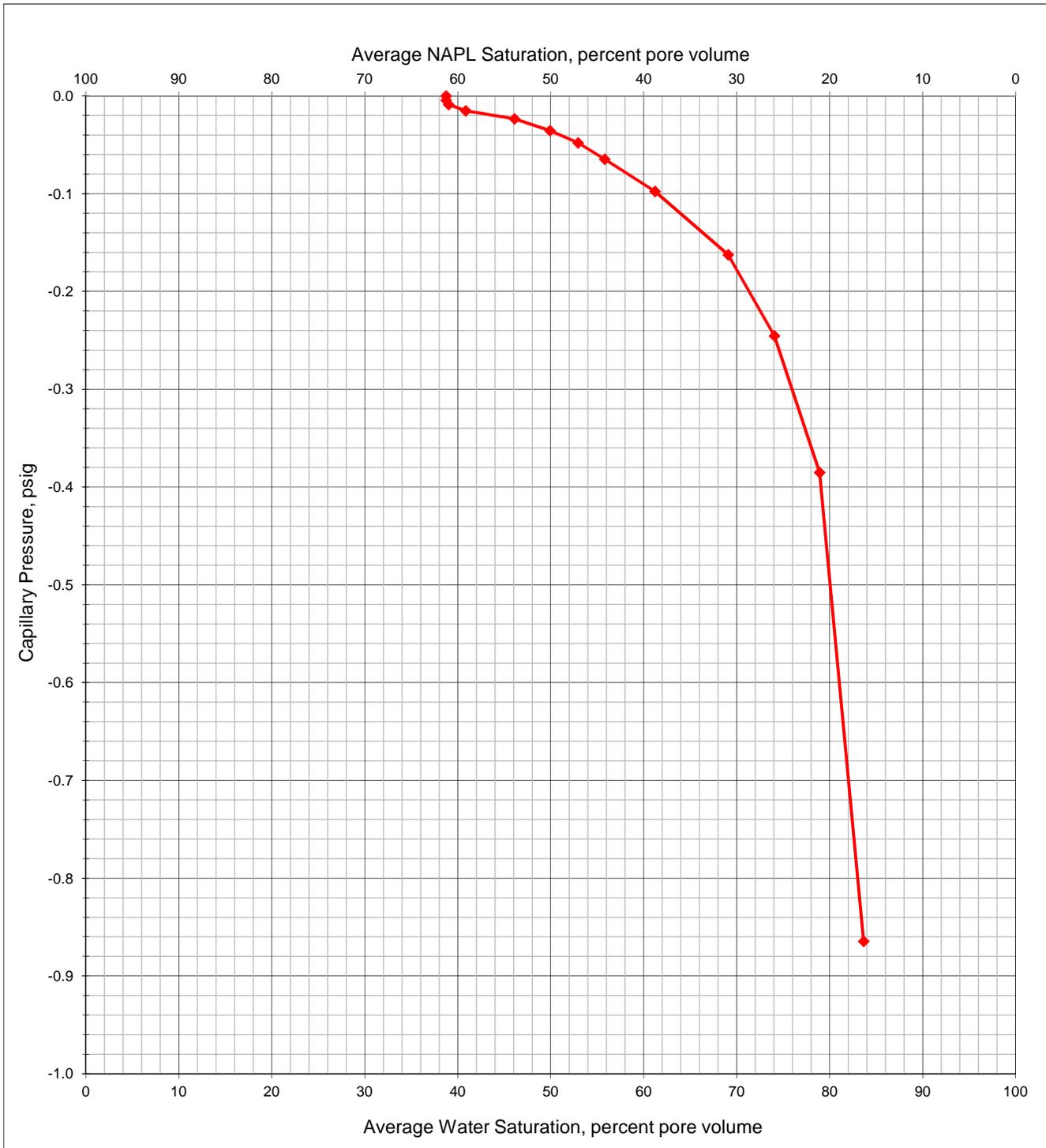
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B404A-D  
Depth, ft.: 14.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B412A-B at 12.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

<b>Drainage - Oil Displacing Water</b>					
0.000	0.00	0.00	83.6	16.4	
0.892	62.7	75.6	28.2	71.8	

<b>Spontaneous Imbibition</b>					
0.000	0.00	0.00	28.2	71.8	
0.000	0.00	0.00	28.2	71.8	

<b>Imbibition - Water Displacing Oil</b>					
0.000	0.00	0.00	28.2	71.8	
-0.004	-0.30	0.36	28.2	71.8	
-0.009	-0.61	0.74	28.2	71.8	
-0.016	-1.11	1.34	28.4	71.6	
-0.027	-1.90	2.30	36.2	63.8	
-0.038	-2.65	3.20	41.0	59.0	
-0.047	-3.33	4.02	46.0	54.0	
-0.066	-4.61	5.56	49.9	50.1	
-0.096	-6.75	8.15	54.2	45.8	
-0.162	-11.4	13.8	62.1	37.9	
-0.246	-17.3	20.9	68.8	31.2	
-0.380	-26.7	32.3	71.6	28.4	
-0.864	-60.8	73.3	74.6	25.4	

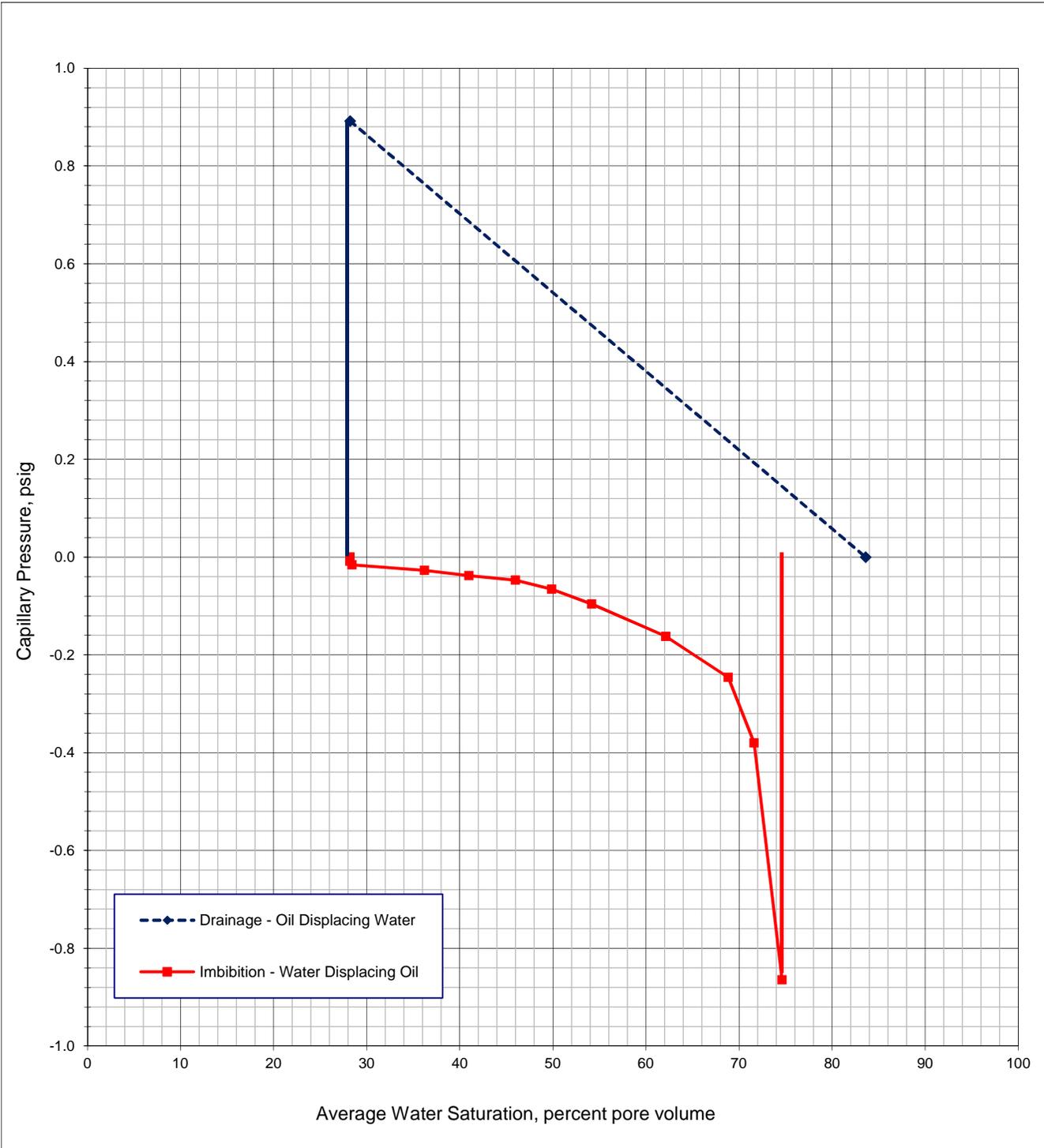
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B412A-B  
Depth, ft.: 12.5



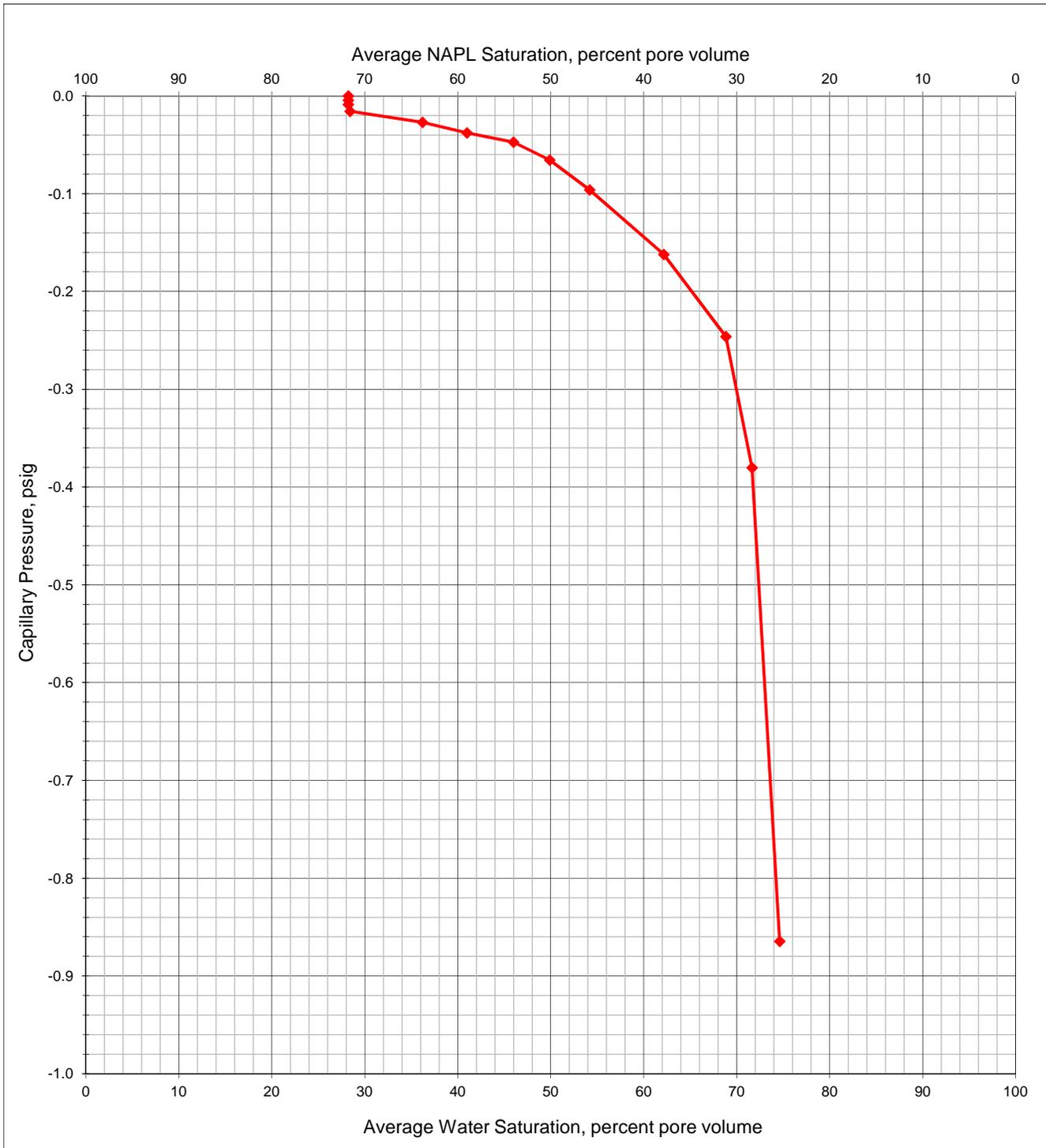
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B412A-B  
Depth, ft.: 12.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B412A-C at 14.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	91.4	8.6
0.894	62.9	75.8	32.9	67.1

**Spontaneous Imbibition**

0.000	0.00	0.00	32.9	67.1
0.000	0.00	0.00	32.9	67.1

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	32.9	67.1
-0.004	-0.30	0.37	32.9	67.1
-0.009	-0.62	0.74	38.9	61.1
-0.016	-1.11	1.34	43.3	56.7
-0.027	-1.91	2.30	49.5	50.5
-0.038	-2.66	3.21	55.7	44.3
-0.048	-3.34	4.03	56.8	43.2
-0.066	-4.62	5.58	58.4	41.6
-0.096	-6.77	8.17	59.7	40.3
-0.163	-11.4	13.8	62.2	37.8
-0.247	-17.4	20.9	64.6	35.4
-0.381	-26.8	32.3	67.5	32.5
-0.867	-60.9	73.5	70.8	29.2

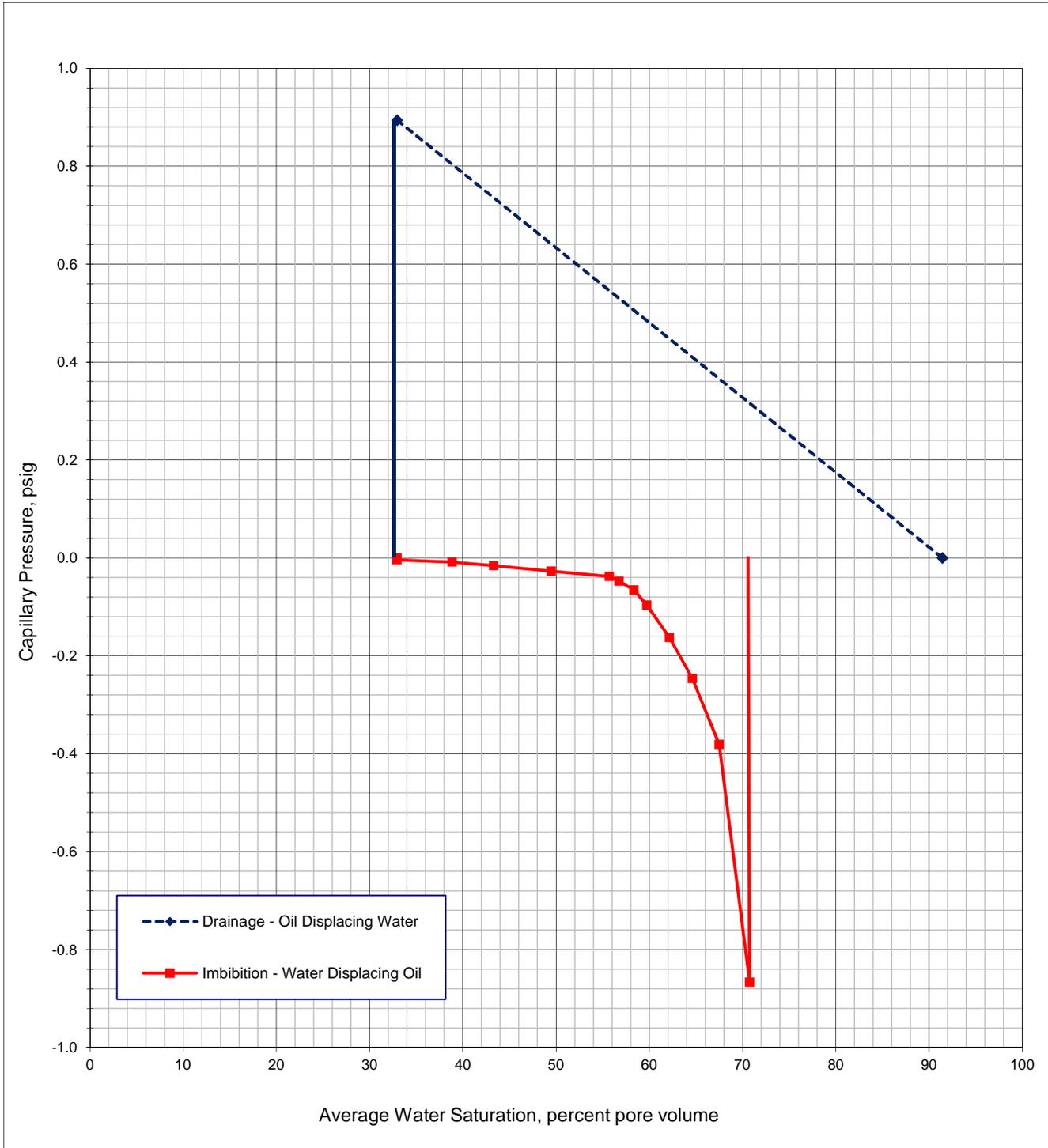
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B412A-C  
Depth, ft.: 14.5



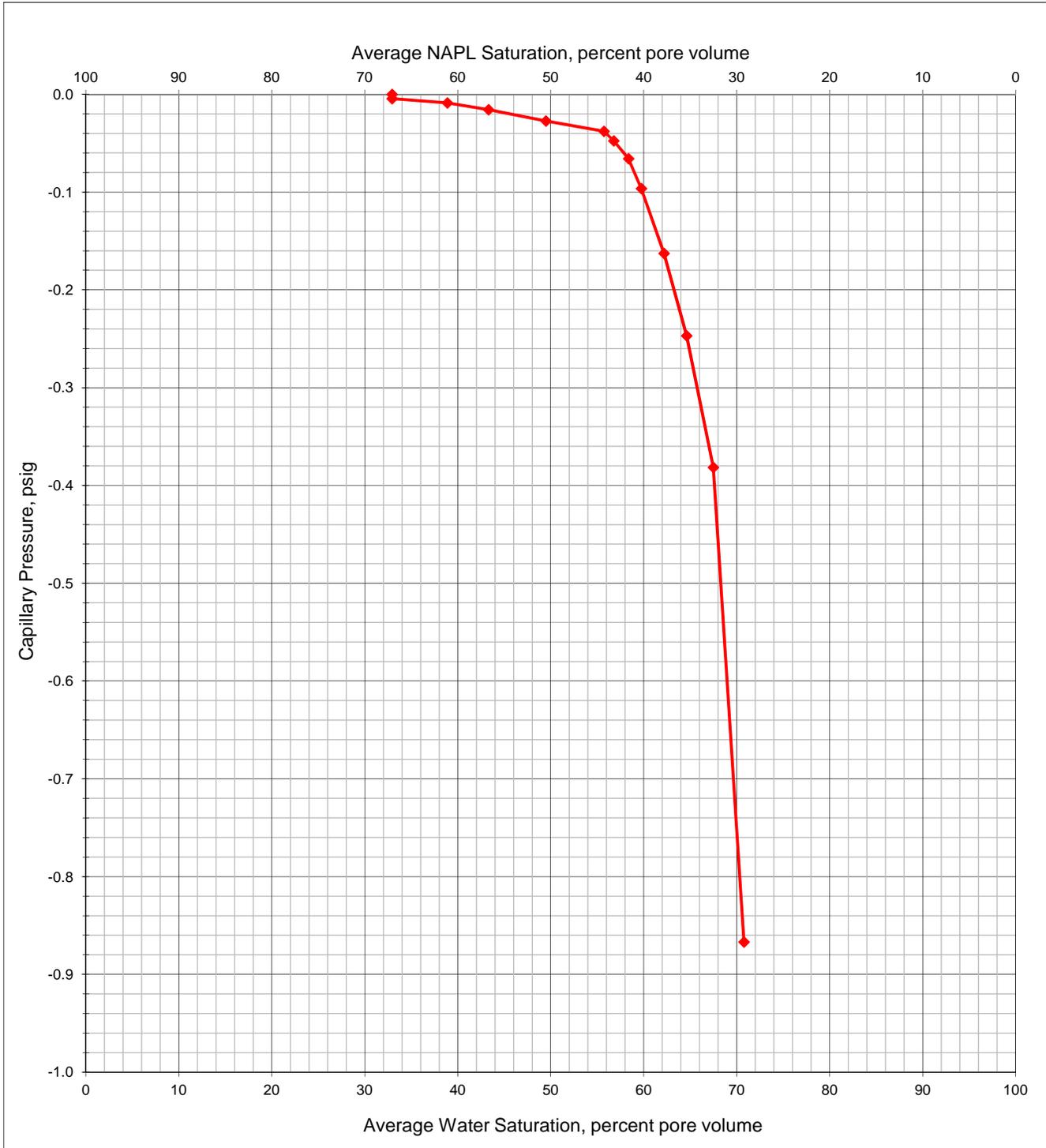
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B412A-C  
Depth, ft.: 14.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B412A-D at 16.45 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	88.9	11.1
0.836	58.8	70.9	20.5	79.5

**Spontaneous Imbibition**

0.000	0.00	0.00	20.5	79.5
0.000	0.00	0.00	20.5	79.5

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	20.5	79.5
-0.004	-0.28	0.34	20.6	79.4
-0.008	-0.57	0.69	20.7	79.3
-0.015	-1.04	1.25	20.9	79.1
-0.025	-1.78	2.14	21.5	78.5
-0.035	-2.48	2.99	54.7	45.3
-0.044	-3.11	3.76	58.1	41.9
-0.061	-4.31	5.20	60.5	39.5
-0.090	-6.31	7.61	62.7	37.3
-0.151	-10.7	12.8	65.2	34.8
-0.230	-16.2	19.5	68.2	31.8
-0.355	-25.0	30.1	71.4	28.6
-0.808	-56.8	68.5	73.8	26.2

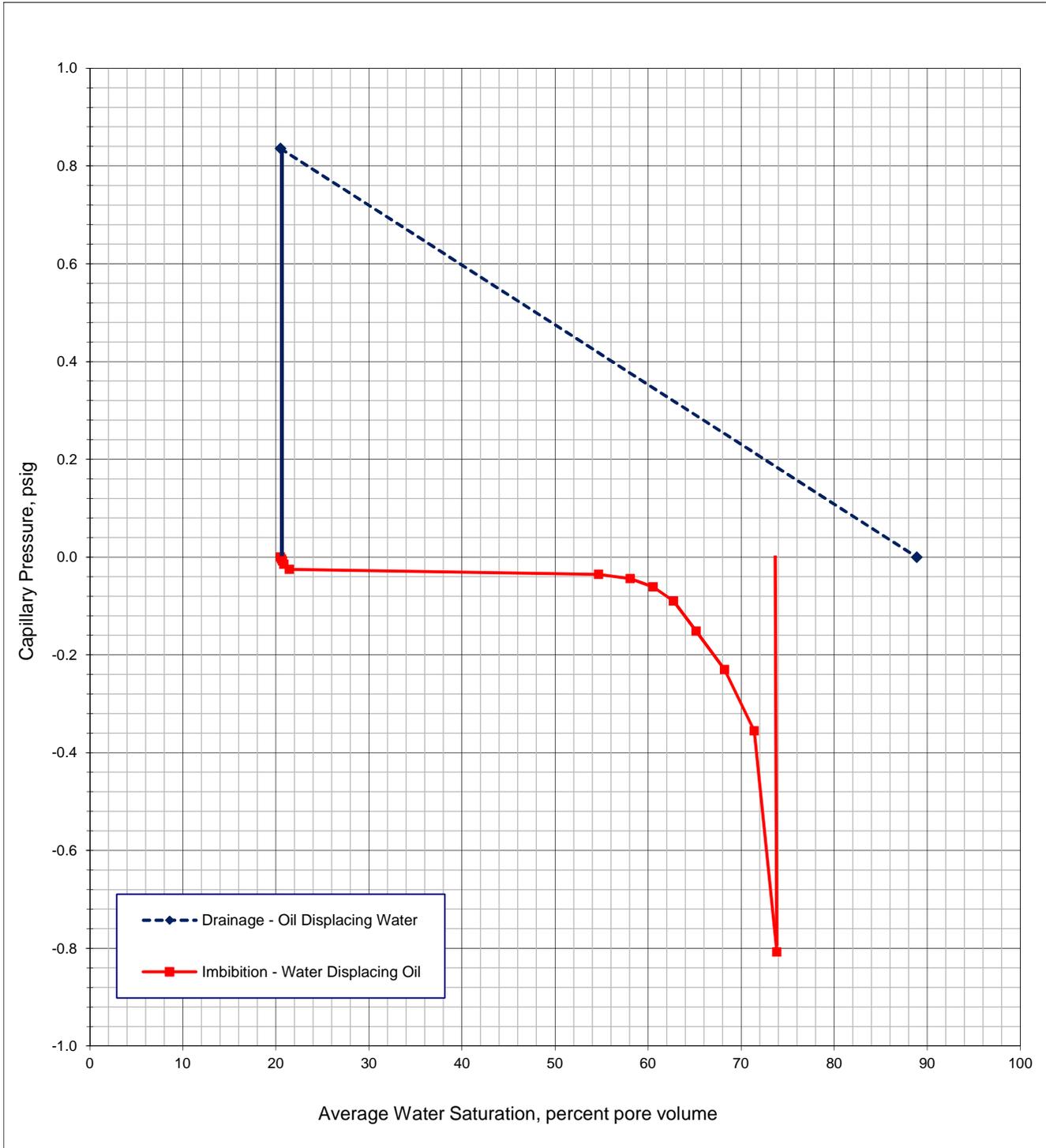
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B412A-D  
Depth, ft.: 16.45



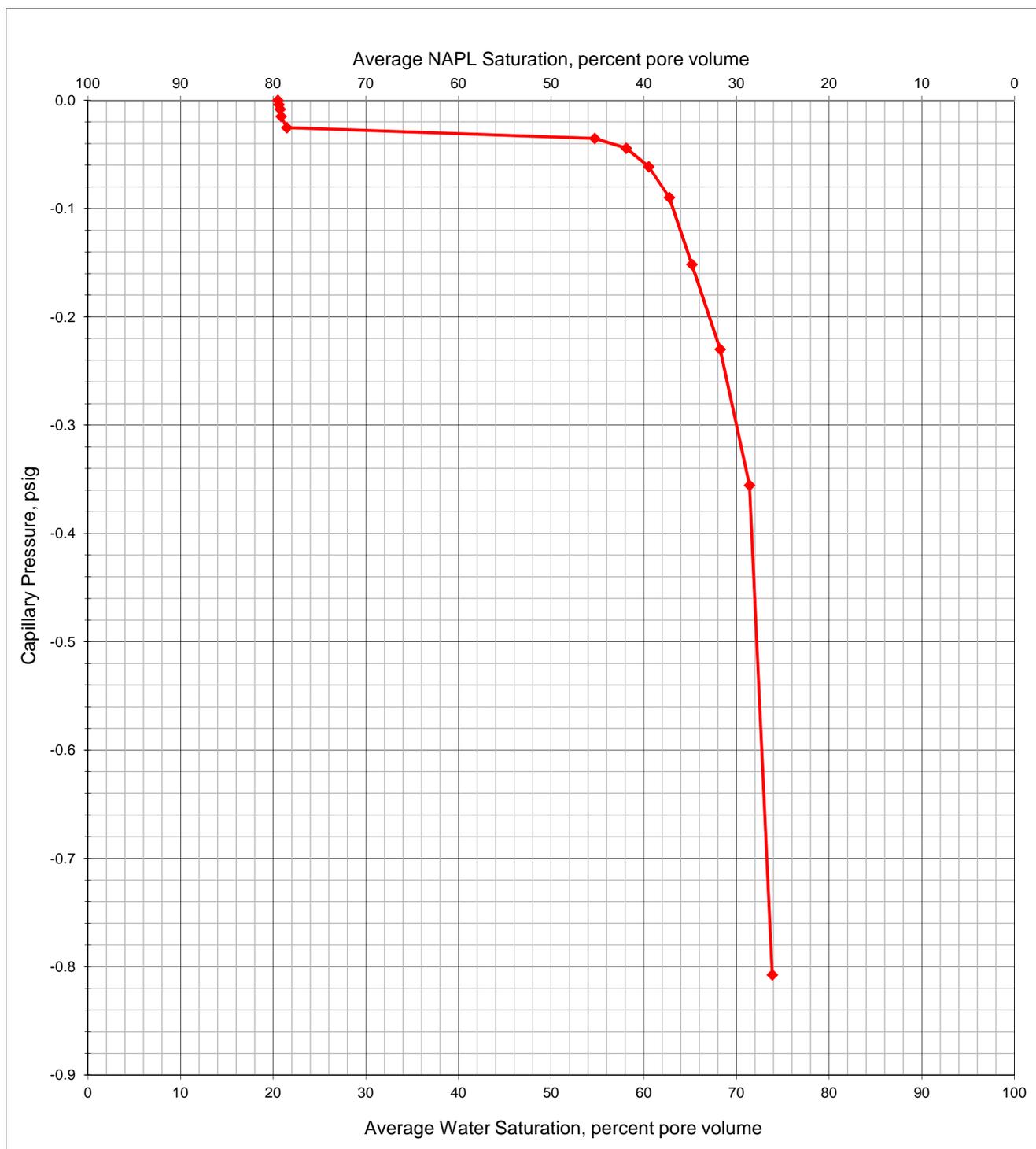
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Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B412A-D  
Depth, ft.: 16.45



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B413A-B at 12.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	72.2	27.8
0.843	59.3	71.5	30.8	69.2

**Spontaneous Imbibition**

0.000	0.00	0.00	30.8	69.2
0.000	0.00	0.00	30.8	69.2

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	30.8	69.2
-0.004	-0.28	0.34	30.8	69.2
-0.008	-0.58	0.70	30.9	69.1
-0.015	-1.04	1.26	33.8	66.2
-0.026	-1.79	2.16	36.0	64.0
-0.036	-2.50	3.02	38.9	61.1
-0.045	-3.14	3.79	42.7	57.3
-0.062	-4.35	5.24	46.2	53.8
-0.091	-6.36	7.68	50.6	49.4
-0.153	-10.7	13.0	56.9	43.1
-0.232	-16.3	19.7	62.7	37.3
-0.358	-25.2	30.4	68.0	32.0
-0.815	-57.3	69.1	71.0	29.0

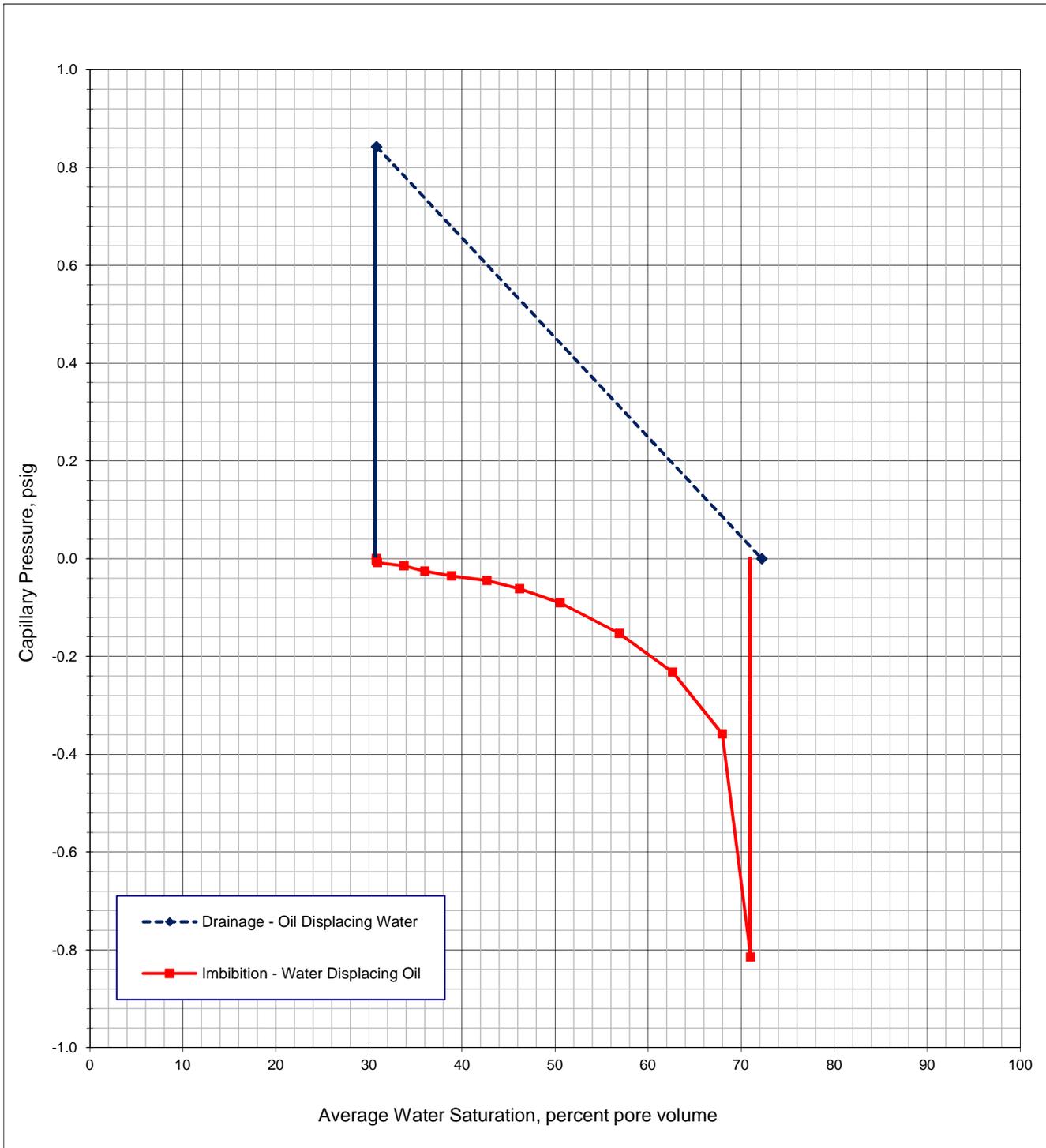
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B413A-B  
Depth, ft.: 12.5



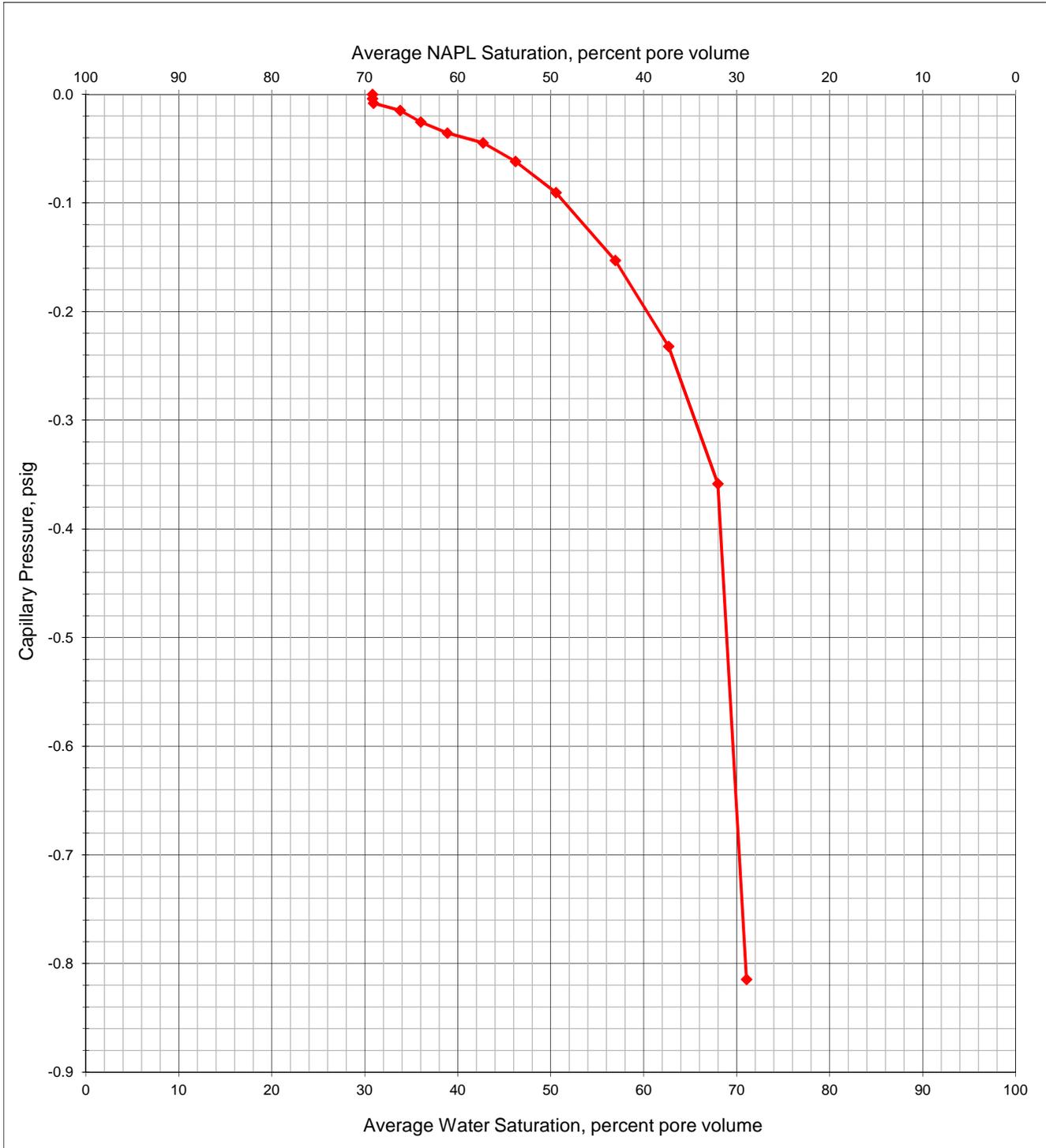
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Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B413A-B  
Depth, ft.: 12.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B413A-C at 14.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	73.1	26.9
0.848	59.6	71.9	19.2	80.8

**Spontaneous Imbibition**

0.000	0.00	0.00	19.2	80.8
0.000	0.00	0.00	19.2	80.8

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	19.2	80.8
-0.004	-0.29	0.35	19.2	80.8
-0.008	-0.58	0.70	19.2	80.8
-0.015	-1.05	1.27	19.3	80.7
-0.026	-1.80	2.18	19.4	80.6
-0.036	-2.51	3.03	20.4	79.6
-0.045	-3.16	3.81	32.8	67.2
-0.062	-4.37	5.27	40.9	59.1
-0.091	-6.40	7.72	46.5	53.5
-0.154	-10.8	13.0	52.7	47.3
-0.233	-16.4	19.8	58.6	41.4
-0.361	-25.4	30.6	65.0	35.0
-0.819	-57.6	69.5	70.4	29.6

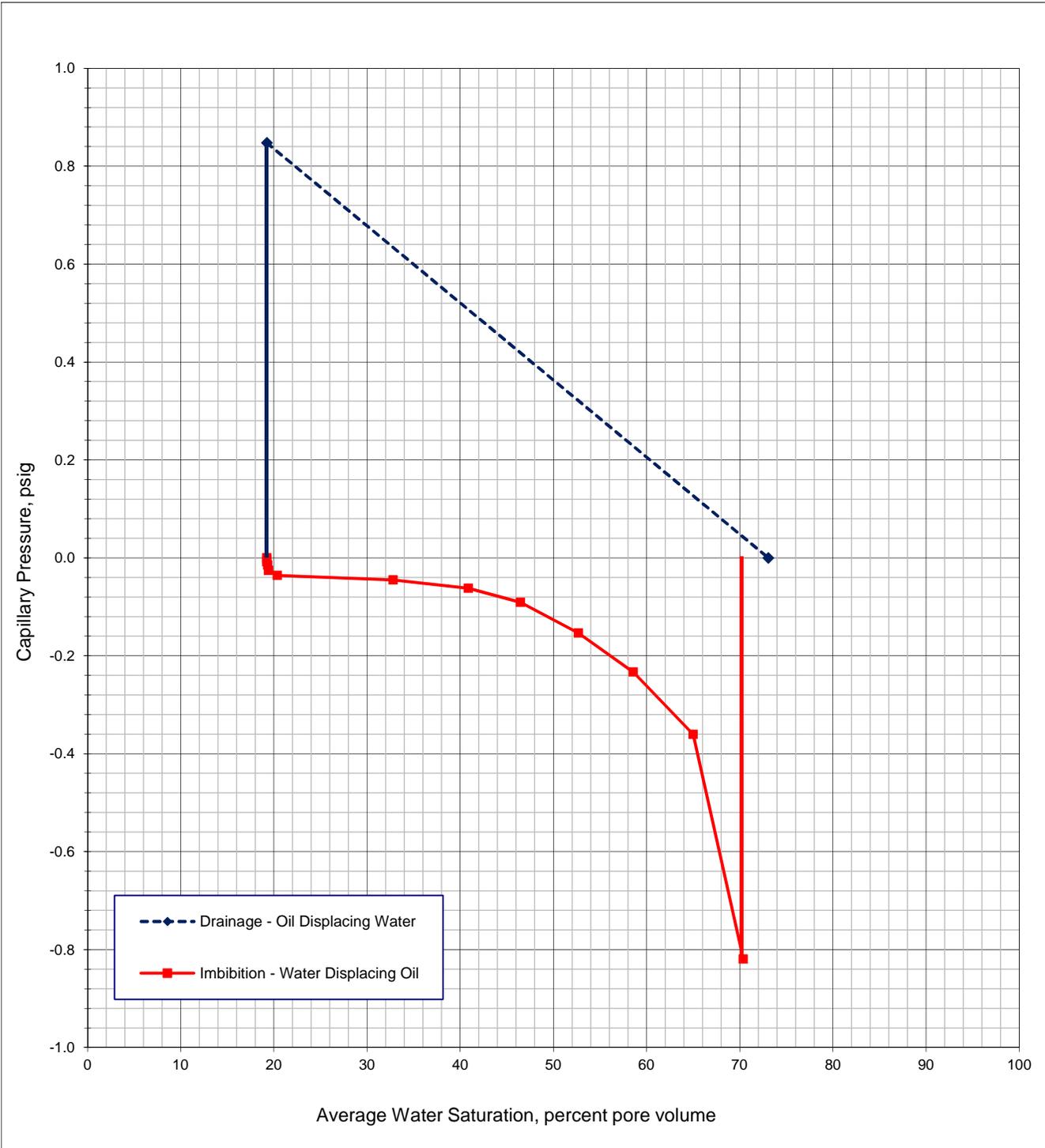
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B413A-C  
Depth, ft.: 14.5



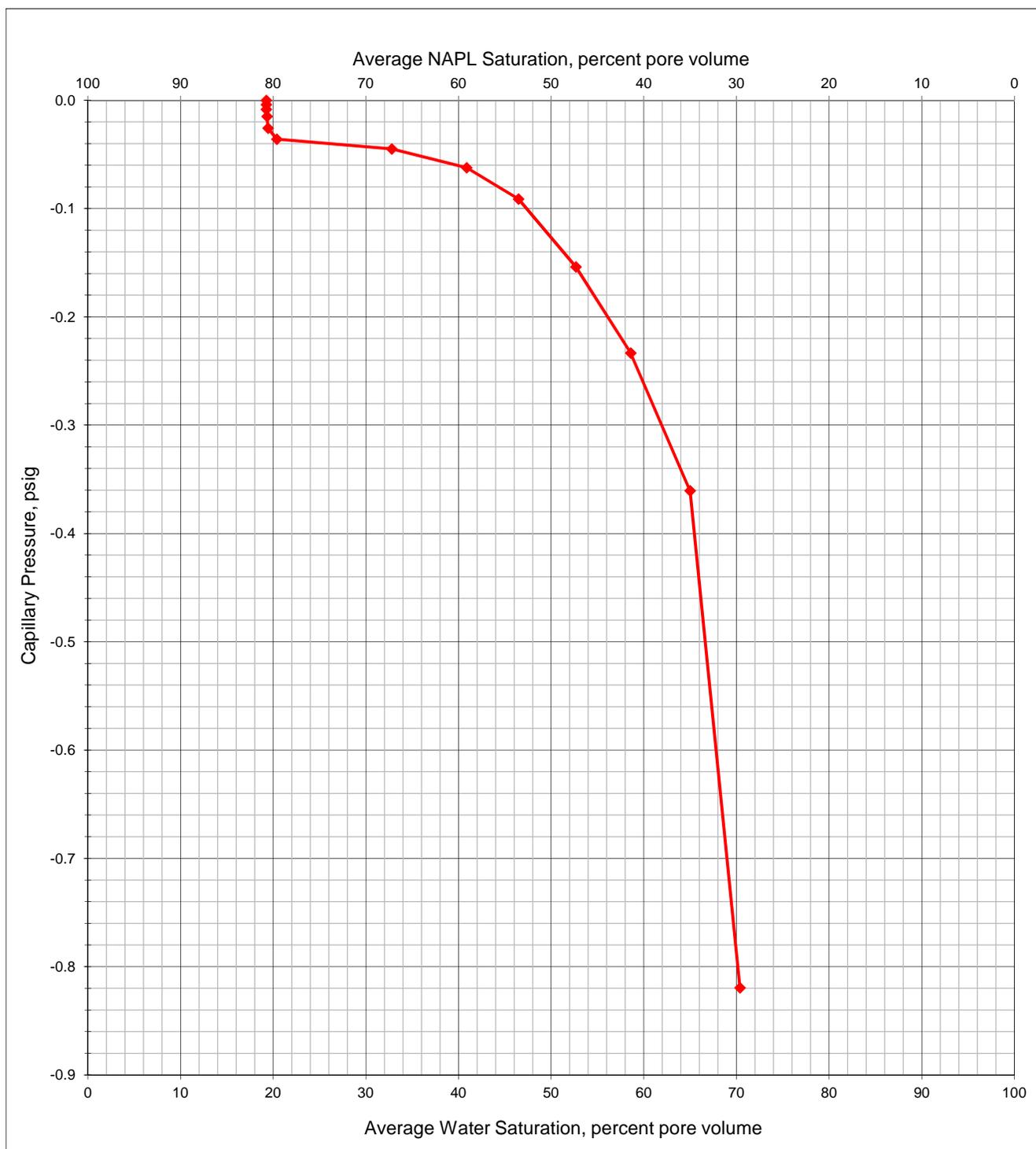
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

### OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B413A-C  
Depth, ft.: 14.5



PTS File No: 46705R1  
 Client: TRC Solutions  
 Report Date: 04/26/17

**OIL/WATER CAPILLARY PRESSURE TABULAR DATA**  
 ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

Capillary Pressure		Height Above Water Table, ft	Sample ID		
			B413A-D at 16.5 ft.		
		Average Saturation, % pore volume			
psi	cm water		Water	Oil (NAPL)	

**Drainage - Oil Displacing Water**

0.000	0.00	0.00	57.3	42.7
0.978	68.8	83.0	23.6	76.4

**Spontaneous Imbibition**

0.000	0.00	0.00	23.6	76.4
0.000	0.00	0.00	23.6	76.4

**Imbibition - Water Displacing Oil**

0.000	0.00	0.00	23.6	76.4
-0.005	-0.33	0.40	23.6	76.4
-0.010	-0.68	0.82	24.4	75.6
-0.017	-1.22	1.47	25.0	75.0
-0.030	-2.10	2.53	25.3	74.7
-0.042	-2.93	3.53	25.8	74.2
-0.052	-3.68	4.43	26.5	73.5
-0.072	-5.09	6.13	27.1	72.9
-0.106	-7.45	8.98	27.7	72.3
-0.179	-12.6	15.2	41.9	58.1
-0.271	-19.1	23.0	58.7	41.3
-0.420	-29.5	35.6	66.2	33.8
-0.953	-67.0	80.9	77.7	22.3

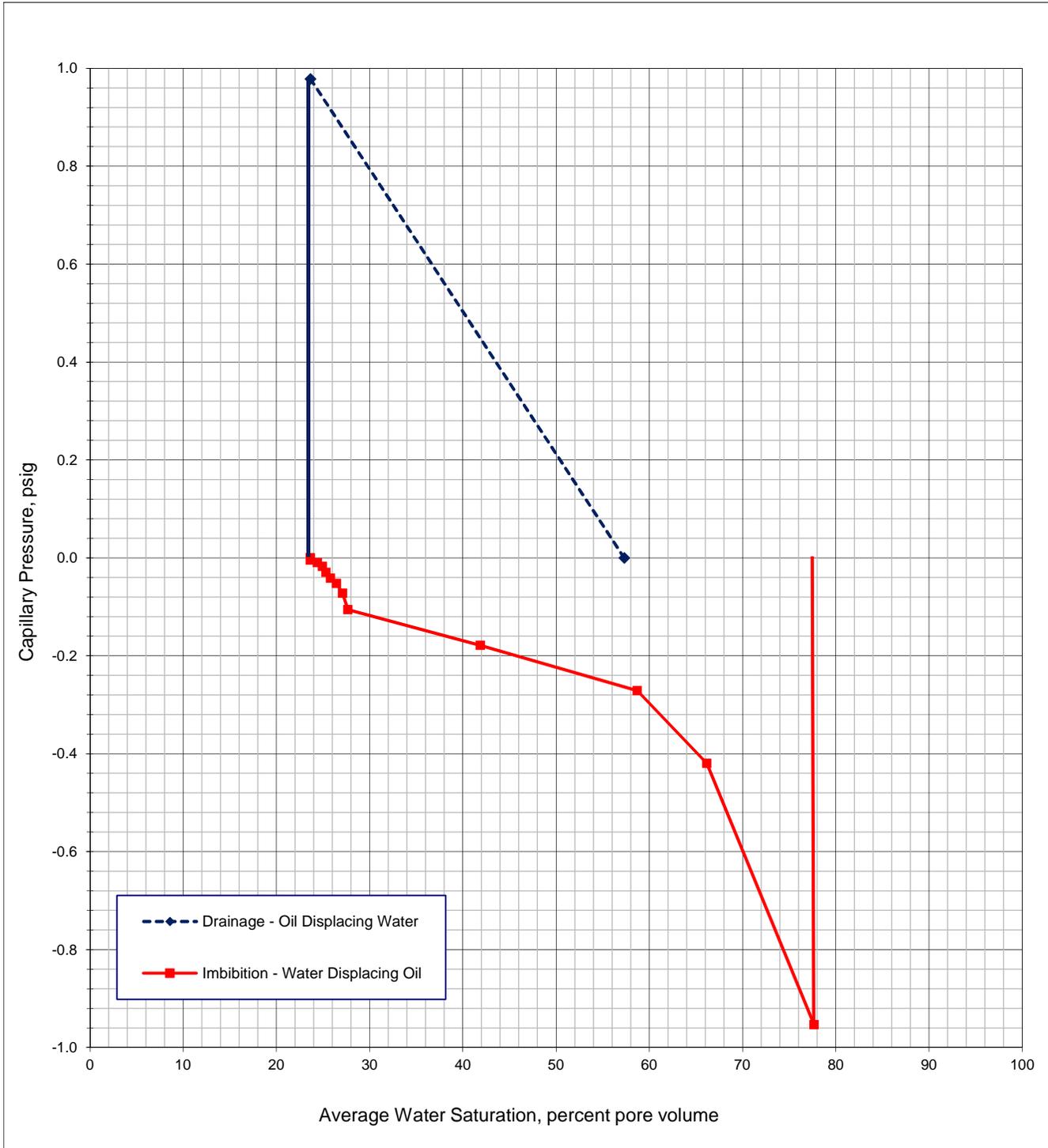
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER DRAINAGE & IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B413A-D  
Depth, ft.: 16.5



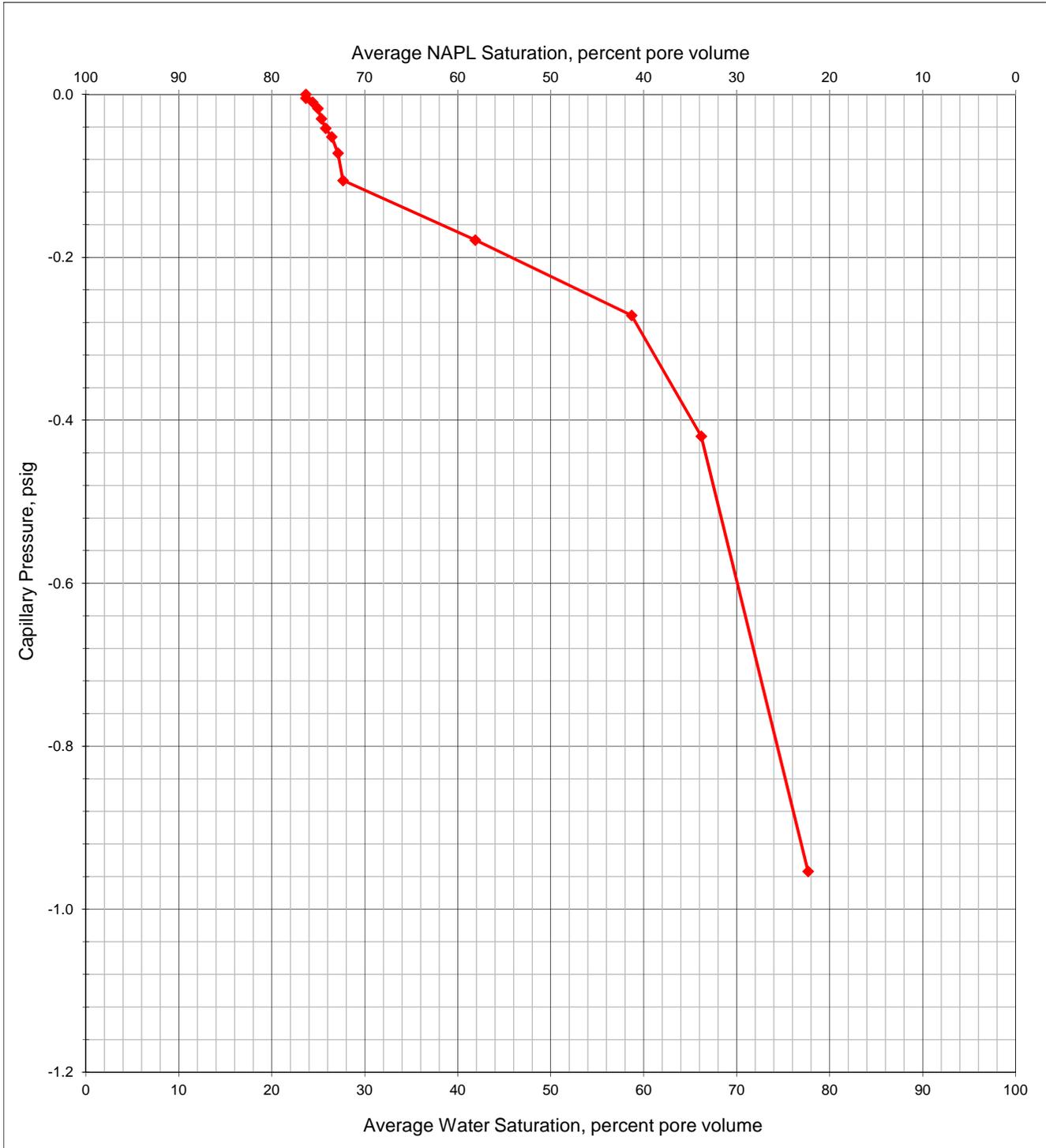
PTS File No: 46705R1  
Client: TRC Solutions  
Report Date: 04/26/17

**OIL/WATER IMBIBITION CAPILLARY PRESSURE GRAPH**

ASTM D6836; Method E (Centrifugal Method: Single point drainage followed by imbibition)

Project Name: Atlantic Bridge Project  
Project No: 140143.0000.4903

Sample ID: B413A-D  
Depth, ft.: 16.5



**PARTICLE SIZE SUMMARY**  
(METHODOLOGY: ASTM D422M)

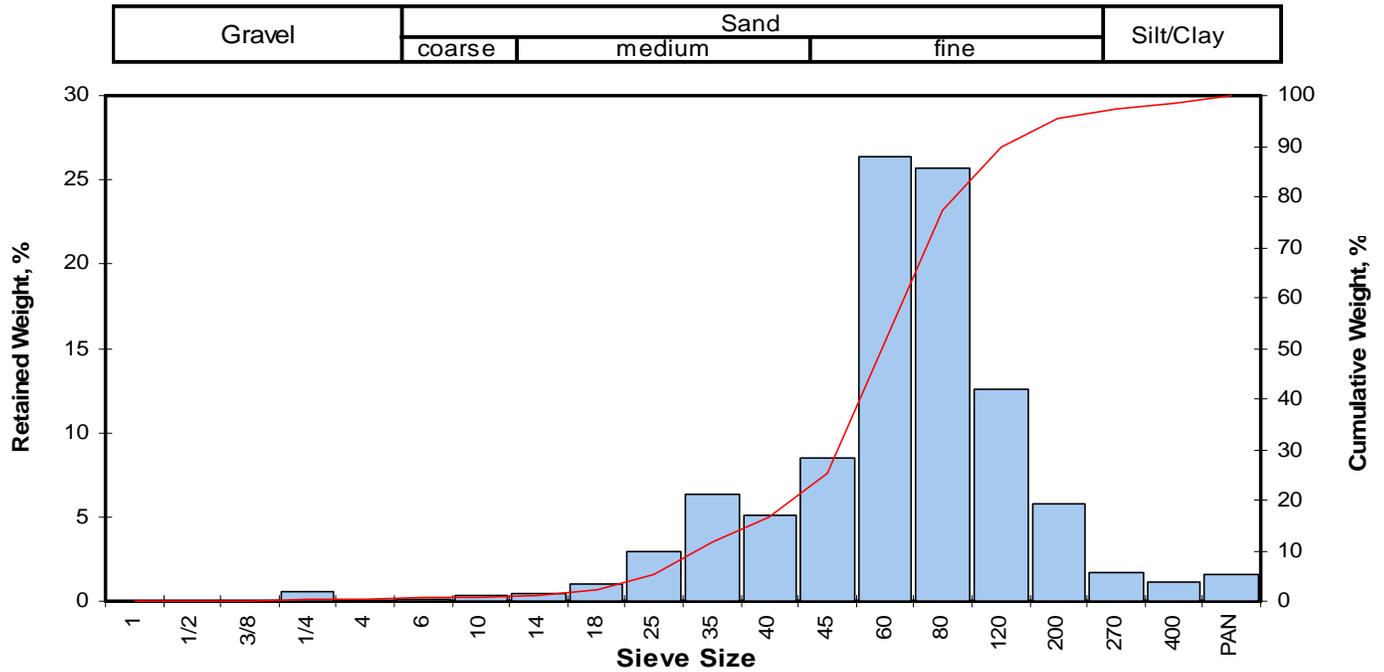
PROJECT NAME: Atlantic Bridge Project  
PROJECT NO: 140143.0000.4903

Sample ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
B406A-C	12.6-12.8	Fine sand	0.255	0.53	0.37	15.77	78.99	4.35
B404A-D	14.6-14.8	Gravel	13.468	76.88	8.61	9.69	3.72	1.10
B412A-C	14.6-14.8	Coarse sand	2.585	37.40	18.00	24.74	14.21	5.65
B413A-C	14.6-14.8	Gravel	3.861	44.50	20.57	18.85	11.65	4.42

(1) Based on Mean from Trask

**Client:** TRC Solutions  
**Project:** Atlantic Bridge Project  
**Project No:** 140143.0000.4903

**PTS File No:** 46705R1  
**Sample ID:** B406A-C  
**Depth, ft:** 12.6-12.8



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.71	0.53	0.53
0.1873	4.757	-2.25	4	0.00	0.00	0.53
0.1324	3.364	-1.75	6	0.09	0.07	0.60
0.0787	2.000	-1.00	10	0.40	0.30	0.90
0.0557	1.414	-0.50	14	0.53	0.40	1.30
0.0394	1.000	0.00	18	1.33	1.00	2.30
0.0278	0.707	0.50	25	3.84	2.89	5.19
0.0197	0.500	1.00	35	8.47	6.37	11.56
0.0166	0.420	1.25	40	6.80	5.11	16.67
0.0139	0.354	1.50	45	11.35	8.53	25.20
0.0098	0.250	2.00	60	35.05	26.35	51.55
0.0070	0.177	2.50	80	34.22	25.73	77.28
0.0049	0.125	3.00	120	16.72	12.57	89.85
0.0029	0.074	3.75	200	7.72	5.80	95.65
0.0021	0.053	4.25	270	2.27	1.71	97.36
0.0015	0.037	4.75	400	1.44	1.08	98.44
			PAN	2.07	1.56	100.00
<b>TOTALS</b>				133.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.47	0.0285	0.723
10	0.88	0.0214	0.544
16	1.22	0.0169	0.430
25	1.49	0.0140	0.355
40	1.78	0.0115	0.291
50	1.97	0.0100	0.255
60	2.16	0.0088	0.223
75	2.46	0.0072	0.182
84	2.77	0.0058	0.147
90	3.02	0.0049	0.123
95	3.67	0.0031	0.079

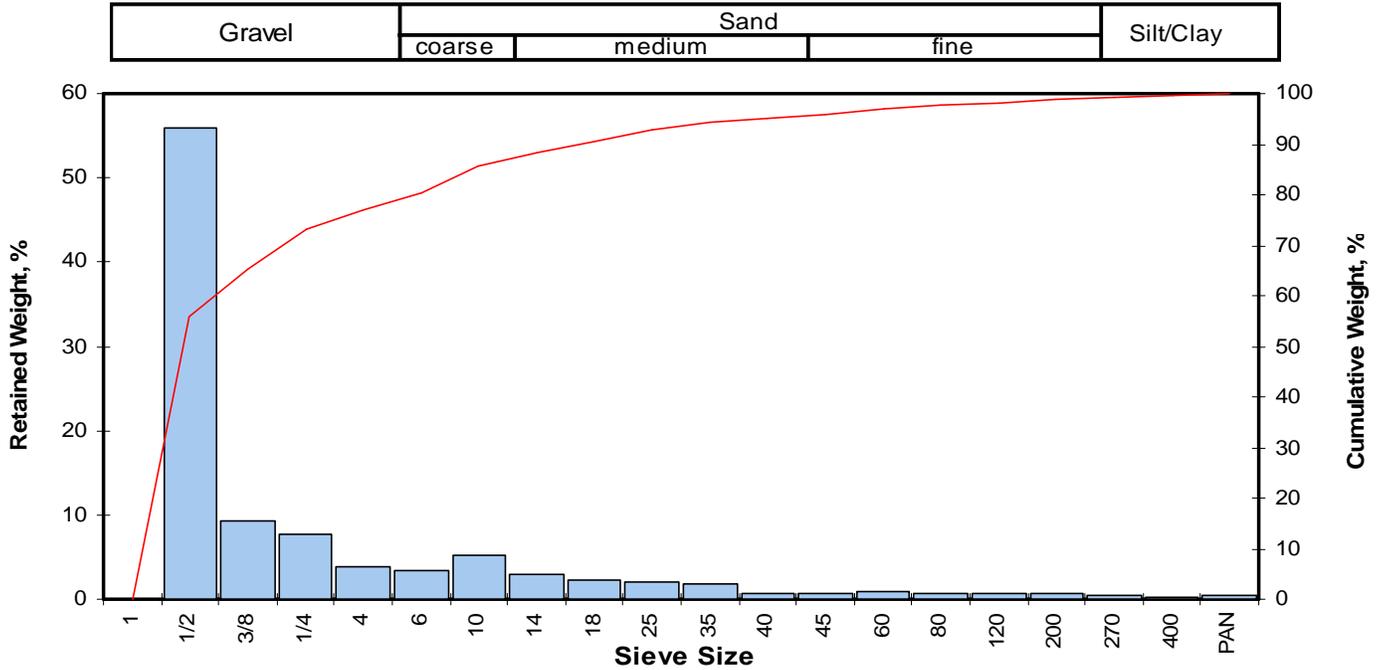
Measure	Trask	Inman	Folk-Ward
Median, phi	1.97	1.97	1.97
Median, in.	0.0100	0.0100	0.0100
Median, mm	0.255	0.255	0.255
Mean, phi	1.90	1.99	1.99
Mean, in.	0.0106	0.0099	0.0099
Mean, mm	0.269	0.251	0.253
Sorting	1.396	0.775	0.872
Skewness	0.997	0.028	0.044
Kurtosis	0.205	1.063	1.363

**Grain Size Description** (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.53
Coarse Sand	10	0.37
Medium Sand	40	15.77
Fine Sand	200	78.99
Silt/Clay	<200	4.35
<b>Total</b>		<b>100</b>

**Client:** TRC Solutions  
**Project:** Atlantic Bridge Project  
**Project No:** 140143.0000.4903

**PTS File No:** 46705R1  
**Sample ID:** B404A-D  
**Depth, ft:** 14.6-14.8



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	65.46	56.02	56.02
0.3740	9.500	-3.25	3/8	10.97	9.39	65.41
0.2500	6.351	-2.67	1/4	8.95	7.66	73.07
0.1873	4.757	-2.25	4	4.46	3.82	76.88
0.1324	3.364	-1.75	6	4.07	3.48	80.37
0.0787	2.000	-1.00	10	5.99	5.13	85.49
0.0557	1.414	-0.50	14	3.44	2.94	88.44
0.0394	1.000	0.00	18	2.54	2.17	90.61
0.0278	0.707	0.50	25	2.48	2.12	92.73
0.0197	0.500	1.00	35	2.06	1.76	94.50
0.0166	0.420	1.25	40	0.80	0.68	95.18
0.0139	0.354	1.50	45	0.80	0.68	95.87
0.0098	0.250	2.00	60	1.14	0.98	96.84
0.0070	0.177	2.50	80	0.90	0.77	97.61
0.0049	0.125	3.00	120	0.78	0.67	98.28
0.0029	0.074	3.75	200	0.73	0.62	98.90
0.0021	0.053	4.25	270	0.40	0.34	99.25
0.0015	0.037	4.75	400	0.34	0.29	99.54
			PAN	0.54	0.46	100.00
<b>TOTALS</b>				116.85	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.55	0.9253	23.503
10	-4.47	0.8698	22.093
16	-4.36	0.8076	20.512
25	-4.20	0.7225	18.350
40	-3.93	0.6001	15.242
50	-3.75	0.5302	13.468
60	-3.48	0.4381	11.128
75	-2.46	0.2160	5.487
84	-1.22	0.0916	2.327
90	-0.14	0.0434	1.102
95	1.18	0.0173	0.440

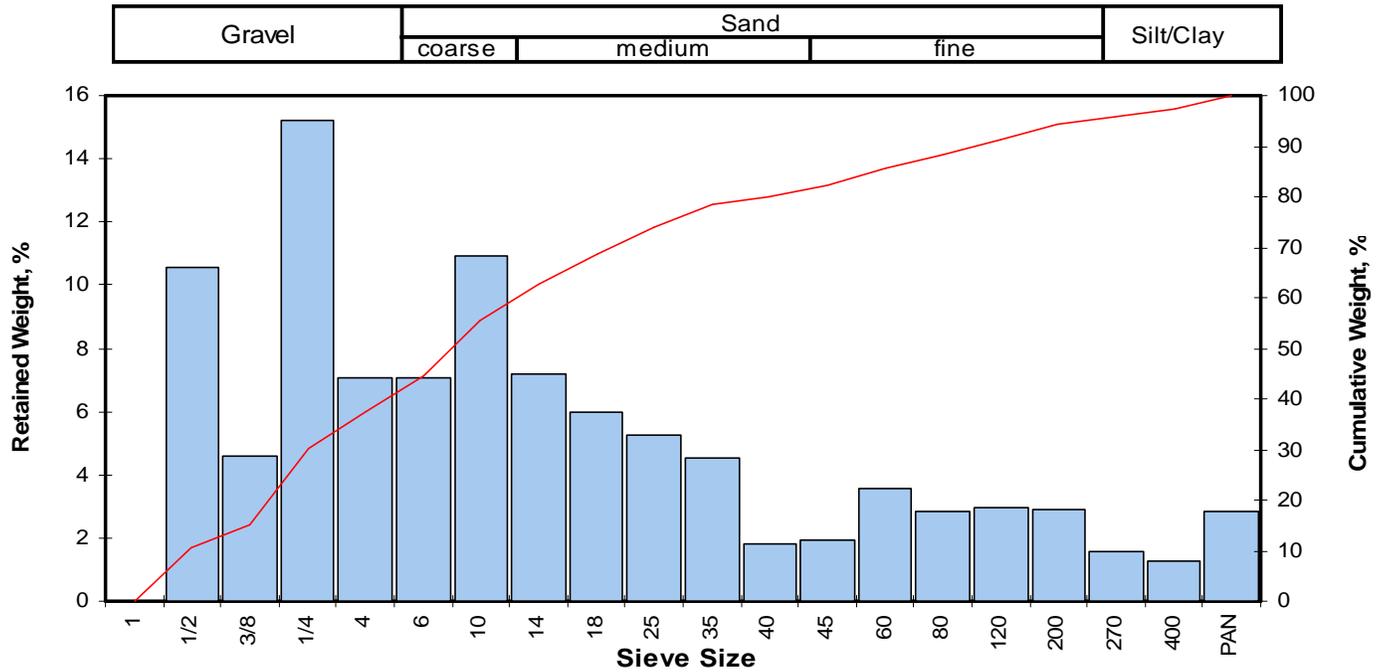
Measure	Trask	Inman	Folk-Ward
Median, phi	-3.75	-3.75	-3.75
Median, in.	0.5302	0.5302	0.5302
Median, mm	13.468	13.468	13.468
Mean, phi	-3.58	-2.79	-3.11
Mean, in.	0.4692	0.2720	0.3398
Mean, mm	11.919	6.909	8.631
Sorting	1.829	1.570	1.654
Skewness	0.745	0.613	0.667
Kurtosis	0.306	0.828	1.350

**Grain Size Description** (ASTM-USCS Scale) Gravel (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	76.88
Coarse Sand	10	8.61
Medium Sand	40	9.69
Fine Sand	200	3.72
Silt/Clay	<200	1.10
<b>Total</b>		<b>100</b>

**Client:** TRC Solutions  
**Project:** Atlantic Bridge Project  
**Project No:** 140143.0000.4903

**PTS File No:** 46705R1  
**Sample ID:** B412A-C  
**Depth, ft:** 14.6-14.8



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	8.44	10.55	10.55
0.3740	9.500	-3.25	3/8	3.65	4.56	15.11
0.2500	6.351	-2.67	1/4	12.17	15.21	30.32
0.1873	4.757	-2.25	4	5.67	7.09	37.40
0.1324	3.364	-1.75	6	5.65	7.06	44.46
0.0787	2.000	-1.00	10	8.75	10.93	55.40
0.0557	1.414	-0.50	14	5.74	7.17	62.57
0.0394	1.000	0.00	18	4.79	5.99	68.56
0.0278	0.707	0.50	25	4.21	5.26	73.82
0.0197	0.500	1.00	35	3.62	4.52	78.34
0.0166	0.420	1.25	40	1.44	1.80	80.14
0.0139	0.354	1.50	45	1.55	1.94	82.08
0.0098	0.250	2.00	60	2.84	3.55	85.63
0.0070	0.177	2.50	80	2.25	2.81	88.44
0.0049	0.125	3.00	120	2.39	2.99	91.43
0.0029	0.074	3.75	200	2.34	2.92	94.35
0.0021	0.053	4.25	270	1.27	1.59	95.94
0.0015	0.037	4.75	400	1.00	1.25	97.19
			PAN	2.25	2.81	100.00
<b>TOTALS</b>				80.02	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.17	0.7087	18.000
10	-3.70	0.5102	12.959
16	-3.21	0.3653	9.279
25	-2.87	0.2878	7.311
40	-2.07	0.1649	4.188
50	-1.37	0.1018	2.585
60	-0.68	0.0630	1.601
75	0.63	0.0254	0.646
84	1.77	0.0115	0.293
90	2.76	0.0058	0.148
95	3.95	0.0025	0.065

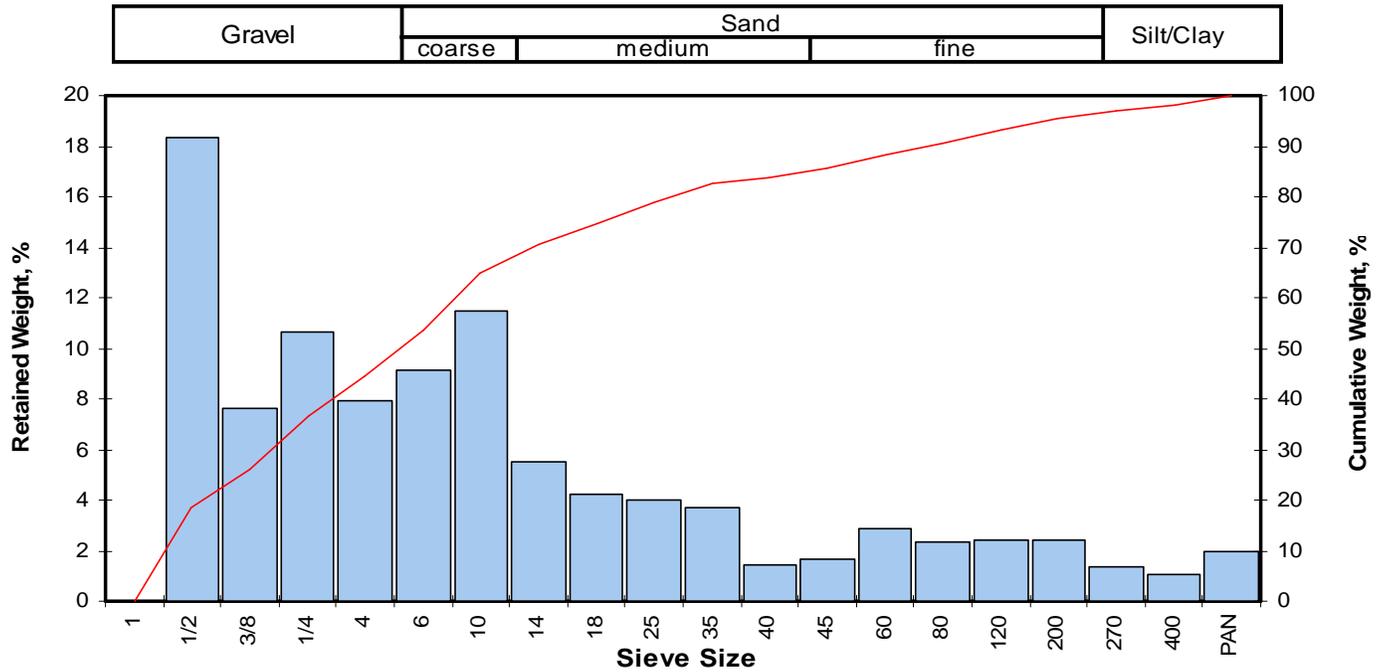
Measure	Trask	Inman	Folk-Ward
Median, phi	-1.37	-1.37	-1.37
Median, in.	0.1018	0.1018	0.1018
Median, mm	2.585	2.585	2.585
Mean, phi	-1.99	-0.72	-0.94
Mean, in.	0.1566	0.0649	0.0754
Mean, mm	3.979	1.649	1.916
Sorting	3.364	2.492	2.477
Skewness	0.841	0.260	0.286
Kurtosis	0.260	0.630	0.951

**Grain Size Description** (ASTM-USCS Scale) Coarse sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	37.40
Coarse Sand	10	18.00
Medium Sand	40	24.74
Fine Sand	200	14.21
Silt/Clay	<200	5.65
<b>Total</b>		<b>100</b>

**Client:** TRC Solutions  
**Project:** Atlantic Bridge Project  
**Project No:** 140143.0000.4903

**PTS File No:** 46705R1  
**Sample ID:** B413A-C  
**Depth, ft:** 14.6-14.8



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	13.84	18.31	18.31
0.3740	9.500	-3.25	3/8	5.76	7.62	25.93
0.2500	6.351	-2.67	1/4	8.07	10.68	36.61
0.1873	4.757	-2.25	4	5.97	7.90	44.50
0.1324	3.364	-1.75	6	6.90	9.13	53.63
0.0787	2.000	-1.00	10	8.65	11.44	65.07
0.0557	1.414	-0.50	14	4.14	5.48	70.55
0.0394	1.000	0.00	18	3.18	4.21	74.76
0.0278	0.707	0.50	25	3.05	4.03	78.79
0.0197	0.500	1.00	35	2.82	3.73	82.52
0.0166	0.420	1.25	40	1.06	1.40	83.93
0.0139	0.354	1.50	45	1.25	1.65	85.58
0.0098	0.250	2.00	60	2.14	2.83	88.41
0.0070	0.177	2.50	80	1.75	2.32	90.73
0.0049	0.125	3.00	120	1.83	2.42	93.15
0.0029	0.074	3.75	200	1.84	2.43	95.58
0.0021	0.053	4.25	270	1.03	1.36	96.94
0.0015	0.037	4.75	400	0.82	1.08	98.03
			PAN	1.49	1.97	100.00
<b>TOTALS</b>				75.59	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.37	0.8146	20.691
10	-4.10	0.6741	17.123
16	-3.77	0.5371	13.643
25	-3.30	0.3868	9.824
40	-2.49	0.2208	5.609
50	-1.95	0.1520	3.861
60	-1.33	0.0992	2.519
75	0.03	0.0386	0.979
84	1.26	0.0164	0.417
90	2.34	0.0078	0.197
95	3.57	0.0033	0.084

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.95	-1.95	-1.95
Median, in.	0.1520	0.1520	0.1520
Median, mm	3.861	3.861	3.861
Mean, phi	-2.43	-1.25	-1.49
Mean, in.	0.2127	0.0939	0.1103
Mean, mm	5.402	2.386	2.801
Sorting	3.167	2.516	2.461
Skewness	0.803	0.276	0.333
Kurtosis	0.261	0.578	0.979

**Grain Size Description** (ASTM-USCS Scale) Gravel (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	44.50
Coarse Sand	10	20.57
Medium Sand	40	18.85
Fine Sand	200	11.65
Silt/Clay	<200	4.42
<b>Total</b>		<b>100</b>

COMPANY TRC		CITY Boston		ZIP CODE 02109	
ADDRESS Two Liberty Square, 6th Floor		PROJECT MANAGER Rick Paquette		email crace@trcsolutions.com	
PROJECT NAME Atlantic Bridge Project		PHONE NUMBER 617-385-6033		FAX NUMBER	
PROJECT NUMBER 140143.0000.4903		SITE LOCATION 6 & 50 Bridge Street, Weymouth, MA			
SAMPLER SIGNATURE					
SAMPLE ID	DATE	TIME	DEPTH, FT	ANALYSIS REQUEST	
B406A-A	12/15/16	1120	8-10	NUMBER OF SAMPLES	PO# 103297
B406A-B	12/15/16	1130	10-12	SOIL PROPERTIES PACKAGE	TURNAROUND TIME 24 HOURS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/>
B406A-C	12/15/16	1135	12-14	HYDRAULIC CONDUCTIVITY PACKAGE	OTHER: _____
B406A-D	12/15/16	1145	14-16	TEQ/INRCC PROPERTIES PACKAGE	SAMPLE INTEGRITY (CHECK): INTACT _____ TEMP (F) - 53°F
B406A-E	12/15/16	1150	16-18	PORE FLUID SATURATIONS PACKAGE	PTS QUOTE NO. Q16-170R1
B404A-A	12/15/16	1255	8-10	HYDRAULIC CONDUCTIVITY PACKAGE	PTS FILE: 46705
B404A-B	12/15/16	1305	10-12	TOC/INRCC PROPERTIES PACKAGE	COMMENTS Additional analyses to be determined based on core photography.
B404A-C	12/15/16	1310	12-14	FLUID PROPERTIES PACKAGE	
B404A-D	12/15/16	1315	14-16	CAPILLARITY PACKAGE	
B404A-E	12/15/16	1320	16-18	PHOTOLOG: CORE PHOTOGRAPHY	
				FLUID PROPERTIES PACKAGE	
				PHOTOLOG: CORE PHOTOGRAPHY	
				VAPOR TRANSPORT PACKAGE	
				POSOITY: TOTAL, AIR FILLED, WATER FILLED	
				POSOITY: EFFECTIVE, ASTM D425M	
				SPECIFIC GRAVITY, ASTM D854	
				BULK DENSITY (DRY), API RP40 or ASTM D2937	
				AIR PERMEABILITY, API RP40	
				HYDRAULIC CONDUCTIVITY, EPA9100/API RP40 or D5084	
				GRAIN SIZE DISTRIBUTION, ASTM D422 or 4464M	
				TOC: WALKLEY-BLACK	
				ATTERBERG LIMITS, ASTM D4318	
				VAPOR INTRUSION PACKAGE	
				FREE PRODUCT MOBILITY PACKAGE	
1. RELINQUISHED BY <i>Robert B. Deere</i>			4. RECEIVED BY		
COMPANY TRC			COMPANY		
DATE 12/15/16	TIME 1400	DATE 12/16/16	TIME 1245	DATE	TIME





## ANALYTICAL REPORT

Lab Number:	L1610843
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Ryan Niles
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.7478
Report Date:	04/21/16

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1610843-01	B105 (14-17)	SOIL	WEYMOUTH, MA	04/12/16 09:15	04/13/16

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

### Case Narrative (continued)

#### MCP Related Narratives

##### VPH

L1610843-01: The sample has elevated detection limits due to the dilution required by the sample matrix.

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

##### EPH

L1610843-01: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the target compounds present in the sample.

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L1610843-01: The surrogate recoveries are below the acceptance criteria for chloro-octadecane (0%) and o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

The WG884842-2/-3 LCS/LCSD RPD, associated with L1610843-01, is above the acceptance criteria for C9-C18 aliphatics (31%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cristin Walker

Title: Technical Director/Representative

Date: 04/21/16

# ORGANICS

# **PETROLEUM HYDROCARBONS**

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

**SAMPLE RESULTS**

Lab ID: L1610843-01 D  
 Client ID: B105 (14-17)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 04/16/16 23:03  
 Analyst: KD  
 Percent Solids: 89%

Date Collected: 04/12/16 09:15  
 Date Received: 04/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	12.5	--	4
C9-C12 Aliphatics	ND		mg/kg	12.5	--	4
C9-C10 Aromatics	45.0		mg/kg	12.5	--	4
C5-C8 Aliphatics, Adjusted	ND		mg/kg	12.5	--	4
C9-C12 Aliphatics, Adjusted	ND		mg/kg	12.5	--	4
Benzene	ND		mg/kg	0.502	--	4
Toluene	ND		mg/kg	0.502	--	4
Ethylbenzene	ND		mg/kg	0.502	--	4
p/m-Xylene	ND		mg/kg	0.502	--	4
o-Xylene	ND		mg/kg	0.502	--	4
Methyl tert butyl ether	ND		mg/kg	0.251	--	4
Naphthalene	ND		mg/kg	1.00	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	101		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

### SAMPLE RESULTS

Lab ID: L1610843-01 D  
 Client ID: B105 (14-17)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 04/21/16 11:32  
 Analyst: SR  
 Percent Solids: 89%

Date Collected: 04/12/16 09:15  
 Date Received: 04/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/18/16 22:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 04/20/16

### Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	4570		mg/kg	148	--	20
C19-C36 Aliphatics	9110		mg/kg	148	--	20
C11-C22 Aromatics	9070		mg/kg	148	--	20
C11-C22 Aromatics, Adjusted	9070		mg/kg	148	--	20
Naphthalene	ND		mg/kg	7.41	--	20
2-Methylnaphthalene	ND		mg/kg	7.41	--	20
Acenaphthylene	ND		mg/kg	7.41	--	20
Acenaphthene	ND		mg/kg	7.41	--	20
Fluorene	ND		mg/kg	7.41	--	20
Phenanthrene	ND		mg/kg	7.41	--	20
Anthracene	ND		mg/kg	7.41	--	20
Fluoranthene	ND		mg/kg	7.41	--	20
Pyrene	ND		mg/kg	7.41	--	20
Benzo(a)anthracene	ND		mg/kg	7.41	--	20
Chrysene	ND		mg/kg	7.41	--	20
Benzo(b)fluoranthene	ND		mg/kg	7.41	--	20
Benzo(k)fluoranthene	ND		mg/kg	7.41	--	20
Benzo(a)pyrene	ND		mg/kg	7.41	--	20
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	7.41	--	20
Dibenzo(a,h)anthracene	ND		mg/kg	7.41	--	20
Benzo(ghi)perylene	ND		mg/kg	7.41	--	20

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

**SAMPLE RESULTS**

Lab ID: L1610843-01 D  
 Client ID: B105 (14-17)  
 Sample Location: WEYMOUTH, MA

Date Collected: 04/12/16 09:15  
 Date Received: 04/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	69		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100, VPH-04-1.1  
**Analytical Date:** 04/16/16 10:02  
**Analyst:** KD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG884467-3					
C5-C8 Aliphatics	ND		mg/kg	2.67	--
C9-C12 Aliphatics	ND		mg/kg	2.67	--
C9-C10 Aromatics	ND		mg/kg	2.67	--
C5-C8 Aliphatics, Adjusted	ND		mg/kg	2.67	--
C9-C12 Aliphatics, Adjusted	ND		mg/kg	2.67	--
Benzene	ND		mg/kg	0.107	--
Toluene	ND		mg/kg	0.107	--
Ethylbenzene	ND		mg/kg	0.107	--
p/m-Xylene	ND		mg/kg	0.107	--
o-Xylene	ND		mg/kg	0.107	--
Methyl tert butyl ether	ND		mg/kg	0.053	--
Naphthalene	ND		mg/kg	0.213	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	107		70-130
2,5-Dibromotoluene-FID	111		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 04/20/16 11:07  
**Analyst:** SR

**Extraction Method:** EPA 3546  
**Extraction Date:** 04/18/16 22:54  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 04/19/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG884842-1					
C9-C18 Aliphatics	ND		mg/kg	6.45	--
C19-C36 Aliphatics	ND		mg/kg	6.45	--
C11-C22 Aromatics	ND		mg/kg	6.45	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.45	--
Naphthalene	ND		mg/kg	0.322	--
2-Methylnaphthalene	ND		mg/kg	0.322	--
Acenaphthylene	ND		mg/kg	0.322	--
Acenaphthene	ND		mg/kg	0.322	--
Fluorene	ND		mg/kg	0.322	--
Phenanthrene	ND		mg/kg	0.322	--
Anthracene	ND		mg/kg	0.322	--
Fluoranthene	ND		mg/kg	0.322	--
Pyrene	ND		mg/kg	0.322	--
Benzo(a)anthracene	ND		mg/kg	0.322	--
Chrysene	ND		mg/kg	0.322	--
Benzo(b)fluoranthene	ND		mg/kg	0.322	--
Benzo(k)fluoranthene	ND		mg/kg	0.322	--
Benzo(a)pyrene	ND		mg/kg	0.322	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.322	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.322	--
Benzo(ghi)perylene	ND		mg/kg	0.322	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	66		40-140
2-Bromonaphthalene	66		40-140

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG884467-1 WG884467-2								
C5-C8 Aliphatics	86		92		70-130	6		25
C9-C12 Aliphatics	102		108		70-130	6		25
C9-C10 Aromatics	102		109		70-130	7		25
Benzene	99		106		70-130	7		25
Toluene	101		108		70-130	7		25
Ethylbenzene	104		110		70-130	6		25
p/m-Xylene	102		109		70-130	7		25
o-Xylene	103		111		70-130	7		25
Methyl tert butyl ether	105		114		70-130	8		25
Naphthalene	100		109		70-130	9		25
1,2,4-Trimethylbenzene	102		109		70-130	7		25
Pentane	77		81		70-130	6		25
2-Methylpentane	89		96		70-130	7		25
2,2,4-Trimethylpentane	94		100		70-130	7		25
n-Nonane	100		105		30-130	5		25
n-Decane	102		107		70-130	5		25
n-Butylcyclohexane	105		111		70-130	6		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG884467-1 WG884467-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
2,5-Dibromotoluene-PID	100		105		70-130
2,5-Dibromotoluene-FID	102		109		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG884842-2 WG884842-3								
C9-C18 Aliphatics	98		72		40-140	31	Q	25
C19-C36 Aliphatics	80		79		40-140	1		25
C11-C22 Aromatics	78		73		40-140	7		25
Naphthalene	58		68		40-140	16		25
2-Methylnaphthalene	62		70		40-140	12		25
Acenaphthylene	59		62		40-140	5		25
Acenaphthene	65		67		40-140	3		25
Fluorene	69		69		40-140	0		25
Phenanthrene	76		71		40-140	7		25
Anthracene	80		73		40-140	9		25
Fluoranthene	80		73		40-140	9		25
Pyrene	83		74		40-140	11		25
Benzo(a)anthracene	78		71		40-140	9		25
Chrysene	82		77		40-140	6		25
Benzo(b)fluoranthene	84		76		40-140	10		25
Benzo(k)fluoranthene	88		79		40-140	11		25
Benzo(a)pyrene	70		64		40-140	9		25
Indeno(1,2,3-cd)Pyrene	83		75		40-140	10		25
Dibenzo(a,h)anthracene	59		55		40-140	7		25
Benzo(ghi)perylene	82		74		40-140	10		25
Nonane (C9)	50		61		30-140	20		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG884842-2 WG884842-3								
Decane (C10)	58		67		40-140	14		25
Dodecane (C12)	63		70		40-140	11		25
Tetradecane (C14)	65		72		40-140	10		25
Hexadecane (C16)	69		74		40-140	7		25
Octadecane (C18)	76		77		40-140	1		25
Nonadecane (C19)	77		77		40-140	0		25
Eicosane (C20)	78		78		40-140	0		25
Docosane (C22)	78		78		40-140	0		25
Tetracosane (C24)	78		78		40-140	0		25
Hexacosane (C26)	78		78		40-140	0		25
Octacosane (C28)	78		78		40-140	0		25
Triacontane (C30)	78		78		40-140	0		25
Hexatriacontane (C36)	80		79		40-140	1		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	54		54		40-140
o-Terphenyl	85		72		40-140
2-Fluorobiphenyl	64		62		40-140
2-Bromonaphthalene	69		62		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

# **INORGANICS & MISCELLANEOUS**

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

**SAMPLE RESULTS**

**Lab ID:** L1610843-01  
**Client ID:** B105 (14-17)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 04/12/16 09:15  
**Date Received:** 04/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.0		%	0.100	NA	1	-	04/14/16 20:28	121,2540G	AS



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1610843-01A	Vial MeOH preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(28)
L1610843-01B	Vial MeOH preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(28)
L1610843-01C	Glass 250ml/8oz unpreserved	A	N/A	2.1	Y	Absent	TS(7),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

#### Data Qualifiers

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1610843  
**Report Date:** 04/21/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: Biphenyl, Caprolactam  
**EPA 8270D-SIM Isotope Dilution:** SCM: 1,4-Dioxane  
**SM 2540D:** TSS  
**SM2540G:** SCM: Percent Solids  
**EPA 1631E:** SCM: Mercury  
**EPA 7474:** SCM: Mercury  
**EPA 8081B:** NPW and SCM: Mirex, Hexachlorobenzene.  
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.  
**EPA 8270-SIM:** NPW and SCM: Alkylated PAHs.  
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.  
**Biological Tissue Matrix:** **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

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

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;  
**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**  
**EPA 332:** Perchlorate.  
**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

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

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





## ANALYTICAL REPORT

Lab Number:	L1614457
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Ryan Niles
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.7478
Report Date:	05/18/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1614457-01	B/MW 204 (6-8')	SOIL	WEYMOUTH, MA	05/10/16 12:05	05/12/16
L1614457-02	B/MW 204 (8-10')	SOIL	WEYMOUTH, MA	05/10/16 12:50	05/12/16
L1614457-03	B/MW 202 (5-7')	SOIL	WEYMOUTH, MA	05/11/16 09:15	05/12/16
L1614457-04	B/MW 202 (9-11')	SOIL	WEYMOUTH, MA	05/11/16 09:45	05/12/16
L1614457-05	B/MW 203 (5-7')	SOIL	WEYMOUTH, MA	05/11/16 14:30	05/12/16
L1614457-06	B/MW 203 (9-11')	SOIL	WEYMOUTH, MA	05/12/16 07:00	05/12/16
L1614457-07	B/MW 205 (6-8')	SOIL	WEYMOUTH, MA	05/12/16 10:00	05/12/16
L1614457-08	B/MW 205 (10-12')	SOIL	WEYMOUTH, MA	05/12/16 10:20	05/12/16
L1614457-09	B/MW 201 (6-8')	SOIL	WEYMOUTH, MA	05/12/16 12:45	05/12/16
L1614457-10	B/MW 201 (10-12')	SOIL	WEYMOUTH, MA	05/12/16 13:00	05/12/16
L1614457-11	DUP-1	SOIL	WEYMOUTH, MA	05/10/16 00:00	05/12/16

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

### Case Narrative (continued)

MCP Related Narratives

Sample Receipt

In reference to question H:

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

EPH

L1614457-10 and -11: The sample has elevated detection limits due to the dilution required by matrix interferences encountered during the concentration of the sample.

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 05/18/16

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-01  
 Client ID: B/MW 204 (6-8')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/13/16 21:45  
 Analyst: SR  
 Percent Solids: 92%

Date Collected: 05/10/16 12:05  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	7.97		mg/kg	7.24	--	1
C19-C36 Aliphatics	51.7		mg/kg	7.24	--	1
C11-C22 Aromatics	48.2		mg/kg	7.24	--	1
C11-C22 Aromatics, Adjusted	33.5		mg/kg	7.24	--	1
Naphthalene	ND		mg/kg	0.362	--	1
2-Methylnaphthalene	ND		mg/kg	0.362	--	1
Acenaphthylene	ND		mg/kg	0.362	--	1
Acenaphthene	ND		mg/kg	0.362	--	1
Fluorene	ND		mg/kg	0.362	--	1
Phenanthrene	2.03		mg/kg	0.362	--	1
Anthracene	ND		mg/kg	0.362	--	1
Fluoranthene	2.57		mg/kg	0.362	--	1
Pyrene	2.89		mg/kg	0.362	--	1
Benzo(a)anthracene	1.34		mg/kg	0.362	--	1
Chrysene	1.50		mg/kg	0.362	--	1
Benzo(b)fluoranthene	0.986		mg/kg	0.362	--	1
Benzo(k)fluoranthene	0.908		mg/kg	0.362	--	1
Benzo(a)pyrene	1.02		mg/kg	0.362	--	1
Indeno(1,2,3-cd)Pyrene	0.694		mg/kg	0.362	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.362	--	1
Benzo(ghi)perylene	0.710		mg/kg	0.362	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-01  
Client ID: B/MW 204 (6-8')  
Sample Location: WEYMOUTH, MA

Date Collected: 05/10/16 12:05  
Date Received: 05/12/16  
Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	85		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-02  
 Client ID: B/MW 204 (8-10')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/17/16 19:01  
 Analyst: DV  
 Percent Solids: 73%

Date Collected: 05/10/16 12:50  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	9.11	--	1
C19-C36 Aliphatics	ND		mg/kg	9.11	--	1
C11-C22 Aromatics	ND		mg/kg	9.11	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	9.11	--	1
Naphthalene	ND		mg/kg	0.456	--	1
2-Methylnaphthalene	ND		mg/kg	0.456	--	1
Acenaphthylene	ND		mg/kg	0.456	--	1
Acenaphthene	ND		mg/kg	0.456	--	1
Fluorene	ND		mg/kg	0.456	--	1
Phenanthrene	ND		mg/kg	0.456	--	1
Anthracene	ND		mg/kg	0.456	--	1
Fluoranthene	ND		mg/kg	0.456	--	1
Pyrene	ND		mg/kg	0.456	--	1
Benzo(a)anthracene	ND		mg/kg	0.456	--	1
Chrysene	ND		mg/kg	0.456	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.456	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.456	--	1
Benzo(a)pyrene	ND		mg/kg	0.456	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.456	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.456	--	1
Benzo(ghi)perylene	ND		mg/kg	0.456	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-02  
 Client ID: B/MW 204 (8-10')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/10/16 12:50  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	44		40-140
o-Terphenyl	50		40-140
2-Fluorobiphenyl	61		40-140
2-Bromonaphthalene	59		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-03  
 Client ID: B/MW 202 (5-7')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/18/16 10:27  
 Analyst: DV  
 Percent Solids: 83%

Date Collected: 05/11/16 09:15  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/17/16 10:56  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.70	--	1
C19-C36 Aliphatics	13.3		mg/kg	7.70	--	1
C11-C22 Aromatics	26.4		mg/kg	7.70	--	1
C11-C22 Aromatics, Adjusted	25.4		mg/kg	7.70	--	1
Naphthalene	ND		mg/kg	0.385	--	1
2-Methylnaphthalene	ND		mg/kg	0.385	--	1
Acenaphthylene	ND		mg/kg	0.385	--	1
Acenaphthene	ND		mg/kg	0.385	--	1
Fluorene	ND		mg/kg	0.385	--	1
Phenanthrene	0.542		mg/kg	0.385	--	1
Anthracene	ND		mg/kg	0.385	--	1
Fluoranthene	ND		mg/kg	0.385	--	1
Pyrene	ND		mg/kg	0.385	--	1
Benzo(a)anthracene	ND		mg/kg	0.385	--	1
Chrysene	0.416		mg/kg	0.385	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.385	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.385	--	1
Benzo(a)pyrene	ND		mg/kg	0.385	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.385	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.385	--	1
Benzo(ghi)perylene	ND		mg/kg	0.385	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-03  
 Client ID: B/MW 202 (5-7')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/11/16 09:15  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	88		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	80		40-140
2-Bromonaphthalene	81		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-04  
 Client ID: B/MW 202 (9-11')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/13/16 20:08  
 Analyst: SR  
 Percent Solids: 90%

Date Collected: 05/11/16 09:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.01	--	1
C19-C36 Aliphatics	ND		mg/kg	7.01	--	1
C11-C22 Aromatics	ND		mg/kg	7.01	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.01	--	1
Naphthalene	ND		mg/kg	0.350	--	1
2-Methylnaphthalene	ND		mg/kg	0.350	--	1
Acenaphthylene	ND		mg/kg	0.350	--	1
Acenaphthene	ND		mg/kg	0.350	--	1
Fluorene	ND		mg/kg	0.350	--	1
Phenanthrene	ND		mg/kg	0.350	--	1
Anthracene	ND		mg/kg	0.350	--	1
Fluoranthene	ND		mg/kg	0.350	--	1
Pyrene	ND		mg/kg	0.350	--	1
Benzo(a)anthracene	ND		mg/kg	0.350	--	1
Chrysene	ND		mg/kg	0.350	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(a)pyrene	ND		mg/kg	0.350	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.350	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.350	--	1
Benzo(ghi)perylene	ND		mg/kg	0.350	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-04  
 Client ID: B/MW 202 (9-11')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/11/16 09:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	96		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-05  
 Client ID: B/MW 203 (5-7')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/13/16 22:49  
 Analyst: SR  
 Percent Solids: 89%

Date Collected: 05/11/16 14:30  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.29	--	1
C19-C36 Aliphatics	50.1		mg/kg	7.29	--	1
C11-C22 Aromatics	27.8		mg/kg	7.29	--	1
C11-C22 Aromatics, Adjusted	27.8		mg/kg	7.29	--	1
Naphthalene	ND		mg/kg	0.364	--	1
2-Methylnaphthalene	ND		mg/kg	0.364	--	1
Acenaphthylene	ND		mg/kg	0.364	--	1
Acenaphthene	ND		mg/kg	0.364	--	1
Fluorene	ND		mg/kg	0.364	--	1
Phenanthrene	ND		mg/kg	0.364	--	1
Anthracene	ND		mg/kg	0.364	--	1
Fluoranthene	ND		mg/kg	0.364	--	1
Pyrene	ND		mg/kg	0.364	--	1
Benzo(a)anthracene	ND		mg/kg	0.364	--	1
Chrysene	ND		mg/kg	0.364	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.364	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.364	--	1
Benzo(a)pyrene	ND		mg/kg	0.364	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.364	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.364	--	1
Benzo(ghi)perylene	ND		mg/kg	0.364	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-05  
 Client ID: B/MW 203 (5-7')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/11/16 14:30  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	92		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	78		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-06  
 Client ID: B/MW 203 (9-11')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/13/16 22:17  
 Analyst: SR  
 Percent Solids: 84%

Date Collected: 05/12/16 07:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.72	--	1
C19-C36 Aliphatics	12.3		mg/kg	7.72	--	1
C11-C22 Aromatics	19.7		mg/kg	7.72	--	1
C11-C22 Aromatics, Adjusted	18.2		mg/kg	7.72	--	1
Naphthalene	ND		mg/kg	0.386	--	1
2-Methylnaphthalene	ND		mg/kg	0.386	--	1
Acenaphthylene	ND		mg/kg	0.386	--	1
Acenaphthene	ND		mg/kg	0.386	--	1
Fluorene	ND		mg/kg	0.386	--	1
Phenanthrene	0.662		mg/kg	0.386	--	1
Anthracene	ND		mg/kg	0.386	--	1
Fluoranthene	ND		mg/kg	0.386	--	1
Pyrene	0.431		mg/kg	0.386	--	1
Benzo(a)anthracene	ND		mg/kg	0.386	--	1
Chrysene	0.442		mg/kg	0.386	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.386	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.386	--	1
Benzo(a)pyrene	ND		mg/kg	0.386	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.386	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.386	--	1
Benzo(ghi)perylene	ND		mg/kg	0.386	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-06  
 Client ID: B/MW 203 (9-11')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/12/16 07:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	100		40-140
o-Terphenyl	80		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-07  
 Client ID: B/MW 205 (6-8')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/13/16 20:41  
 Analyst: SR  
 Percent Solids: 97%

Date Collected: 05/12/16 10:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	6.50	--	1
C19-C36 Aliphatics	8.44		mg/kg	6.50	--	1
C11-C22 Aromatics	ND		mg/kg	6.50	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.50	--	1
Naphthalene	ND		mg/kg	0.325	--	1
2-Methylnaphthalene	ND		mg/kg	0.325	--	1
Acenaphthylene	ND		mg/kg	0.325	--	1
Acenaphthene	ND		mg/kg	0.325	--	1
Fluorene	ND		mg/kg	0.325	--	1
Phenanthrene	ND		mg/kg	0.325	--	1
Anthracene	ND		mg/kg	0.325	--	1
Fluoranthene	ND		mg/kg	0.325	--	1
Pyrene	ND		mg/kg	0.325	--	1
Benzo(a)anthracene	ND		mg/kg	0.325	--	1
Chrysene	ND		mg/kg	0.325	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.325	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.325	--	1
Benzo(a)pyrene	ND		mg/kg	0.325	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.325	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.325	--	1
Benzo(ghi)perylene	ND		mg/kg	0.325	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-07  
 Client ID: B/MW 205 (6-8')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/12/16 10:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	90		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-08  
 Client ID: B/MW 205 (10-12')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/13/16 19:04  
 Analyst: SR  
 Percent Solids: 67%

Date Collected: 05/12/16 10:20  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	9.55	--	1
C19-C36 Aliphatics	10.1		mg/kg	9.55	--	1
C11-C22 Aromatics	ND		mg/kg	9.55	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	9.55	--	1
Naphthalene	ND		mg/kg	0.478	--	1
2-Methylnaphthalene	ND		mg/kg	0.478	--	1
Acenaphthylene	ND		mg/kg	0.478	--	1
Acenaphthene	ND		mg/kg	0.478	--	1
Fluorene	ND		mg/kg	0.478	--	1
Phenanthrene	ND		mg/kg	0.478	--	1
Anthracene	ND		mg/kg	0.478	--	1
Fluoranthene	ND		mg/kg	0.478	--	1
Pyrene	ND		mg/kg	0.478	--	1
Benzo(a)anthracene	ND		mg/kg	0.478	--	1
Chrysene	ND		mg/kg	0.478	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.478	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.478	--	1
Benzo(a)pyrene	ND		mg/kg	0.478	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.478	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.478	--	1
Benzo(ghi)perylene	ND		mg/kg	0.478	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-08  
 Client ID: B/MW 205 (10-12')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/12/16 10:20  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	85		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-09  
 Client ID: B/MW 201 (6-8')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/14/16 00:07  
 Analyst: SR  
 Percent Solids: 90%

Date Collected: 05/12/16 12:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	11.4		mg/kg	7.01	--	1
C19-C36 Aliphatics	73.0		mg/kg	7.01	--	1
C11-C22 Aromatics	38.2		mg/kg	7.01	--	1
C11-C22 Aromatics, Adjusted	32.8		mg/kg	7.01	--	1
Naphthalene	ND		mg/kg	0.350	--	1
2-Methylnaphthalene	ND		mg/kg	0.350	--	1
Acenaphthylene	ND		mg/kg	0.350	--	1
Acenaphthene	ND		mg/kg	0.350	--	1
Fluorene	ND		mg/kg	0.350	--	1
Phenanthrene	0.385		mg/kg	0.350	--	1
Anthracene	0.592		mg/kg	0.350	--	1
Fluoranthene	1.58		mg/kg	0.350	--	1
Pyrene	1.29		mg/kg	0.350	--	1
Benzo(a)anthracene	0.460		mg/kg	0.350	--	1
Chrysene	0.735		mg/kg	0.350	--	1
Benzo(b)fluoranthene	0.358		mg/kg	0.350	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(a)pyrene	ND		mg/kg	0.350	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.350	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.350	--	1
Benzo(ghi)perylene	ND		mg/kg	0.350	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-09  
 Client ID: B/MW 201 (6-8')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/12/16 12:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	80		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	67		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

### SAMPLE RESULTS

Lab ID: L1614457-10  
 Client ID: B/MW 201 (10-12')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/14/16 00:39  
 Analyst: SR  
 Percent Solids: 80%

Date Collected: 05/12/16 13:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

### Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	677		mg/kg	15.9	--	2
C19-C36 Aliphatics	3260		mg/kg	15.9	--	2
C11-C22 Aromatics	2330		mg/kg	15.9	--	2
C11-C22 Aromatics, Adjusted	2330		mg/kg	15.9	--	2
Naphthalene	ND		mg/kg	0.794	--	2
2-Methylnaphthalene	ND		mg/kg	0.794	--	2
Acenaphthylene	ND		mg/kg	0.794	--	2
Acenaphthene	ND		mg/kg	0.794	--	2
Fluorene	ND		mg/kg	0.794	--	2
Phenanthrene	ND		mg/kg	0.794	--	2
Anthracene	ND		mg/kg	0.794	--	2
Fluoranthene	ND		mg/kg	0.794	--	2
Pyrene	ND		mg/kg	0.794	--	2
Benzo(a)anthracene	ND		mg/kg	0.794	--	2
Chrysene	ND		mg/kg	0.794	--	2
Benzo(b)fluoranthene	ND		mg/kg	0.794	--	2
Benzo(k)fluoranthene	ND		mg/kg	0.794	--	2
Benzo(a)pyrene	ND		mg/kg	0.794	--	2
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.794	--	2
Dibenzo(a,h)anthracene	ND		mg/kg	0.794	--	2
Benzo(ghi)perylene	ND		mg/kg	0.794	--	2

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-10  
 Client ID: B/MW 201 (10-12')  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/12/16 13:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	86		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	81		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-11  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 05/14/16 01:11  
 Analyst: SR  
 Percent Solids: 78%

Date Collected: 05/10/16 00:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/16 00:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 05/13/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	818		mg/kg	24.3	--	3
C19-C36 Aliphatics	4310		mg/kg	24.3	--	3
C11-C22 Aromatics	3420		mg/kg	24.3	--	3
C11-C22 Aromatics, Adjusted	3420		mg/kg	24.3	--	3
Naphthalene	ND		mg/kg	1.22	--	3
2-Methylnaphthalene	ND		mg/kg	1.22	--	3
Acenaphthylene	ND		mg/kg	1.22	--	3
Acenaphthene	ND		mg/kg	1.22	--	3
Fluorene	ND		mg/kg	1.22	--	3
Phenanthrene	ND		mg/kg	1.22	--	3
Anthracene	ND		mg/kg	1.22	--	3
Fluoranthene	ND		mg/kg	1.22	--	3
Pyrene	ND		mg/kg	1.22	--	3
Benzo(a)anthracene	ND		mg/kg	1.22	--	3
Chrysene	ND		mg/kg	1.22	--	3
Benzo(b)fluoranthene	ND		mg/kg	1.22	--	3
Benzo(k)fluoranthene	ND		mg/kg	1.22	--	3
Benzo(a)pyrene	ND		mg/kg	1.22	--	3
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	1.22	--	3
Dibenzo(a,h)anthracene	ND		mg/kg	1.22	--	3
Benzo(ghi)perylene	ND		mg/kg	1.22	--	3

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-11  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA

Date Collected: 05/10/16 00:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	138		40-140
o-Terphenyl	109		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	70		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 05/17/16 15:22  
**Analyst:** DV

**Extraction Method:** EPA 3546  
**Extraction Date:** 05/13/16 00:24  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 05/13/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-02,04-11 Batch: WG893488-1					
C9-C18 Aliphatics	ND		mg/kg	6.39	--
C19-C36 Aliphatics	ND		mg/kg	6.39	--
C11-C22 Aromatics	ND		mg/kg	6.39	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.39	--
Naphthalene	ND		mg/kg	0.320	--
2-Methylnaphthalene	ND		mg/kg	0.320	--
Acenaphthylene	ND		mg/kg	0.320	--
Acenaphthene	ND		mg/kg	0.320	--
Fluorene	ND		mg/kg	0.320	--
Phenanthrene	ND		mg/kg	0.320	--
Anthracene	ND		mg/kg	0.320	--
Fluoranthene	ND		mg/kg	0.320	--
Pyrene	ND		mg/kg	0.320	--
Benzo(a)anthracene	ND		mg/kg	0.320	--
Chrysene	ND		mg/kg	0.320	--
Benzo(b)fluoranthene	ND		mg/kg	0.320	--
Benzo(k)fluoranthene	ND		mg/kg	0.320	--
Benzo(a)pyrene	ND		mg/kg	0.320	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.320	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.320	--
Benzo(ghi)perylene	ND		mg/kg	0.320	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 05/17/16 15:22  
**Analyst:** DV

**Extraction Method:** EPA 3546  
**Extraction Date:** 05/13/16 00:24  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 05/13/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-02,04-11 Batch: WG893488-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	45		40-140
o-Terphenyl	58		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	62		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 05/18/16 08:52  
**Analyst:** DV

**Extraction Method:** EPA 3546  
**Extraction Date:** 05/17/16 10:56  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 05/17/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 03 Batch: WG894809-1					
C9-C18 Aliphatics	ND		mg/kg	6.63	--
C19-C36 Aliphatics	ND		mg/kg	6.63	--
C11-C22 Aromatics	ND		mg/kg	6.63	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.63	--
Naphthalene	ND		mg/kg	0.332	--
2-Methylnaphthalene	ND		mg/kg	0.332	--
Acenaphthylene	ND		mg/kg	0.332	--
Acenaphthene	ND		mg/kg	0.332	--
Fluorene	ND		mg/kg	0.332	--
Phenanthrene	ND		mg/kg	0.332	--
Anthracene	ND		mg/kg	0.332	--
Fluoranthene	ND		mg/kg	0.332	--
Pyrene	ND		mg/kg	0.332	--
Benzo(a)anthracene	ND		mg/kg	0.332	--
Chrysene	ND		mg/kg	0.332	--
Benzo(b)fluoranthene	ND		mg/kg	0.332	--
Benzo(k)fluoranthene	ND		mg/kg	0.332	--
Benzo(a)pyrene	ND		mg/kg	0.332	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.332	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.332	--
Benzo(ghi)perylene	ND		mg/kg	0.332	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	100		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	76		40-140

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02,04-11 Batch: WG893488-2 WG893488-3								
C9-C18 Aliphatics	73		73		40-140	0		25
C19-C36 Aliphatics	88		92		40-140	4		25
C11-C22 Aromatics	57		64		40-140	12		25
Naphthalene	52		54		40-140	4		25
2-Methylnaphthalene	54		58		40-140	7		25
Acenaphthylene	47		51		40-140	8		25
Acenaphthene	54		58		40-140	7		25
Fluorene	56		61		40-140	9		25
Phenanthrene	57		63		40-140	10		25
Anthracene	58		64		40-140	10		25
Fluoranthene	59		66		40-140	11		25
Pyrene	59		66		40-140	11		25
Benzo(a)anthracene	56		63		40-140	12		25
Chrysene	59		66		40-140	11		25
Benzo(b)fluoranthene	58		66		40-140	13		25
Benzo(k)fluoranthene	56		65		40-140	15		25
Benzo(a)pyrene	48		55		40-140	14		25
Indeno(1,2,3-cd)Pyrene	54		64		40-140	17		25
Dibenzo(a,h)anthracene	52		61		40-140	16		25
Benzo(ghi)perylene	52		62		40-140	18		25
Nonane (C9)	56		51		30-140	9		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02,04-11 Batch: WG893488-2 WG893488-3								
Decane (C10)	65		63		40-140	3		25
Dodecane (C12)	70		70		40-140	0		25
Tetradecane (C14)	74		75		40-140	1		25
Hexadecane (C16)	79		81		40-140	3		25
Octadecane (C18)	86		89		40-140	3		25
Nonadecane (C19)	88		90		40-140	2		25
Eicosane (C20)	88		92		40-140	4		25
Docosane (C22)	89		93		40-140	4		25
Tetracosane (C24)	88		92		40-140	4		25
Hexacosane (C26)	87		91		40-140	4		25
Octacosane (C28)	86		90		40-140	5		25
Triacontane (C30)	84		88		40-140	5		25
Hexatriacontane (C36)	73		86		40-140	16		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	85		87		40-140
o-Terphenyl	63		70		40-140
2-Fluorobiphenyl	65		69		40-140
2-Bromonaphthalene	65		69		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 03 Batch: WG894809-2 WG894809-3								
C9-C18 Aliphatics	76		72		40-140	5		25
C19-C36 Aliphatics	86		90		40-140	5		25
C11-C22 Aromatics	74		74		40-140	0		25
Naphthalene	62		58		40-140	7		25
2-Methylnaphthalene	67		63		40-140	6		25
Acenaphthylene	62		59		40-140	5		25
Acenaphthene	67		65		40-140	3		25
Fluorene	70		70		40-140	0		25
Phenanthrene	72		74		40-140	3		25
Anthracene	73		75		40-140	3		25
Fluoranthene	74		78		40-140	5		25
Pyrene	75		78		40-140	4		25
Benzo(a)anthracene	71		75		40-140	5		25
Chrysene	74		78		40-140	5		25
Benzo(b)fluoranthene	76		81		40-140	6		25
Benzo(k)fluoranthene	75		79		40-140	5		25
Benzo(a)pyrene	63		67		40-140	6		25
Indeno(1,2,3-cd)Pyrene	73		79		40-140	8		25
Dibenzo(a,h)anthracene	69		74		40-140	7		25
Benzo(ghi)perylene	72		77		40-140	7		25
Nonane (C9)	56		52		30-140	7		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 03 Batch: WG894809-2 WG894809-3								
Decane (C10)	64		61		40-140	5		25
Dodecane (C12)	72		67		40-140	7		25
Tetradecane (C14)	77		72		40-140	7		25
Hexadecane (C16)	82		81		40-140	1		25
Octadecane (C18)	86		90		40-140	5		25
Nonadecane (C19)	88		92		40-140	4		25
Eicosane (C20)	88		92		40-140	4		25
Docosane (C22)	86		91		40-140	6		25
Tetracosane (C24)	84		89		40-140	6		25
Hexacosane (C26)	83		87		40-140	5		25
Octacosane (C28)	81		86		40-140	6		25
Triacontane (C30)	80		84		40-140	5		25
Hexatriacontane (C36)	79		84		40-140	6		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	86		91		40-140
o-Terphenyl	84		85		40-140
2-Fluorobiphenyl	73		76		40-140
2-Bromonaphthalene	74		77		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## METALS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-01  
 Client ID: B/MW 204 (6-8')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 92%

Date Collected: 05/10/16 12:05  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.1	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Arsenic, Total	30		mg/kg	0.42	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Barium, Total	51		mg/kg	0.42	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Beryllium, Total	0.66		mg/kg	0.21	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.42	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Chromium, Total	15		mg/kg	0.42	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Lead, Total	32		mg/kg	2.1	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Mercury, Total	0.218		mg/kg	0.078	--	1	05/13/16 16:25	05/13/16 18:48	EPA 7471B	97,7471B	EA
Nickel, Total	19		mg/kg	1.0	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.1	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.42	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.1	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Vanadium, Total	82		mg/kg	0.42	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB
Zinc, Total	62		mg/kg	2.1	--	1	05/13/16 13:04	05/15/16 12:30	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-02  
 Client ID: B/MW 204 (8-10')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 73%

Date Collected: 05/10/16 12:50  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	3.8		mg/kg	2.7	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Arsenic, Total	90		mg/kg	0.55	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Barium, Total	94		mg/kg	0.55	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Beryllium, Total	2.6		mg/kg	0.27	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.55	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Chromium, Total	24		mg/kg	0.55	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Lead, Total	16		mg/kg	2.7	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Mercury, Total	0.142		mg/kg	0.110	--	1	05/13/16 16:25	05/13/16 18:50	EPA 7471B	97,7471B	EA
Nickel, Total	15		mg/kg	1.4	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.7	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.55	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.7	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Vanadium, Total	71		mg/kg	0.55	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB
Zinc, Total	17		mg/kg	2.7	--	1	05/13/16 13:04	05/15/16 12:35	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-03  
 Client ID: B/MW 202 (5-7')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 83%

Date Collected: 05/11/16 09:15  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 TCLP/SPLP Ext. Date: 05/13/16 12:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>SPLP Metals by EPA 1312 - Mansfield Lab</b>											
Antimony, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Arsenic, SPLP	0.005		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Barium, SPLP	0.014		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Beryllium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Cadmium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Chromium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Lead, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Mercury, SPLP	ND		mg/l	0.00100	--	1	05/16/16 09:35	05/16/16 11:54	EPA 7470A	1,7470A	BV
Nickel, SPLP	ND		mg/l	0.025	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Selenium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Silver, SPLP	ND		mg/l	0.007	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Thallium, SPLP	ND		mg/l	0.020	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Vanadium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM
Zinc, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 10:08	EPA 3005A	1,6010C	AM



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-03  
 Client ID: B/MW 202 (5-7')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 83%

Date Collected: 05/11/16 09:15  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Arsenic, Total	4.4		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Barium, Total	20		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Beryllium, Total	0.27		mg/kg	0.23	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Chromium, Total	11		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Lead, Total	14		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Mercury, Total	ND		mg/kg	0.081	--	1	05/13/16 16:25	05/13/16 18:52	EPA 7471B	97,7471B	EA
Nickel, Total	9.8		mg/kg	1.2	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Vanadium, Total	20		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB
Zinc, Total	46		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:40	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-04  
 Client ID: B/MW 202 (9-11')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 90%

Date Collected: 05/11/16 09:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 TCLP/SPLP Ext. Date: 05/13/16 12:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>SPLP Metals by EPA 1312 - Mansfield Lab</b>											
Antimony, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Arsenic, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Barium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Beryllium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Cadmium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Chromium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Lead, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Mercury, SPLP	ND		mg/l	0.00100	--	1	05/16/16 09:35	05/16/16 12:03	EPA 7470A	1,7470A	BV
Nickel, SPLP	ND		mg/l	0.025	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Selenium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Silver, SPLP	ND		mg/l	0.007	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Thallium, SPLP	ND		mg/l	0.020	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Vanadium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM
Zinc, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 10:12	EPA 3005A	1,6010C	AM



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-04  
 Client ID: B/MW 202 (9-11')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 90%

Date Collected: 05/11/16 09:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Arsenic, Total	2.5		mg/kg	0.43	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Barium, Total	6.5		mg/kg	0.43	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Beryllium, Total	0.23		mg/kg	0.22	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.43	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Chromium, Total	6.8		mg/kg	0.43	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Lead, Total	2.3		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Mercury, Total	ND		mg/kg	0.077	--	1	05/13/16 16:25	05/13/16 18:54	EPA 7471B	97,7471B	EA
Nickel, Total	8.3		mg/kg	1.1	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.43	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Vanadium, Total	12		mg/kg	0.43	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB
Zinc, Total	29		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:44	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-05  
 Client ID: B/MW 203 (5-7')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 89%

Date Collected: 05/11/16 14:30  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 TCLP/SPLP Ext. Date: 05/13/16 12:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>SPLP Metals by EPA 1312 - Mansfield Lab</b>											
Antimony, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Arsenic, SPLP	0.009		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Barium, SPLP	0.013		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Beryllium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Cadmium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Chromium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Lead, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Mercury, SPLP	ND		mg/l	0.00100	--	1	05/16/16 09:35	05/16/16 12:05	EPA 7470A	1,7470A	BV
Nickel, SPLP	ND		mg/l	0.025	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Selenium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Silver, SPLP	ND		mg/l	0.007	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Thallium, SPLP	ND		mg/l	0.020	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Vanadium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM
Zinc, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 10:16	EPA 3005A	1,6010C	AM



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-05  
 Client ID: B/MW 203 (5-7')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 89%

Date Collected: 05/11/16 14:30  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Arsenic, Total	46		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Barium, Total	39		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Beryllium, Total	0.60		mg/kg	0.22	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Chromium, Total	12		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Lead, Total	4.4		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Mercury, Total	0.252		mg/kg	0.079	--	1	05/13/16 16:25	05/13/16 18:59	EPA 7471B	97,7471B	EA
Nickel, Total	16		mg/kg	1.1	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Vanadium, Total	24		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB
Zinc, Total	13		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 12:48	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-06  
 Client ID: B/MW 203 (9-11')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 84%

Date Collected: 05/12/16 07:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 TCLP/SPLP Ext. Date: 05/13/16 12:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>SPLP Metals by EPA 1312 - Mansfield Lab</b>											
Antimony, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Arsenic, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Barium, SPLP	0.013		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Beryllium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Cadmium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Chromium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Lead, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Mercury, SPLP	ND		mg/l	0.00100	--	1	05/16/16 09:35	05/16/16 12:07	EPA 7470A	1,7470A	BV
Nickel, SPLP	ND		mg/l	0.025	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Selenium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Silver, SPLP	ND		mg/l	0.007	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Thallium, SPLP	ND		mg/l	0.020	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Vanadium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM
Zinc, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 11:01	EPA 3005A	1,6010C	AM



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-06  
 Client ID: B/MW 203 (9-11')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 84%

Date Collected: 05/12/16 07:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Arsenic, Total	19		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Barium, Total	20		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Beryllium, Total	1.3		mg/kg	0.23	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Chromium, Total	8.0		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Lead, Total	16		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Mercury, Total	ND		mg/kg	0.082	--	1	05/13/16 16:25	05/13/16 19:01	EPA 7471B	97,7471B	EA
Nickel, Total	17		mg/kg	1.2	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Vanadium, Total	21		mg/kg	0.46	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB
Zinc, Total	15		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 12:53	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-07  
 Client ID: B/MW 205 (6-8')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 97%

Date Collected: 05/12/16 10:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Arsenic, Total	3.4		mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Barium, Total	4.5		mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Beryllium, Total	ND		mg/kg	0.20	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Chromium, Total	2.5		mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Lead, Total	2.1		mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Mercury, Total	ND		mg/kg	0.068	--	1	05/13/16 16:25	05/13/16 19:03	EPA 7471B	97,7471B	EA
Nickel, Total	1.4		mg/kg	1.0	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Vanadium, Total	8.0		mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB
Zinc, Total	6.5		mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 13:07	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-08  
**Client ID:** B/MW 205 (10-12')  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil  
**Percent Solids:** 67%

**Date Collected:** 05/12/16 10:20  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	4.2		mg/kg	2.9	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Arsenic, Total	130		mg/kg	0.58	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Barium, Total	81		mg/kg	0.58	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Beryllium, Total	4.2		mg/kg	0.29	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.58	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Chromium, Total	19		mg/kg	0.58	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Lead, Total	10		mg/kg	2.9	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Mercury, Total	0.285		mg/kg	0.098	--	1	05/13/16 16:25	05/13/16 19:05	EPA 7471B	97,7471B	EA
Nickel, Total	17		mg/kg	1.4	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.9	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.58	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.9	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Vanadium, Total	75		mg/kg	0.58	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB
Zinc, Total	19		mg/kg	2.9	--	1	05/13/16 13:04	05/15/16 13:11	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-09  
 Client ID: B/MW 201 (6-8')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 90%

Date Collected: 05/12/16 12:45  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Arsenic, Total	24		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Barium, Total	34		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Beryllium, Total	0.74		mg/kg	0.22	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Chromium, Total	9.6		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Lead, Total	33		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Mercury, Total	0.191		mg/kg	0.078	--	1	05/13/16 16:25	05/13/16 19:06	EPA 7471B	97,7471B	EA
Nickel, Total	11		mg/kg	1.1	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Vanadium, Total	24		mg/kg	0.44	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB
Zinc, Total	110		mg/kg	2.2	--	1	05/13/16 13:04	05/15/16 13:16	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-10  
 Client ID: B/MW 201 (10-12')  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 80%

Date Collected: 05/12/16 13:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Arsenic, Total	16		mg/kg	0.47	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Barium, Total	11		mg/kg	0.47	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Beryllium, Total	0.55		mg/kg	0.23	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.47	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Chromium, Total	3.9		mg/kg	0.47	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Lead, Total	9.9		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Mercury, Total	ND		mg/kg	0.096	--	1	05/13/16 16:25	05/13/16 19:08	EPA 7471B	97,7471B	EA
Nickel, Total	13		mg/kg	1.2	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.47	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Vanadium, Total	12		mg/kg	0.47	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB
Zinc, Total	6.6		mg/kg	2.3	--	1	05/13/16 13:04	05/15/16 13:20	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-11  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 78%

Date Collected: 05/10/16 00:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified  
 TCLP/SPLP Ext. Date: 05/13/16 12:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>SPLP Metals by EPA 1312 - Mansfield Lab</b>											
Antimony, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Arsenic, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Barium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Beryllium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Cadmium, SPLP	ND		mg/l	0.005	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Chromium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Lead, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Mercury, SPLP	ND		mg/l	0.00100	--	1	05/16/16 09:35	05/16/16 12:09	EPA 7470A	1,7470A	BV
Nickel, SPLP	ND		mg/l	0.025	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Selenium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Silver, SPLP	ND		mg/l	0.007	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Thallium, SPLP	ND		mg/l	0.020	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Vanadium, SPLP	ND		mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM
Zinc, SPLP	ND		mg/l	0.050	--	1	05/16/16 09:40	05/17/16 09:52	EPA 3005A	1,6010C	AM



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

Lab ID: L1614457-11  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Percent Solids: 78%

Date Collected: 05/10/16 00:00  
 Date Received: 05/12/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>MCP Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/kg	2.5	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Arsenic, Total	20		mg/kg	0.50	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Barium, Total	29		mg/kg	0.50	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Beryllium, Total	0.78		mg/kg	0.25	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Cadmium, Total	ND		mg/kg	0.50	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Chromium, Total	7.1		mg/kg	0.50	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Lead, Total	14		mg/kg	2.5	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Mercury, Total	ND		mg/kg	0.103	--	1	05/13/16 16:25	05/13/16 19:10	EPA 7471B	97,7471B	EA
Nickel, Total	11		mg/kg	1.2	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Selenium, Total	ND		mg/kg	2.5	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Silver, Total	ND		mg/kg	0.50	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Thallium, Total	ND		mg/kg	2.5	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Vanadium, Total	16		mg/kg	0.50	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB
Zinc, Total	15		mg/kg	2.5	--	1	05/13/16 13:04	05/15/16 13:25	EPA 3050B	97,6010C	FB



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

### Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-11 Batch: WG893714-1									
Antimony, Total	ND	mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Arsenic, Total	ND	mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Barium, Total	ND	mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Beryllium, Total	ND	mg/kg	0.20	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Cadmium, Total	ND	mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Chromium, Total	ND	mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Lead, Total	ND	mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Nickel, Total	ND	mg/kg	1.0	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Selenium, Total	ND	mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Silver, Total	ND	mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Thallium, Total	ND	mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Vanadium, Total	ND	mg/kg	0.40	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB
Zinc, Total	ND	mg/kg	2.0	--	1	05/13/16 13:04	05/15/16 12:17	97,6010C	FB

#### Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-11 Batch: WG893806-1									
Mercury, Total	ND	mg/kg	0.083	--	1	05/13/16 16:25	05/13/16 18:38	97,7471B	EA

#### Prep Information

Digestion Method: EPA 7471B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
SPLP Metals by EPA 1312 - Mansfield Lab for sample(s): 03-06,11 Batch: WG894307-1									
Mercury, SPLP	ND	mg/l	0.00100	--	1	05/16/16 09:35	05/16/16 11:51	1,7470A	BV

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

## Method Blank Analysis Batch Quality Control

### Prep Information

Digestion Method: EPA 7470A  
TCLP/SPLP Extraction Date: 05/13/16 12:39

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
SPLP Metals by EPA 1312 - Mansfield Lab for sample(s): 03-06,11 Batch: WG894320-1									
Antimony, SPLP	ND	mg/l	0.050	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Arsenic, SPLP	ND	mg/l	0.005	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Barium, SPLP	ND	mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Beryllium, SPLP	ND	mg/l	0.005	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Cadmium, SPLP	ND	mg/l	0.005	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Chromium, SPLP	ND	mg/l	0.01	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Lead, SPLP	ND	mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Nickel, SPLP	ND	mg/l	0.025	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Selenium, SPLP	ND	mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Silver, SPLP	ND	mg/l	0.007	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Thallium, SPLP	ND	mg/l	0.020	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Vanadium, SPLP	ND	mg/l	0.010	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM
Zinc, SPLP	ND	mg/l	0.050	--	1	05/16/16 09:40	05/17/16 09:44	1,6010C	AM

### Prep Information

Digestion Method: EPA 3005A  
TCLP/SPLP Extraction Date: 05/13/16 12:39

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Total Metals - Westborough Lab Associated sample(s): 01-11 Batch: WG893714-2 WG893714-3 SRM Lot Number: D088-540								
Antimony, Total	178		168		1-208	6		30
Arsenic, Total	88		88		79-121	0		30
Barium, Total	88		88		83-117	0		30
Beryllium, Total	93		95		83-117	2		30
Cadmium, Total	91		93		83-117	2		30
Chromium, Total	91		92		80-120	1		30
Lead, Total	82		86		81-117	5		30
Nickel, Total	90		93		83-117	3		30
Selenium, Total	91		91		78-122	0		30
Silver, Total	91		93		75-124	2		30
Thallium, Total	90		95		80-120	5		30
Vanadium, Total	90		92		78-122	2		30
Zinc, Total	92		92		82-118	0		30
MCP Total Metals - Westborough Lab Associated sample(s): 01-11 Batch: WG893806-2 WG893806-3 SRM Lot Number: D088-540								
Mercury, Total	101		98		72-128	3		30
SPLP Metals by EPA 1312 - Mansfield Lab Associated sample(s): 03-06,11 Batch: WG894307-2								
Mercury, SPLP	108		-		80-120	-		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
SPLP Metals by EPA 1312 - Mansfield Lab Associated sample(s): 03-06,11 Batch: WG894320-2					
Antimony, SPLP	98	-	80-120	-	
Arsenic, SPLP	102	-	80-120	-	
Barium, SPLP	94	-	80-120	-	
Beryllium, SPLP	95	-	80-120	-	
Cadmium, SPLP	100	-	80-120	-	
Chromium, SPLP	100	-	80-120	-	
Lead, SPLP	100	-	80-120	-	
Nickel, SPLP	101	-	80-120	-	
Selenium, SPLP	102	-	80-120	-	
Silver, SPLP	100	-	80-120	-	
Thallium, SPLP	99	-	80-120	-	
Vanadium, SPLP	106	-	80-120	-	
Zinc, SPLP	95	-	80-120	-	

### Matrix Spike Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
SPLP Metals by EPA 1312 - Mansfield Lab Associated sample(s): 03-06,11 QC Batch ID: WG894307-4 QC Sample: L1614457-03 Client ID: B/MW 202 (5-7')												
Mercury, SPLP	ND	0.025	0.0240	96	-	-	-	-	80-120	-	-	20
SPLP Metals by EPA 1312 - Mansfield Lab Associated sample(s): 03-06,11 QC Batch ID: WG894320-4 QC Sample: L1614457-11 Client ID: DUP-1												
Antimony, SPLP	ND	0.5	0.510	102	-	-	-	-	75-125	-	-	20
Arsenic, SPLP	ND	0.12	0.128	107	-	-	-	-	75-125	-	-	20
Barium, SPLP	ND	2	1.90	95	-	-	-	-	75-125	-	-	20
Beryllium, SPLP	ND	0.05	0.048	95	-	-	-	-	75-125	-	-	20
Cadmium, SPLP	ND	0.051	0.053	103	-	-	-	-	75-125	-	-	20
Chromium, SPLP	ND	0.2	0.20	100	-	-	-	-	75-125	-	-	20
Lead, SPLP	ND	0.51	0.538	105	-	-	-	-	75-125	-	-	20
Nickel, SPLP	ND	0.5	0.526	105	-	-	-	-	75-125	-	-	20
Selenium, SPLP	ND	0.12	0.128	107	-	-	-	-	75-125	-	-	20
Silver, SPLP	ND	0.05	0.050	100	-	-	-	-	75-125	-	-	20
Thallium, SPLP	ND	0.12	0.123	102	-	-	-	-	75-125	-	-	20
Vanadium, SPLP	ND	0.5	0.537	107	-	-	-	-	75-125	-	-	20
Zinc, SPLP	ND	0.5	0.487	97	-	-	-	-	75-125	-	-	20

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
SPLP Metals by EPA 1312 - Mansfield Lab Associated sample(s): 03-06,11 QC Batch ID: WG894307-3 QC Sample: L1614457-03 Client ID: B/MW 202 (5-7')						
Mercury, SPLP	ND	ND	mg/l	NC		20
SPLP Metals by EPA 1312 - Mansfield Lab Associated sample(s): 03-06,11 QC Batch ID: WG894320-3 QC Sample: L1614457-11 Client ID: DUP-1						
Antimony, SPLP	ND	ND	mg/l	NC		20
Arsenic, SPLP	ND	ND	mg/l	NC		20
Barium, SPLP	ND	ND	mg/l	NC		20
Beryllium, SPLP	ND	ND	mg/l	NC		20
Cadmium, SPLP	ND	ND	mg/l	NC		20
Chromium, SPLP	ND	ND	mg/l	NC		20
Lead, SPLP	ND	ND	mg/l	NC		20
Nickel, SPLP	ND	ND	mg/l	NC		20
Selenium, SPLP	ND	ND	mg/l	NC		20
Silver, SPLP	ND	ND	mg/l	NC		20
Thallium, SPLP	ND	ND	mg/l	NC		20
Vanadium, SPLP	ND	ND	mg/l	NC		20
Zinc, SPLP	ND	ND	mg/l	NC		20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-01  
**Client ID:** B/MW 204 (6-8)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/10/16 12:05  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.6		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-02  
**Client ID:** B/MW 204 (8-10')  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/10/16 12:50  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.5		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-03  
**Client ID:** B/MW 202 (5-7)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/11/16 09:15  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.0		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-04  
**Client ID:** B/MW 202 (9-11')  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/11/16 09:45  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.2		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-05  
**Client ID:** B/MW 203 (5-7)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/11/16 14:30  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.0		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-06  
**Client ID:** B/MW 203 (9-11')  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/12/16 07:00  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.8		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-07  
**Client ID:** B/MW 205 (6-8)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/12/16 10:00  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.7		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-08  
**Client ID:** B/MW 205 (10-12')  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/12/16 10:20  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	66.8		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-09  
**Client ID:** B/MW 201 (6-8)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/12/16 12:45  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.7		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-10  
**Client ID:** B/MW 201 (10-12')  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/12/16 13:00  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.1		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**SAMPLE RESULTS**

**Lab ID:** L1614457-11  
**Client ID:** DUP-1  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 05/10/16 00:00  
**Date Received:** 05/12/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.3		%	0.100	NA	1	-	05/13/16 11:01	121,2540G	RI



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG893669-1 QC Sample: L1614457-01 Client ID: B/MW 204 (6-8')						
Solids, Total	91.6	92.1	%	1		20

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1614457-01A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),EPH-DELUX-10(14)
L1614457-01B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-02A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),HOLD-METAL(180),EPH-DELUX-10(14)
L1614457-02B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-03A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),EPH-DELUX-10(14)
L1614457-03B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1614457-03X	Plastic 120ml HNO3 preserved Ext	A	<2	3.9	Y	Absent	AG-PI(180),SE-PI(180),SB-PI(180),ZN-PI(180),NI-PI(180),TL-PI(180),BA-PI(180),BE-PI(180),CR-PI(180),PB-PI(180),V-PI(180),AS-PI(180),CD-PI(180),HG-P(28)
L1614457-03X9	Tumble Vessel	A	N/A	3.9	Y	Absent	-
L1614457-04A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),EPH-DELUX-10(14)
L1614457-04B	Metals Only - Glass 60mL/2oz unpr	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-04X	Plastic 120ml HNO3 preserved Ext	A	<2	3.9	Y	Absent	AG-PI(180),SE-PI(180),SB-PI(180),ZN-PI(180),NI-PI(180),TL-PI(180),BA-PI(180),BE-PI(180),CR-PI(180),PB-PI(180),V-PI(180),AS-PI(180),CD-PI(180),HG-P(28)
L1614457-04X9	Tumble Vessel	A	N/A	3.9	Y	Absent	-
L1614457-05A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),EPH-DELUX-10(14)
L1614457-05B	Metals Only - Glass 60mL/2oz unpr	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-05X	Plastic 120ml HNO3 preserved Ext	A	<2	3.9	Y	Absent	AG-PI(180),SE-PI(180),SB-PI(180),ZN-PI(180),NI-PI(180),TL-PI(180),BA-PI(180),BE-PI(180),CR-PI(180),PB-PI(180),V-PI(180),AS-PI(180),CD-PI(180),HG-P(28)
L1614457-05X9	Tumble Vessel	A	N/A	3.9	Y	Absent	-
L1614457-06A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1614457-06B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-06X	Plastic 120ml HNO3 preserved Ext	A	<2	3.9	Y	Absent	AG-PI(180),SE-PI(180),SB-PI(180),ZN-PI(180),NI-PI(180),TL-PI(180),BA-PI(180),BE-PI(180),CR-PI(180),PB-PI(180),V-PI(180),AS-PI(180),CD-PI(180),HG-P(28)
L1614457-06X9	Tumble Vessel	A	N/A	3.9	Y	Absent	-
L1614457-07A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),HOLD-METAL(180),EPH-DELUX-10(14)
L1614457-07B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-08A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),HOLD-METAL(180),EPH-DELUX-10(14)
L1614457-08B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-09A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),HOLD-METAL(180),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1614457-09B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-10A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),HOLD-METAL(180),EPH-DELUX-10(14)
L1614457-10B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-11A	Glass 250ml/8oz unpreserved	A	N/A	3.9	Y	Absent	TS(7),EPH-DELUX-10(14)
L1614457-11B	Metals Only - Glass 60mL/2oz unp	A	N/A	3.9	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1614457-11X	Plastic 120ml HNO3 preserved Ext	A	<2	3.9	Y	Absent	AG-PI(180),SE-PI(180),SB-PI(180),ZN-PI(180),NI-PI(180),TL-PI(180),BA-PI(180),BE-PI(180),CR-PI(180),PB-PI(180),V-PI(180),AS-PI(180),CD-PI(180),HG-P(28)
L1614457-11X9	Tumble Vessel	A	N/A	3.9	Y	Absent	-

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

#### Data Qualifiers

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.7478

**Lab Number:** L1614457  
**Report Date:** 05/18/16

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: Biphenyl, Caprolactam  
**EPA 8270D-SIM Isotope Dilution:** SCM: 1,4-Dioxane  
**SM 2540D:** TSS  
**SM2540G:** SCM: Percent Solids  
**EPA 1631E:** SCM: Mercury  
**EPA 7474:** SCM: Mercury  
**EPA 8081B:** NPW and SCM: Mirex, Hexachlorobenzene.  
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.  
**EPA 8270-SIM:** NPW and SCM: Alkylated PAHs.  
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.  
**Biological Tissue Matrix:** **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

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

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;  
**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**  
**EPA 332:** Perchlorate.  
**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

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

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



# CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 5/12/16

ALPHA Job #: U6/4457

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

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

## Project Information

Project Name: Weymouth, C/S  
Project Location: Weymouth, MA  
Project #: 140143.0000.7478  
Project Manager: Rich Paquette  
ALPHA Quote #:

## Report Information - Data Deliverables

ADEX  EMAIL

## Billing Information

Same as Client info PO #: C140143

## Client Information

Client: TRC  
Address: 2 Liberty Square, 6th Floor Boston, MA 02109  
Phone: 617-350-3444  
Email: rnieles@trcsolutions.com

## Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due: 72-Hour

## Regulatory Requirements & Project Information Requirements

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

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRAS <input type="checkbox"/> RCRAB <input type="checkbox"/> RCP 13	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	PCB <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	Total Metals	T3, SPLP Metals	EPH <del>to</del> delux	SAMPLE INFO	TOTAL # BOTTLES
												Filtration	
												<input type="checkbox"/> Field	
												<input type="checkbox"/> Lab to do	
												Preservation	
												<input type="checkbox"/> Lab to do	
												Sample Comments	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
14457-01	B/MW 204 (6-8')	5/10/16	12:05	S	w/m/cnr
02	B/MW 204 (8-10')	5/10/16	2:50		w/m/cnr
03	B/MW 202 (5-7')	5/11/16	09:15		
04	B/MW 202 (9-11')	5/11/16	09:45		
05	B/MW 203 (5-7')	5/12/16	14:30		
06	B/MW 203 (9-11')	5/12/16	07:00		
07	B/MW 205 (6-8')	5/12/16	10:00		
08	B/MW 205 (10-12')	5/12/16	10:20		
09	B/MW 201 (6-8')	5/12/16	12:45		
10	B/MW 201 (10-12')	5/12/16	13:00		

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

**Preservative**  
A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type

Preservative

A A A A  
A A A A

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Lauren V. Drape</u>	<u>5/12/16 14:23</u>	<u>[Signature]</u>	<u>5/12/16 14:23</u>
<u>[Signature]</u>	<u>5-12-16 15:45</u>	<u>[Signature]</u>	<u>5/12/16 14:23</u>

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
FORM NO. 01-01 (rev. 12-Mar-2012)



# CHAIN OF CUSTODY

PAGE 1 OF 2

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

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

### Project Information

Project Name: Weymouth, C/S  
Project Location: Weymouth, MA  
Project #: 140143.0000.7478  
Project Manager: Rich Paquette  
ALPHA Quote #:

Date Rec'd in Lab: 5/12/16

ALPHA Job #: U6/4457

### Report Information - Data Deliverables

ADEX  EMAIL

### Billing Information

Same as Client info PO #: C140143

### Client Information

Client: TRC  
Address: 2 Liberty Square, 6th Floor  
Boston, MA 02109  
Phone: 617-350-3444  
Email: rnieles@trcsolutions.com

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due: 72-Hour

### Regulatory Requirements & Project Information Requirements

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

Additional Project Information:

ANALYSIS		SAMPLE INFO	
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 824 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	Filtration	<input type="checkbox"/> Field <input type="checkbox"/> Lab to do
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA8 <input type="checkbox"/> RCRA8	Preservation	<input type="checkbox"/> Lab to do
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only		
TPH: <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		
Total Metals			
TS, SPLP Metals			
EPH-10			
TOTAL # BOTTLES			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
14457-01	B/MW 204 (6-8')	5/10/16	12:05	S	w/m/cm
02	B/MW 204 (8-10')	5/10/16	2:50		w/m/cm
03	B/MW 202 (5-7')	5/11/16	0915		
04	B/MW 202 (9-11')	5/11/16	0915		
05	B/MW 203 (5-7')	5/12/16	1430		
06	B/MW 203 (9-11')	5/12/16	0700		
07	B/MW 205 (6-8')	5/12/16	1000		
08	B/MW 205 (10-12')	5/12/16	1020		
09	B/MW 201 (6-8')	5/12/16	1245		
10	B/MW 201 (10-12')	5/12/16	1300		

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

**Preservative**  
A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type	A	A	A	A
Preservative	A	A	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Lauren V. Drape</u>	<u>5/12/16 1423</u>	<u>John AAL</u>	<u>5/12/16 1423</u>
<u>John AAL</u>	<u>5-12-16 15195</u>	<u>Kelly M</u>	<u>5/12/16 1423</u>

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
FORM NO. 01-01 (rev. 12-Mar-2012)





## ANALYTICAL REPORT

Lab Number:	L1632948
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Ryan Niles
Phone:	(617) 385-6033
Project Name:	6 BRIDGE ST.
Project Number:	140143.00012.00005
Report Date:	10/20/16

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

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1632948-01	B-310-12.5	SOIL	WEYMOUTH, MA	10/12/16 15:25	10/13/16
L1632948-02	B-308-12.0	SOIL	WEYMOUTH, MA	10/12/16 08:45	10/13/16
L1632948-03	B-317-11.5	SOIL	WEYMOUTH, MA	10/12/16 09:30	10/13/16
L1632948-04	B-314-12.5	SOIL	WEYMOUTH, MA	10/12/16 13:35	10/13/16
L1632948-05	B-315-12.5	SOIL	WEYMOUTH, MA	10/12/16 14:00	10/13/16
L1632948-06	B-317-13.0	SOIL	WEYMOUTH, MA	10/12/16 09:40	10/13/16
L1632948-07	TB-01	SOIL	WEYMOUTH, MA	10/10/16 00:00	10/13/16

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

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**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

### Case Narrative (continued)

#### MCP Related Narratives

##### VPH

L1632948-03 and -06 were outside the recommended 1:1 methanol:soil ratio, due to the amount of soil provided in the sample vials.

In reference to question G:

L1632948-06: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample. One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L1632948-06: The surrogate recoveries are outside the acceptance criteria for 2,5-dibromotoluene-fid (133%); however, the sample was not re-analyzed due to coelution with obvious interferences. A copy of the chromatogram is included as an attachment to this report. The results are not considered to be biased.

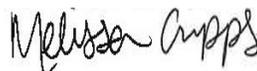
##### EPH

In reference to question G:

L1632948-06: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample. One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 10/20/16

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-01  
 Client ID: B-310-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 10/18/16 21:13  
 Analyst: JM  
 Percent Solids: 66%

Date Collected: 10/12/16 15:25  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	5.59	--	1
C9-C12 Aliphatics	ND		mg/kg	5.59	--	1
C9-C10 Aromatics	ND		mg/kg	5.59	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	5.59	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	5.59	--	1
Benzene	ND		mg/kg	0.224	--	1
Toluene	ND		mg/kg	0.224	--	1
Ethylbenzene	ND		mg/kg	0.224	--	1
p/m-Xylene	ND		mg/kg	0.224	--	1
o-Xylene	ND		mg/kg	0.224	--	1
Methyl tert butyl ether	ND		mg/kg	0.112	--	1
Naphthalene	ND		mg/kg	0.447	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	104		70-130
2,5-Dibromotoluene-FID	112		70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-01  
 Client ID: B-310-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 10/20/16 01:41  
 Analyst: SR  
 Percent Solids: 66%

Date Collected: 10/12/16 15:25  
 Date Received: 10/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 10/17/16 17:20  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 10/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	11.2		mg/kg	9.94	--	1
C19-C36 Aliphatics	132		mg/kg	9.94	--	1
C11-C22 Aromatics	97.0		mg/kg	9.94	--	1
C11-C22 Aromatics, Adjusted	97.0		mg/kg	9.94	--	1
Naphthalene	ND		mg/kg	0.497	--	1
2-Methylnaphthalene	ND		mg/kg	0.497	--	1
Acenaphthylene	ND		mg/kg	0.497	--	1
Acenaphthene	ND		mg/kg	0.497	--	1
Fluorene	ND		mg/kg	0.497	--	1
Phenanthrene	ND		mg/kg	0.497	--	1
Anthracene	ND		mg/kg	0.497	--	1
Fluoranthene	ND		mg/kg	0.497	--	1
Pyrene	ND		mg/kg	0.497	--	1
Benzo(a)anthracene	ND		mg/kg	0.497	--	1
Chrysene	ND		mg/kg	0.497	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.497	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.497	--	1
Benzo(a)pyrene	ND		mg/kg	0.497	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.497	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.497	--	1
Benzo(ghi)perylene	ND		mg/kg	0.497	--	1

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-01  
 Client ID: B-310-12.5  
 Sample Location: WEYMOUTH, MA

Date Collected: 10/12/16 15:25  
 Date Received: 10/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	58		40-140
2-Fluorobiphenyl	55		40-140
2-Bromonaphthalene	54		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-02  
 Client ID: B-308-12.0  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 10/18/16 21:52  
 Analyst: JM  
 Percent Solids: 87%

Date Collected: 10/12/16 08:45  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	3.10	--	1
C9-C12 Aliphatics	ND		mg/kg	3.10	--	1
C9-C10 Aromatics	ND		mg/kg	3.10	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	3.10	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	3.10	--	1
Benzene	ND		mg/kg	0.124	--	1
Toluene	ND		mg/kg	0.124	--	1
Ethylbenzene	ND		mg/kg	0.124	--	1
p/m-Xylene	ND		mg/kg	0.124	--	1
o-Xylene	ND		mg/kg	0.124	--	1
Methyl tert butyl ether	ND		mg/kg	0.062	--	1
Naphthalene	ND		mg/kg	0.248	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	100		70-130
2,5-Dibromotoluene-FID	104		70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-02  
 Client ID: B-308-12.0  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 10/20/16 01:09  
 Analyst: SR  
 Percent Solids: 87%

Date Collected: 10/12/16 08:45  
 Date Received: 10/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 10/17/16 17:20  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 10/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.34	--	1
C19-C36 Aliphatics	ND		mg/kg	7.34	--	1
C11-C22 Aromatics	ND		mg/kg	7.34	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.34	--	1
Naphthalene	ND		mg/kg	0.367	--	1
2-Methylnaphthalene	ND		mg/kg	0.367	--	1
Acenaphthylene	ND		mg/kg	0.367	--	1
Acenaphthene	ND		mg/kg	0.367	--	1
Fluorene	ND		mg/kg	0.367	--	1
Phenanthrene	ND		mg/kg	0.367	--	1
Anthracene	ND		mg/kg	0.367	--	1
Fluoranthene	ND		mg/kg	0.367	--	1
Pyrene	ND		mg/kg	0.367	--	1
Benzo(a)anthracene	ND		mg/kg	0.367	--	1
Chrysene	ND		mg/kg	0.367	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.367	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.367	--	1
Benzo(a)pyrene	ND		mg/kg	0.367	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.367	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.367	--	1
Benzo(ghi)perylene	ND		mg/kg	0.367	--	1

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-02  
 Client ID: B-308-12.0  
 Sample Location: WEYMOUTH, MA

Date Collected: 10/12/16 08:45  
 Date Received: 10/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	65		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	64		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-03  
 Client ID: B-317-11.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100,VPH-04-1.1  
 Analytical Date: 10/18/16 22:30  
 Analyst: JM  
 Percent Solids: 59%

Date Collected: 10/12/16 09:30  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 3.3:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	17.0	--	1
C9-C12 Aliphatics	ND		mg/kg	17.0	--	1
C9-C10 Aromatics	ND		mg/kg	17.0	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	17.0	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	17.0	--	1
Benzene	ND		mg/kg	0.679	--	1
Toluene	ND		mg/kg	0.679	--	1
Ethylbenzene	ND		mg/kg	0.679	--	1
p/m-Xylene	ND		mg/kg	0.679	--	1
o-Xylene	ND		mg/kg	0.679	--	1
Methyl tert butyl ether	ND		mg/kg	0.339	--	1
Naphthalene	ND		mg/kg	1.36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	97		70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-03  
 Client ID: B-317-11.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 10/20/16 00:37  
 Analyst: SR  
 Percent Solids: 59%

Date Collected: 10/12/16 09:30  
 Date Received: 10/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 10/17/16 17:20  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 10/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	11.0	--	1
C19-C36 Aliphatics	ND		mg/kg	11.0	--	1
C11-C22 Aromatics	ND		mg/kg	11.0	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	11.0	--	1
Naphthalene	ND		mg/kg	0.551	--	1
2-Methylnaphthalene	ND		mg/kg	0.551	--	1
Acenaphthylene	ND		mg/kg	0.551	--	1
Acenaphthene	ND		mg/kg	0.551	--	1
Fluorene	ND		mg/kg	0.551	--	1
Phenanthrene	ND		mg/kg	0.551	--	1
Anthracene	ND		mg/kg	0.551	--	1
Fluoranthene	ND		mg/kg	0.551	--	1
Pyrene	ND		mg/kg	0.551	--	1
Benzo(a)anthracene	ND		mg/kg	0.551	--	1
Chrysene	ND		mg/kg	0.551	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.551	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.551	--	1
Benzo(a)pyrene	ND		mg/kg	0.551	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.551	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.551	--	1
Benzo(ghi)perylene	ND		mg/kg	0.551	--	1

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-03  
 Client ID: B-317-11.5  
 Sample Location: WEYMOUTH, MA

Date Collected: 10/12/16 09:30  
 Date Received: 10/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	62		40-140
o-Terphenyl	61		40-140
2-Fluorobiphenyl	63		40-140
2-Bromonaphthalene	62		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-04  
 Client ID: B-314-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 10/18/16 23:09  
 Analyst: JM  
 Percent Solids: 93%

Date Collected: 10/12/16 13:35  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	2.54	--	1
C9-C12 Aliphatics	ND		mg/kg	2.54	--	1
C9-C10 Aromatics	ND		mg/kg	2.54	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	2.54	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	2.54	--	1
Benzene	ND		mg/kg	0.102	--	1
Toluene	ND		mg/kg	0.102	--	1
Ethylbenzene	ND		mg/kg	0.102	--	1
p/m-Xylene	ND		mg/kg	0.102	--	1
o-Xylene	ND		mg/kg	0.102	--	1
Methyl tert butyl ether	ND		mg/kg	0.051	--	1
Naphthalene	ND		mg/kg	0.204	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	101		70-130
2,5-Dibromotoluene-FID	106		70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-04  
 Client ID: B-314-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 10/20/16 00:06  
 Analyst: SR  
 Percent Solids: 93%

Date Collected: 10/12/16 13:35  
 Date Received: 10/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 10/17/16 17:20  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 10/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.01	--	1
C19-C36 Aliphatics	ND		mg/kg	7.01	--	1
C11-C22 Aromatics	ND		mg/kg	7.01	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.01	--	1
Naphthalene	ND		mg/kg	0.350	--	1
2-Methylnaphthalene	ND		mg/kg	0.350	--	1
Acenaphthylene	ND		mg/kg	0.350	--	1
Acenaphthene	ND		mg/kg	0.350	--	1
Fluorene	ND		mg/kg	0.350	--	1
Phenanthrene	ND		mg/kg	0.350	--	1
Anthracene	ND		mg/kg	0.350	--	1
Fluoranthene	ND		mg/kg	0.350	--	1
Pyrene	ND		mg/kg	0.350	--	1
Benzo(a)anthracene	ND		mg/kg	0.350	--	1
Chrysene	ND		mg/kg	0.350	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(a)pyrene	ND		mg/kg	0.350	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.350	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.350	--	1
Benzo(ghi)perylene	ND		mg/kg	0.350	--	1

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-04  
 Client ID: B-314-12.5  
 Sample Location: WEYMOUTH, MA

Date Collected: 10/12/16 13:35  
 Date Received: 10/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	58		40-140
2-Bromonaphthalene	57		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-05  
 Client ID: B-315-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 10/18/16 23:47  
 Analyst: JM  
 Percent Solids: 70%

Date Collected: 10/12/16 14:00  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	5.57	--	1
C9-C12 Aliphatics	ND		mg/kg	5.57	--	1
C9-C10 Aromatics	ND		mg/kg	5.57	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	5.57	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	5.57	--	1
Benzene	ND		mg/kg	0.223	--	1
Toluene	ND		mg/kg	0.223	--	1
Ethylbenzene	ND		mg/kg	0.223	--	1
p/m-Xylene	ND		mg/kg	0.223	--	1
o-Xylene	ND		mg/kg	0.223	--	1
Methyl tert butyl ether	ND		mg/kg	0.111	--	1
Naphthalene	ND		mg/kg	0.446	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	107		70-130
2,5-Dibromotoluene-FID	114		70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-05  
 Client ID: B-315-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 10/19/16 23:34  
 Analyst: SR  
 Percent Solids: 70%

Date Collected: 10/12/16 14:00  
 Date Received: 10/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 10/17/16 17:20  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 10/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	9.36	--	1
C19-C36 Aliphatics	ND		mg/kg	9.36	--	1
C11-C22 Aromatics	ND		mg/kg	9.36	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	9.36	--	1
Naphthalene	ND		mg/kg	0.468	--	1
2-Methylnaphthalene	ND		mg/kg	0.468	--	1
Acenaphthylene	ND		mg/kg	0.468	--	1
Acenaphthene	ND		mg/kg	0.468	--	1
Fluorene	ND		mg/kg	0.468	--	1
Phenanthrene	ND		mg/kg	0.468	--	1
Anthracene	ND		mg/kg	0.468	--	1
Fluoranthene	ND		mg/kg	0.468	--	1
Pyrene	ND		mg/kg	0.468	--	1
Benzo(a)anthracene	ND		mg/kg	0.468	--	1
Chrysene	ND		mg/kg	0.468	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.468	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.468	--	1
Benzo(a)pyrene	ND		mg/kg	0.468	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.468	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.468	--	1
Benzo(ghi)perylene	ND		mg/kg	0.468	--	1

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-05  
 Client ID: B-315-12.5  
 Sample Location: WEYMOUTH, MA

Date Collected: 10/12/16 14:00  
 Date Received: 10/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	67		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	60		40-140
2-Bromonaphthalene	60		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-06 D  
 Client ID: B-317-13.0  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100,VPH-04-1.1  
 Analytical Date: 10/19/16 04:16  
 Analyst: JM  
 Percent Solids: 85%

Date Collected: 10/12/16 09:40  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1.9:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	12.4	--	1
C9-C12 Aliphatics	303		mg/kg	12.4	--	1
C9-C10 Aromatics	140		mg/kg	12.4	--	2
C5-C8 Aliphatics, Adjusted	ND		mg/kg	12.4	--	2
C9-C12 Aliphatics, Adjusted	163		mg/kg	12.4	--	2
Benzene	ND		mg/kg	0.498	--	2
Toluene	ND		mg/kg	0.498	--	2
Ethylbenzene	ND		mg/kg	0.498	--	2
p/m-Xylene	ND		mg/kg	0.498	--	2
o-Xylene	ND		mg/kg	0.498	--	2
Methyl tert butyl ether	ND		mg/kg	0.249	--	2
Naphthalene	ND		mg/kg	0.995	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	133	Q	70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-06 D  
 Client ID: B-317-13.0  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 10/20/16 02:45  
 Analyst: SR  
 Percent Solids: 85%

Date Collected: 10/12/16 09:40  
 Date Received: 10/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 10/17/16 17:20  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 10/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	3740		mg/kg	77.3	--	10
C19-C36 Aliphatics	6140		mg/kg	77.3	--	10
C11-C22 Aromatics	5970		mg/kg	77.3	--	10
C11-C22 Aromatics, Adjusted	5970		mg/kg	77.3	--	10
Naphthalene	ND		mg/kg	3.86	--	10
2-Methylnaphthalene	ND		mg/kg	3.86	--	10
Acenaphthylene	ND		mg/kg	3.86	--	10
Acenaphthene	ND		mg/kg	3.86	--	10
Fluorene	ND		mg/kg	3.86	--	10
Phenanthrene	ND		mg/kg	3.86	--	10
Anthracene	ND		mg/kg	3.86	--	10
Fluoranthene	ND		mg/kg	3.86	--	10
Pyrene	ND		mg/kg	3.86	--	10
Benzo(a)anthracene	ND		mg/kg	3.86	--	10
Chrysene	ND		mg/kg	3.86	--	10
Benzo(b)fluoranthene	ND		mg/kg	3.86	--	10
Benzo(k)fluoranthene	ND		mg/kg	3.86	--	10
Benzo(a)pyrene	ND		mg/kg	3.86	--	10
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	3.86	--	10
Dibenzo(a,h)anthracene	ND		mg/kg	3.86	--	10
Benzo(ghi)perylene	ND		mg/kg	3.86	--	10

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-06 D  
 Client ID: B-317-13.0  
 Sample Location: WEYMOUTH, MA

Date Collected: 10/12/16 09:40  
 Date Received: 10/13/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	92		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

Lab ID: L1632948-07  
 Client ID: TB-01  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 10/18/16 16:06  
 Analyst: JM  
 Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 10/10/16 00:00  
 Date Received: 10/13/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	2.67	--	1
C9-C12 Aliphatics	ND		mg/kg	2.67	--	1
C9-C10 Aromatics	ND		mg/kg	2.67	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	2.67	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	2.67	--	1
Benzene	ND		mg/kg	0.107	--	1
Toluene	ND		mg/kg	0.107	--	1
Ethylbenzene	ND		mg/kg	0.107	--	1
p/m-Xylene	ND		mg/kg	0.107	--	1
o-Xylene	ND		mg/kg	0.107	--	1
Methyl tert butyl ether	ND		mg/kg	0.053	--	1
Naphthalene	ND		mg/kg	0.213	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 10/18/16 10:16  
**Analyst:** SR

**Extraction Method:** EPA 3546  
**Extraction Date:** 10/17/16 17:20  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 10/18/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-06 Batch: WG942887-1					
C9-C18 Aliphatics	ND		mg/kg	6.27	--
C19-C36 Aliphatics	ND		mg/kg	6.27	--
C11-C22 Aromatics	ND		mg/kg	6.27	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.27	--
Naphthalene	ND		mg/kg	0.313	--
2-Methylnaphthalene	ND		mg/kg	0.313	--
Acenaphthylene	ND		mg/kg	0.313	--
Acenaphthene	ND		mg/kg	0.313	--
Fluorene	ND		mg/kg	0.313	--
Phenanthrene	ND		mg/kg	0.313	--
Anthracene	ND		mg/kg	0.313	--
Fluoranthene	ND		mg/kg	0.313	--
Pyrene	ND		mg/kg	0.313	--
Benzo(a)anthracene	ND		mg/kg	0.313	--
Chrysene	ND		mg/kg	0.313	--
Benzo(b)fluoranthene	ND		mg/kg	0.313	--
Benzo(k)fluoranthene	ND		mg/kg	0.313	--
Benzo(a)pyrene	ND		mg/kg	0.313	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.313	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.313	--
Benzo(ghi)perylene	ND		mg/kg	0.313	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	91		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	78		40-140

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100, VPH-04-1.1  
**Analytical Date:** 10/18/16 08:52  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-07 Batch: WG943239-3					
C5-C8 Aliphatics	ND		mg/kg	2.67	--
C9-C12 Aliphatics	ND		mg/kg	2.67	--
C9-C10 Aromatics	ND		mg/kg	2.67	--
C5-C8 Aliphatics, Adjusted	ND		mg/kg	2.67	--
C9-C12 Aliphatics, Adjusted	ND		mg/kg	2.67	--
Benzene	ND		mg/kg	0.107	--
Toluene	ND		mg/kg	0.107	--
Ethylbenzene	ND		mg/kg	0.107	--
p/m-Xylene	ND		mg/kg	0.107	--
o-Xylene	ND		mg/kg	0.107	--
Methyl tert butyl ether	ND		mg/kg	0.053	--
Naphthalene	ND		mg/kg	0.213	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	93		70-130
2,5-Dibromotoluene-FID	98		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-06 Batch: WG942887-2 WG942887-3								
C9-C18 Aliphatics	71		77		40-140	8		25
C19-C36 Aliphatics	83		94		40-140	12		25
C11-C22 Aromatics	90		94		40-140	4		25
Naphthalene	71		74		40-140	4		25
2-Methylnaphthalene	73		76		40-140	4		25
Acenaphthylene	78		82		40-140	5		25
Acenaphthene	82		86		40-140	5		25
Fluorene	86		90		40-140	5		25
Phenanthrene	89		96		40-140	8		25
Anthracene	89		96		40-140	8		25
Fluoranthene	94		100		40-140	6		25
Pyrene	96		104		40-140	8		25
Benzo(a)anthracene	92		96		40-140	4		25
Chrysene	95		98		40-140	3		25
Benzo(b)fluoranthene	99		101		40-140	2		25
Benzo(k)fluoranthene	95		96		40-140	1		25
Benzo(a)pyrene	87		90		40-140	3		25
Indeno(1,2,3-cd)Pyrene	95		95		40-140	0		25
Dibenzo(a,h)anthracene	82		82		40-140	0		25
Benzo(ghi)perylene	91		89		40-140	2		25
Nonane (C9)	61		63		30-140	3		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-06 Batch: WG942887-2 WG942887-3								
Decane (C10)	66		69		40-140	4		25
Dodecane (C12)	68		70		40-140	3		25
Tetradecane (C14)	70		74		40-140	6		25
Hexadecane (C16)	73		80		40-140	9		25
Octadecane (C18)	77		87		40-140	12		25
Nonadecane (C19)	78		89		40-140	13		25
Eicosane (C20)	80		90		40-140	12		25
Docosane (C22)	81		92		40-140	13		25
Tetracosane (C24)	82		93		40-140	13		25
Hexacosane (C26)	82		93		40-140	13		25
Octacosane (C28)	83		94		40-140	12		25
Triacontane (C30)	82		93		40-140	13		25
Hexatriacontane (C36)	81		90		40-140	11		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	78		90		40-140
o-Terphenyl	97		97		40-140
2-Fluorobiphenyl	94		94		40-140
2-Bromonaphthalene	99		98		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG943239-1 WG943239-2								
C5-C8 Aliphatics	94		94		70-130	1		25
C9-C12 Aliphatics	113		111		70-130	2		25
C9-C10 Aromatics	99		97		70-130	2		25
Benzene	99		97		70-130	2		25
Toluene	101		99		70-130	2		25
Ethylbenzene	101		99		70-130	2		25
p/m-Xylene	102		99		70-130	3		25
o-Xylene	102		100		70-130	2		25
Methyl tert butyl ether	99		96		70-130	3		25
Naphthalene	99		96		70-130	3		25
1,2,4-Trimethylbenzene	99		97		70-130	2		25
Pentane	80		79		70-130	1		25
2-Methylpentane	92		91		70-130	1		25
2,2,4-Trimethylpentane	98		98		70-130	0		25
n-Nonane	106		105		30-130	1		25
n-Decane	113		111		70-130	2		25
n-Butylcyclohexane	107		104		70-130	3		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG943239-1 WG943239-2								

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
2,5-Dibromotoluene-PID	102		98		70-130
2,5-Dibromotoluene-FID	107		104		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

**Lab ID:** L1632948-01  
**Client ID:** B-310-12.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 10/12/16 15:25  
**Date Received:** 10/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	66.2		%	0.100	NA	1	-	10/15/16 08:22	121,2540G	VB



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

**Lab ID:** L1632948-02  
**Client ID:** B-308-12.0  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 10/12/16 08:45  
**Date Received:** 10/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	10/15/16 08:22	121,2540G	VB



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

**Lab ID:** L1632948-03  
**Client ID:** B-317-11.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 10/12/16 09:30  
**Date Received:** 10/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	58.5		%	0.100	NA	1	-	10/15/16 08:22	121,2540G	VB



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

**Lab ID:** L1632948-04  
**Client ID:** B-314-12.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 10/12/16 13:35  
**Date Received:** 10/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.9		%	0.100	NA	1	-	10/15/16 08:22	121,2540G	VB



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

**Lab ID:** L1632948-05  
**Client ID:** B-315-12.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 10/12/16 14:00  
**Date Received:** 10/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.0		%	0.100	NA	1	-	10/15/16 08:22	121,2540G	VB



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

**SAMPLE RESULTS**

**Lab ID:** L1632948-06  
**Client ID:** B-317-13.0  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 10/12/16 09:40  
**Date Received:** 10/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	10/15/16 08:22	121,2540G	VB



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1632948-01A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-01B	Plastic 2oz unpreserved for TS	A	N/A	4.1	Y	Absent	TS(7)
L1632948-01C	Glass 60mL/2oz unpreserved	A	N/A	4.1	Y	Absent	EPH-DELUX-10(14)
L1632948-02A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-02B	Plastic 2oz unpreserved for TS	A	N/A	4.1	Y	Absent	TS(7)
L1632948-02C	Glass 60mL/2oz unpreserved	A	N/A	4.1	Y	Absent	EPH-DELUX-10(14)
L1632948-03A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-03B	Plastic 2oz unpreserved for TS	A	N/A	4.1	Y	Absent	TS(7)
L1632948-03C	Glass 60mL/2oz unpreserved	A	N/A	4.1	Y	Absent	EPH-DELUX-10(14)
L1632948-04A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-04B	Plastic 2oz unpreserved for TS	A	N/A	4.1	Y	Absent	TS(7)
L1632948-04C	Glass 60mL/2oz unpreserved	A	N/A	4.1	Y	Absent	EPH-DELUX-10(14)
L1632948-05A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-05B	Plastic 2oz unpreserved for TS	A	N/A	4.1	Y	Absent	TS(7)
L1632948-05C	Glass 60mL/2oz unpreserved	A	N/A	4.1	Y	Absent	EPH-DELUX-10(14)
L1632948-06A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-06B	Plastic 2oz unpreserved for TS	A	N/A	4.1	Y	Absent	TS(7)
L1632948-06C	Glass 60mL/2oz unpreserved	A	N/A	4.1	Y	Absent	EPH-DELUX-10(14)
L1632948-07A	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)
L1632948-07B	Vial MeOH preserved	A	N/A	4.1	Y	Absent	VPH-DELUX-10(28)

\*Values in parentheses indicate holding time in days

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** 6 BRIDGE ST.  
**Project Number:** 140143.00012.00005

**Lab Number:** L1632948  
**Report Date:** 10/20/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1** Hg.

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE L OF 1

Date Rec'd in Lab: 10/13/16

ALPHA Job #: 11638948

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

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

### Project Information

Project Name: 6 Bridge St  
Project Location: Weymouth, MA  
Project #: 140143 000120005  
Project Manager: Ryan Miles  
ALPHA Quote #:

### Report Information - Data Deliverables

ADEx  EMAIL

### Billing Information

Same as Client info PO #:

### Client Information

Client: TRC  
Address: 650 Southfolk St  
Lowell, MA 01854  
Phone: 978 970 5600  
Email: miles@trcsolutions.com

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due:

### Regulatory Requirements & Project Information Requirements

Yes  No MA MCP Analytical Methods  Yes  No CT RCP Analytical Methods  
 Yes  No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
 Yes  No GW1 Standards (Info Required for Metals & EPH with Targets)  
 Yes  No NPDES RGP  
 Other State /Fed Program Criteria RCS-1

Additional Project Information:

ANALYSIS		SAMPLE INFO	
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 824 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	Filtration	<input type="checkbox"/> Field <input type="checkbox"/> Lab to do
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8	Preservation	<input type="checkbox"/> Lab to do
EPH: <input checked="" type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input checked="" type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only		
<input type="checkbox"/> PCB <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		
Sample Comments		TOTAL # BOTTLES	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
<u>37948-01</u>	<u>B-310-12.5</u>	<u>10/12/16</u>	<u>1525</u>	<u>Soil</u>	<u>CF</u>
<u>02</u>	<u>B-308-12.0</u>	<u>10/13/16</u>	<u>0845</u>	<u>Soil</u>	<u>CF</u>
<u>03</u>	<u>B-317-11.5</u>	<u>10/13/16</u>	<u>0930</u>	<u>Soil</u>	<u>CF</u>
<u>04</u>	<u>B-314-12.5</u>	<u>10/13/16</u>	<u>1335</u>	<u>Soil</u>	<u>CF</u>
<u>05</u>	<u>B-315-12.5</u>	<u>10/13/16</u>	<u>1400</u>	<u>Soil</u>	<u>CF</u>
<u>06</u>	<u>B-317-13.0</u>	<u>10/13/16</u>	<u>0940</u>	<u>Soil</u>	<u>CF</u>
<u>07</u>	<u>TB-01</u>	<u>10/10/16</u>	<u>LAB</u>	<u>Meat</u>	<u>LAB</u>

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

**Preservative**  
A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type: A V/P  
Preservative: A F

Relinquished By: [Signature] Date/Time: 10/13/16/2000  
Received By: C2 MAA Date/Time: 10/13/16/2000

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

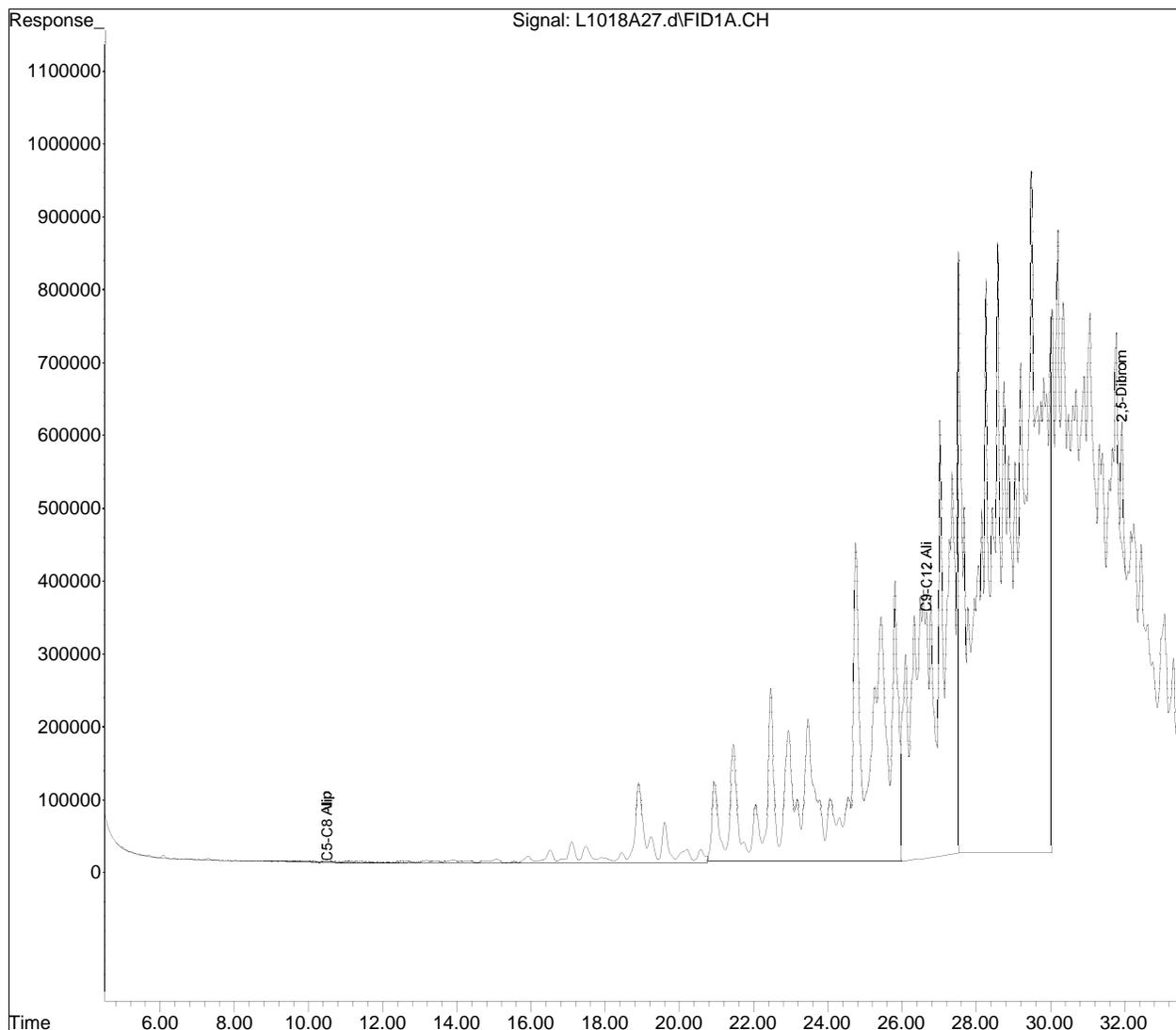
## Quantitation Report (QT Reviewed)

Data Path : I:\LVPH\161018Sali\  
Data File : L1018A27.d  
Signal(s) : FID1A.CH  
Acq On : 19 Oct 2016 4:16 am  
Operator : LVPH:JM  
Sample : 11632948-06,41,16,8.1,.1  
Misc : WG943239,ICAL12970  
ALS Vial : 27 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Oct 19 07:48:22 2016  
Quant Method : I:\LVPH\161018Sali\svph-ali161008.m  
Quant Title : VPH ALIPHATIC  
QLast Update : Tue Oct 11 07:13:33 2016  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :  
Signal Phase :  
Signal Info :

Sub List : Default - All compounds listed





## ANALYTICAL REPORT

Lab Number:	L1640521
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	SPECTRA WEYMOUTH
Project Number:	140143.0000.4903
Report Date:	12/22/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



Project Name: SPECTRA WEYMOUTH

Project Number: 140143.0000.4903

Lab Number: L1640521

Report Date: 12/22/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1640521-01	B413 (11)	SOIL	WEYMOUTH, MA	12/12/16 10:15	12/13/16
L1640521-02	B413 (14-15)	SOIL	WEYMOUTH, MA	12/12/16 10:25	12/13/16
L1640521-03	B413 (23)	SOIL	WEYMOUTH, MA	12/12/16 10:40	12/13/16
L1640521-04	B412 (11.5)	SOIL	WEYMOUTH, MA	12/12/16 11:35	12/13/16
L1640521-05	B412 (13)	SOIL	WEYMOUTH, MA	12/12/16 11:45	12/13/16
L1640521-06	B412 (19)	SOIL	WEYMOUTH, MA	12/12/16 11:55	12/13/16
L1640521-07	B411 (11.5)	SOIL	WEYMOUTH, MA	12/12/16 13:25	12/13/16
L1640521-08	B411 (16)	SOIL	WEYMOUTH, MA	12/12/16 13:35	12/13/16
L1640521-09	B411 (14)	SOIL	WEYMOUTH, MA	12/12/16 13:40	12/13/16
L1640521-10	B410 (11)	SOIL	WEYMOUTH, MA	12/12/16 14:30	12/13/16
L1640521-11	B410 (12.5)	SOIL	WEYMOUTH, MA	12/12/16 14:35	12/13/16
L1640521-12	B410 (14)	SOIL	WEYMOUTH, MA	12/12/16 14:40	12/13/16
L1640521-13	B409 (10)	SOIL	WEYMOUTH, MA	12/12/16 15:15	12/13/16
L1640521-14	B409 (11.5)	SOIL	WEYMOUTH, MA	12/12/16 15:20	12/13/16
L1640521-15	B408 (11)	SOIL	WEYMOUTH, MA	12/13/16 08:50	12/13/16
L1640521-16	B408 (15)	SOIL	WEYMOUTH, MA	12/13/16 08:55	12/13/16
L1640521-17	B414 (11)	SOIL	WEYMOUTH, MA	12/13/16 11:20	12/13/16
L1640521-18	B414 (15.5)	SOIL	WEYMOUTH, MA	12/13/16 11:25	12/13/16
L1640521-19	B414 (14)	SOIL	WEYMOUTH, MA	12/13/16 11:28	12/13/16
L1640521-20	B417 (11)	SOIL	WEYMOUTH, MA	12/13/16 12:54	12/13/16
L1640521-21	B417 (15)	SOIL	WEYMOUTH, MA	12/13/16 12:56	12/13/16
L1640521-22	B416 (11)	SOIL	WEYMOUTH, MA	12/13/16 14:05	12/13/16
L1640521-23	B416 (15)	SOIL	WEYMOUTH, MA	12/13/16 14:00	12/13/16

Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

**MADEP MCP Response Action Analytical Report Certification**

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

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

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



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

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**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

### Case Narrative (continued)

#### MCP Related Narratives

##### EPH

L1640521-01, -02, -05, -09, and -19: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the target compounds present in the sample.

L1640521-04 and -10: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the sample matrix.

L1640521-11: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

In reference to question G:

L1640521-01, -02, -04, -05, -09, -11, and -19: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L1640521-01, -02, -04, -05, -09, -10, -11, and -19: The surrogate recoveries are below the acceptance criteria for chloro-octadecane (0%) and o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

The surrogate recovery for L1640521-10 is outside the acceptance criteria for o-terphenyl (255%); however, the sample was not re-extracted due to coelution with obvious interferences. A copy of the chromatogram is included as an attachment to this report. The results are not considered to be biased.

The WG961349-2/-3 LCS/LCSD RPDs, associated with L1640521-01 through -12 and -14 through -20, are outside the acceptance criteria for c9-c18 aliphatics (26%), naphthalene (27%), dibenzo(a,h)anthracene (27%), nonane (c9) (35%), decane (c10) (33%) and dodecane (c12) (32%). The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

The WG961671-2/-3 LCS/LCSD RPDs, associated with L1640521-21, -22, and -23, are above the acceptance criteria for phenanthrene (27%), anthracene (29%), fluoranthene (27%), pyrene (27%), benzo(a)anthracene (28%), chrysene (33%), benzo(b)fluoranthene (28%), benzo(k)fluoranthene (30%), benzo(a)pyrene (29%), indeno(1,2,3-cd)pyrene (29%) and benzo(ghi)perylene (28%).

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

### Case Narrative (continued)

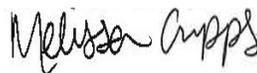
#### Non-MCP Related Narratives

##### Solids, Total

L1640521-01, -02, -03, and -05 through -20: A Laboratory Duplicate were prepared with the sample batch, however, the native sample was not available for reporting; therefore, the laboratory duplicate results could not be reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 12/22/16

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-01 D  
 Client ID: B413 (11)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 20:45  
 Analyst: SR  
 Percent Solids: 81%

Date Collected: 12/12/16 10:15  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	1780		mg/kg	245	--	30
C19-C36 Aliphatics	4590		mg/kg	245	--	30
C11-C22 Aromatics	6610		mg/kg	245	--	30
C11-C22 Aromatics, Adjusted	6610		mg/kg	245	--	30
Naphthalene	ND		mg/kg	12.2	--	30
2-Methylnaphthalene	ND		mg/kg	12.2	--	30
Acenaphthylene	ND		mg/kg	12.2	--	30
Acenaphthene	ND		mg/kg	12.2	--	30
Fluorene	ND		mg/kg	12.2	--	30
Phenanthrene	ND		mg/kg	12.2	--	30
Anthracene	ND		mg/kg	12.2	--	30
Fluoranthene	ND		mg/kg	12.2	--	30
Pyrene	ND		mg/kg	12.2	--	30
Benzo(a)anthracene	ND		mg/kg	12.2	--	30
Chrysene	ND		mg/kg	12.2	--	30
Benzo(b)fluoranthene	ND		mg/kg	12.2	--	30
Benzo(k)fluoranthene	ND		mg/kg	12.2	--	30
Benzo(a)pyrene	ND		mg/kg	12.2	--	30
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	12.2	--	30
Dibenzo(a,h)anthracene	ND		mg/kg	12.2	--	30
Benzo(ghi)perylene	ND		mg/kg	12.2	--	30

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-01 D

Date Collected: 12/12/16 10:15

Client ID: B413 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-02 D  
 Client ID: B413 (14-15)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 01:38  
 Analyst: SR  
 Percent Solids: 86%

Date Collected: 12/12/16 10:25  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	11200		mg/kg	606	--	80
C19-C36 Aliphatics	26300		mg/kg	606	--	80
C11-C22 Aromatics	28200		mg/kg	606	--	80
C11-C22 Aromatics, Adjusted	28200		mg/kg	606	--	80
Naphthalene	ND		mg/kg	30.3	--	80
2-Methylnaphthalene	ND		mg/kg	30.3	--	80
Acenaphthylene	ND		mg/kg	30.3	--	80
Acenaphthene	ND		mg/kg	30.3	--	80
Fluorene	ND		mg/kg	30.3	--	80
Phenanthrene	ND		mg/kg	30.3	--	80
Anthracene	ND		mg/kg	30.3	--	80
Fluoranthene	ND		mg/kg	30.3	--	80
Pyrene	ND		mg/kg	30.3	--	80
Benzo(a)anthracene	ND		mg/kg	30.3	--	80
Chrysene	ND		mg/kg	30.3	--	80
Benzo(b)fluoranthene	ND		mg/kg	30.3	--	80
Benzo(k)fluoranthene	ND		mg/kg	30.3	--	80
Benzo(a)pyrene	ND		mg/kg	30.3	--	80
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	30.3	--	80
Dibenzo(a,h)anthracene	ND		mg/kg	30.3	--	80
Benzo(ghi)perylene	ND		mg/kg	30.3	--	80

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-02 D

Date Collected: 12/12/16 10:25

Client ID: B413 (14-15)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	111		40-140
2-Bromonaphthalene	107		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-03  
 Client ID: B413 (23)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/16/16 23:30  
 Analyst: EK  
 Percent Solids: 79%

Date Collected: 12/12/16 10:40  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.22	--	1
C19-C36 Aliphatics	13.6		mg/kg	8.22	--	1
C11-C22 Aromatics	21.0		mg/kg	8.22	--	1
C11-C22 Aromatics, Adjusted	21.0		mg/kg	8.22	--	1
Naphthalene	ND		mg/kg	0.411	--	1
2-Methylnaphthalene	ND		mg/kg	0.411	--	1
Acenaphthylene	ND		mg/kg	0.411	--	1
Acenaphthene	ND		mg/kg	0.411	--	1
Fluorene	ND		mg/kg	0.411	--	1
Phenanthrene	ND		mg/kg	0.411	--	1
Anthracene	ND		mg/kg	0.411	--	1
Fluoranthene	ND		mg/kg	0.411	--	1
Pyrene	ND		mg/kg	0.411	--	1
Benzo(a)anthracene	ND		mg/kg	0.411	--	1
Chrysene	ND		mg/kg	0.411	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.411	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.411	--	1
Benzo(a)pyrene	ND		mg/kg	0.411	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.411	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.411	--	1
Benzo(ghi)perylene	ND		mg/kg	0.411	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-03

Date Collected: 12/12/16 10:40

Client ID: B413 (23)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	99		40-140
2-Fluorobiphenyl	95		40-140
2-Bromonaphthalene	94		40-140

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-04 D  
 Client ID: B412 (11.5)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/17/16 01:26  
 Analyst: EK  
 Percent Solids: 60%

Date Collected: 12/12/16 11:35  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	2490		mg/kg	220	--	20
C19-C36 Aliphatics	12300		mg/kg	220	--	20
C11-C22 Aromatics	20400		mg/kg	220	--	20
C11-C22 Aromatics, Adjusted	20400		mg/kg	220	--	20
Naphthalene	ND		mg/kg	11.0	--	20
2-Methylnaphthalene	ND		mg/kg	11.0	--	20
Acenaphthylene	ND		mg/kg	11.0	--	20
Acenaphthene	ND		mg/kg	11.0	--	20
Fluorene	ND		mg/kg	11.0	--	20
Phenanthrene	ND		mg/kg	11.0	--	20
Anthracene	ND		mg/kg	11.0	--	20
Fluoranthene	ND		mg/kg	11.0	--	20
Pyrene	ND		mg/kg	11.0	--	20
Benzo(a)anthracene	ND		mg/kg	11.0	--	20
Chrysene	ND		mg/kg	11.0	--	20
Benzo(b)fluoranthene	ND		mg/kg	11.0	--	20
Benzo(k)fluoranthene	ND		mg/kg	11.0	--	20
Benzo(a)pyrene	ND		mg/kg	11.0	--	20
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	11.0	--	20
Dibenzo(a,h)anthracene	ND		mg/kg	11.0	--	20
Benzo(ghi)perylene	ND		mg/kg	11.0	--	20

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-04 D

Date Collected: 12/12/16 11:35

Client ID: B412 (11.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	105		40-140
2-Bromonaphthalene	102		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-05 D  
 Client ID: B412 (13)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 02:15  
 Analyst: SR  
 Percent Solids: 76%

Date Collected: 12/12/16 11:45  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	11000		mg/kg	657	--	80
C19-C36 Aliphatics	26000		mg/kg	657	--	80
C11-C22 Aromatics	26200		mg/kg	657	--	80
C11-C22 Aromatics, Adjusted	26200		mg/kg	657	--	80
Naphthalene	ND		mg/kg	32.8	--	80
2-Methylnaphthalene	ND		mg/kg	32.8	--	80
Acenaphthylene	ND		mg/kg	32.8	--	80
Acenaphthene	ND		mg/kg	32.8	--	80
Fluorene	ND		mg/kg	32.8	--	80
Phenanthrene	ND		mg/kg	32.8	--	80
Anthracene	ND		mg/kg	32.8	--	80
Fluoranthene	ND		mg/kg	32.8	--	80
Pyrene	ND		mg/kg	32.8	--	80
Benzo(a)anthracene	ND		mg/kg	32.8	--	80
Chrysene	ND		mg/kg	32.8	--	80
Benzo(b)fluoranthene	ND		mg/kg	32.8	--	80
Benzo(k)fluoranthene	ND		mg/kg	32.8	--	80
Benzo(a)pyrene	ND		mg/kg	32.8	--	80
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	32.8	--	80
Dibenzo(a,h)anthracene	ND		mg/kg	32.8	--	80
Benzo(ghi)perylene	ND		mg/kg	32.8	--	80

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-05 D

Date Collected: 12/12/16 11:45

Client ID: B412 (13)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	93		40-140
2-Bromonaphthalene	94		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-06  
 Client ID: B412 (19)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/16/16 22:59  
 Analyst: EK  
 Percent Solids: 77%

Date Collected: 12/12/16 11:55  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.27	--	1
C19-C36 Aliphatics	21.4		mg/kg	8.27	--	1
C11-C22 Aromatics	36.5		mg/kg	8.27	--	1
C11-C22 Aromatics, Adjusted	36.5		mg/kg	8.27	--	1
Naphthalene	ND		mg/kg	0.414	--	1
2-Methylnaphthalene	ND		mg/kg	0.414	--	1
Acenaphthylene	ND		mg/kg	0.414	--	1
Acenaphthene	ND		mg/kg	0.414	--	1
Fluorene	ND		mg/kg	0.414	--	1
Phenanthrene	ND		mg/kg	0.414	--	1
Anthracene	ND		mg/kg	0.414	--	1
Fluoranthene	ND		mg/kg	0.414	--	1
Pyrene	ND		mg/kg	0.414	--	1
Benzo(a)anthracene	ND		mg/kg	0.414	--	1
Chrysene	ND		mg/kg	0.414	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.414	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.414	--	1
Benzo(a)pyrene	ND		mg/kg	0.414	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.414	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.414	--	1
Benzo(ghi)perylene	ND		mg/kg	0.414	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-06

Date Collected: 12/12/16 11:55

Client ID: B412 (19)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	101		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	98		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-07  
 Client ID: B411 (11.5)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 21:17  
 Analyst: SR  
 Percent Solids: 91%

Date Collected: 12/12/16 13:25  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	12.6		mg/kg	6.99	--	1
C19-C36 Aliphatics	98.4		mg/kg	6.99	--	1
C11-C22 Aromatics	246		mg/kg	6.99	--	1
C11-C22 Aromatics, Adjusted	246		mg/kg	6.99	--	1
Naphthalene	ND		mg/kg	0.350	--	1
2-Methylnaphthalene	ND		mg/kg	0.350	--	1
Acenaphthylene	ND		mg/kg	0.350	--	1
Acenaphthene	ND		mg/kg	0.350	--	1
Fluorene	ND		mg/kg	0.350	--	1
Phenanthrene	ND		mg/kg	0.350	--	1
Anthracene	ND		mg/kg	0.350	--	1
Fluoranthene	ND		mg/kg	0.350	--	1
Pyrene	ND		mg/kg	0.350	--	1
Benzo(a)anthracene	ND		mg/kg	0.350	--	1
Chrysene	ND		mg/kg	0.350	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.350	--	1
Benzo(a)pyrene	ND		mg/kg	0.350	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.350	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.350	--	1
Benzo(ghi)perylene	ND		mg/kg	0.350	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-07

Date Collected: 12/12/16 13:25

Client ID: B411 (11.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-08  
 Client ID: B411 (16)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/17/16 08:10  
 Analyst: EK  
 Percent Solids: 69%

Date Collected: 12/12/16 13:35  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	9.43	--	1
C19-C36 Aliphatics	ND		mg/kg	9.43	--	1
C11-C22 Aromatics	ND		mg/kg	9.43	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	9.43	--	1
Naphthalene	ND		mg/kg	0.472	--	1
2-Methylnaphthalene	ND		mg/kg	0.472	--	1
Acenaphthylene	ND		mg/kg	0.472	--	1
Acenaphthene	ND		mg/kg	0.472	--	1
Fluorene	ND		mg/kg	0.472	--	1
Phenanthrene	ND		mg/kg	0.472	--	1
Anthracene	ND		mg/kg	0.472	--	1
Fluoranthene	ND		mg/kg	0.472	--	1
Pyrene	ND		mg/kg	0.472	--	1
Benzo(a)anthracene	ND		mg/kg	0.472	--	1
Chrysene	ND		mg/kg	0.472	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.472	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.472	--	1
Benzo(a)pyrene	ND		mg/kg	0.472	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.472	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.472	--	1
Benzo(ghi)perylene	ND		mg/kg	0.472	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-08

Date Collected: 12/12/16 13:35

Client ID: B411 (16)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	67		40-140
o-Terphenyl	93		40-140
2-Fluorobiphenyl	93		40-140
2-Bromonaphthalene	94		40-140

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-09 D  
 Client ID: B411 (14)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 02:53  
 Analyst: SR  
 Percent Solids: 73%

Date Collected: 12/12/16 13:40  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	13600		mg/kg	536	--	60
C19-C36 Aliphatics	17700		mg/kg	536	--	60
C11-C22 Aromatics	19000		mg/kg	536	--	60
C11-C22 Aromatics, Adjusted	19000		mg/kg	536	--	60
Naphthalene	ND		mg/kg	26.8	--	60
2-Methylnaphthalene	ND		mg/kg	26.8	--	60
Acenaphthylene	ND		mg/kg	26.8	--	60
Acenaphthene	ND		mg/kg	26.8	--	60
Fluorene	ND		mg/kg	26.8	--	60
Phenanthrene	ND		mg/kg	26.8	--	60
Anthracene	ND		mg/kg	26.8	--	60
Fluoranthene	ND		mg/kg	26.8	--	60
Pyrene	ND		mg/kg	26.8	--	60
Benzo(a)anthracene	ND		mg/kg	26.8	--	60
Chrysene	ND		mg/kg	26.8	--	60
Benzo(b)fluoranthene	ND		mg/kg	26.8	--	60
Benzo(k)fluoranthene	ND		mg/kg	26.8	--	60
Benzo(a)pyrene	ND		mg/kg	26.8	--	60
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	26.8	--	60
Dibenzo(a,h)anthracene	ND		mg/kg	26.8	--	60
Benzo(ghi)perylene	ND		mg/kg	26.8	--	60

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-09 D

Date Collected: 12/12/16 13:40

Client ID: B411 (14)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	86		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-10 D  
 Client ID: B410 (11)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/17/16 08:41  
 Analyst: EK  
 Percent Solids: 82%

Date Collected: 12/12/16 14:30  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	697		mg/kg	79.7	--	10
C19-C36 Aliphatics	2740		mg/kg	79.7	--	10
C11-C22 Aromatics	7670		mg/kg	79.7	--	10
C11-C22 Aromatics, Adjusted	7670		mg/kg	79.7	--	10
Naphthalene	ND		mg/kg	3.99	--	10
2-Methylnaphthalene	ND		mg/kg	3.99	--	10
Acenaphthylene	ND		mg/kg	3.99	--	10
Acenaphthene	ND		mg/kg	3.99	--	10
Fluorene	ND		mg/kg	3.99	--	10
Phenanthrene	ND		mg/kg	3.99	--	10
Anthracene	ND		mg/kg	3.99	--	10
Fluoranthene	ND		mg/kg	3.99	--	10
Pyrene	ND		mg/kg	3.99	--	10
Benzo(a)anthracene	ND		mg/kg	3.99	--	10
Chrysene	ND		mg/kg	3.99	--	10
Benzo(b)fluoranthene	ND		mg/kg	3.99	--	10
Benzo(k)fluoranthene	ND		mg/kg	3.99	--	10
Benzo(a)pyrene	ND		mg/kg	3.99	--	10
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	3.99	--	10
Dibenzo(a,h)anthracene	ND		mg/kg	3.99	--	10
Benzo(ghi)perylene	ND		mg/kg	3.99	--	10

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-10 D

Date Collected: 12/12/16 14:30

Client ID: B410 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	128		40-140
o-Terphenyl	255	Q	40-140
2-Fluorobiphenyl	108		40-140
2-Bromonaphthalene	106		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-11 D  
 Client ID: B410 (12.5)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 03:30  
 Analyst: SR  
 Percent Solids: 78%

Date Collected: 12/12/16 14:35  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	3690		mg/kg	163	--	20
C19-C36 Aliphatics	5810		mg/kg	163	--	20
C11-C22 Aromatics	7170		mg/kg	163	--	20
C11-C22 Aromatics, Adjusted	7170		mg/kg	163	--	20
Naphthalene	ND		mg/kg	8.16	--	20
2-Methylnaphthalene	ND		mg/kg	8.16	--	20
Acenaphthylene	ND		mg/kg	8.16	--	20
Acenaphthene	ND		mg/kg	8.16	--	20
Fluorene	ND		mg/kg	8.16	--	20
Phenanthrene	ND		mg/kg	8.16	--	20
Anthracene	ND		mg/kg	8.16	--	20
Fluoranthene	ND		mg/kg	8.16	--	20
Pyrene	ND		mg/kg	8.16	--	20
Benzo(a)anthracene	ND		mg/kg	8.16	--	20
Chrysene	ND		mg/kg	8.16	--	20
Benzo(b)fluoranthene	ND		mg/kg	8.16	--	20
Benzo(k)fluoranthene	ND		mg/kg	8.16	--	20
Benzo(a)pyrene	ND		mg/kg	8.16	--	20
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	8.16	--	20
Dibenzo(a,h)anthracene	ND		mg/kg	8.16	--	20
Benzo(ghi)perylene	ND		mg/kg	8.16	--	20

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-11 D

Date Collected: 12/12/16 14:35

Client ID: B410 (12.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	105		40-140
2-Bromonaphthalene	98		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-12  
 Client ID: B410 (14)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 20:01  
 Analyst: SR  
 Percent Solids: 80%

Date Collected: 12/12/16 14:40  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 01:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	21.5		mg/kg	8.26	--	1
C19-C36 Aliphatics	32.0		mg/kg	8.26	--	1
C11-C22 Aromatics	18.5		mg/kg	8.26	--	1
C11-C22 Aromatics, Adjusted	18.5		mg/kg	8.26	--	1
Naphthalene	ND		mg/kg	0.413	--	1
2-Methylnaphthalene	ND		mg/kg	0.413	--	1
Acenaphthylene	ND		mg/kg	0.413	--	1
Acenaphthene	ND		mg/kg	0.413	--	1
Fluorene	ND		mg/kg	0.413	--	1
Phenanthrene	ND		mg/kg	0.413	--	1
Anthracene	ND		mg/kg	0.413	--	1
Fluoranthene	ND		mg/kg	0.413	--	1
Pyrene	ND		mg/kg	0.413	--	1
Benzo(a)anthracene	ND		mg/kg	0.413	--	1
Chrysene	ND		mg/kg	0.413	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.413	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.413	--	1
Benzo(a)pyrene	ND		mg/kg	0.413	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.413	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.413	--	1
Benzo(ghi)perylene	ND		mg/kg	0.413	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-12

Date Collected: 12/12/16 14:40

Client ID: B410 (14)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	71		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-13  
 Client ID: B409 (10)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 13:19  
 Analyst: EK  
 Percent Solids: 79%

Date Collected: 12/12/16 15:15  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/20/16 23:16  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/21/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.13	--	1
C19-C36 Aliphatics	ND		mg/kg	8.13	--	1
C11-C22 Aromatics	37.4		mg/kg	8.13	--	1
C11-C22 Aromatics, Adjusted	37.4		mg/kg	8.13	--	1
Naphthalene	ND		mg/kg	0.406	--	1
2-Methylnaphthalene	ND		mg/kg	0.406	--	1
Acenaphthylene	ND		mg/kg	0.406	--	1
Acenaphthene	ND		mg/kg	0.406	--	1
Fluorene	ND		mg/kg	0.406	--	1
Phenanthrene	ND		mg/kg	0.406	--	1
Anthracene	ND		mg/kg	0.406	--	1
Fluoranthene	ND		mg/kg	0.406	--	1
Pyrene	ND		mg/kg	0.406	--	1
Benzo(a)anthracene	ND		mg/kg	0.406	--	1
Chrysene	ND		mg/kg	0.406	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.406	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.406	--	1
Benzo(a)pyrene	ND		mg/kg	0.406	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.406	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.406	--	1
Benzo(ghi)perylene	ND		mg/kg	0.406	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-13

Date Collected: 12/12/16 15:15

Client ID: B409 (10)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	104		40-140
2-Fluorobiphenyl	91		40-140
2-Bromonaphthalene	91		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-14  
 Client ID: B409 (11.5)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/19/16 21:12  
 Analyst: NS  
 Percent Solids: 73%

Date Collected: 12/12/16 15:20  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:09  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	9.05	--	1
C19-C36 Aliphatics	ND		mg/kg	9.05	--	1
C11-C22 Aromatics	10.3		mg/kg	9.05	--	1
C11-C22 Aromatics, Adjusted	10.3		mg/kg	9.05	--	1
Naphthalene	ND		mg/kg	0.452	--	1
2-Methylnaphthalene	ND		mg/kg	0.452	--	1
Acenaphthylene	ND		mg/kg	0.452	--	1
Acenaphthene	ND		mg/kg	0.452	--	1
Fluorene	ND		mg/kg	0.452	--	1
Phenanthrene	ND		mg/kg	0.452	--	1
Anthracene	ND		mg/kg	0.452	--	1
Fluoranthene	ND		mg/kg	0.452	--	1
Pyrene	ND		mg/kg	0.452	--	1
Benzo(a)anthracene	ND		mg/kg	0.452	--	1
Chrysene	ND		mg/kg	0.452	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.452	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.452	--	1
Benzo(a)pyrene	ND		mg/kg	0.452	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.452	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.452	--	1
Benzo(ghi)perylene	ND		mg/kg	0.452	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-14

Date Collected: 12/12/16 15:20

Client ID: B409 (11.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	104		40-140
o-Terphenyl	102		40-140
2-Fluorobiphenyl	103		40-140
2-Bromonaphthalene	108		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-15  
 Client ID: B408 (11)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/19/16 21:58  
 Analyst: NS  
 Percent Solids: 80%

Date Collected: 12/13/16 08:50  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:11  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.16	--	1
C19-C36 Aliphatics	8.22		mg/kg	8.16	--	1
C11-C22 Aromatics	31.9		mg/kg	8.16	--	1
C11-C22 Aromatics, Adjusted	30.1		mg/kg	8.16	--	1
Naphthalene	ND		mg/kg	0.408	--	1
2-Methylnaphthalene	ND		mg/kg	0.408	--	1
Acenaphthylene	ND		mg/kg	0.408	--	1
Acenaphthene	0.692		mg/kg	0.408	--	1
Fluorene	ND		mg/kg	0.408	--	1
Phenanthrene	0.438		mg/kg	0.408	--	1
Anthracene	ND		mg/kg	0.408	--	1
Fluoranthene	ND		mg/kg	0.408	--	1
Pyrene	ND		mg/kg	0.408	--	1
Benzo(a)anthracene	ND		mg/kg	0.408	--	1
Chrysene	ND		mg/kg	0.408	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.408	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.408	--	1
Benzo(a)pyrene	ND		mg/kg	0.408	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.408	--	1
Dibenzo(a,h)anthracene	0.742		mg/kg	0.408	--	1
Benzo(ghi)perylene	ND		mg/kg	0.408	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-15

Date Collected: 12/13/16 08:50

Client ID: B408 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	97		40-140
o-Terphenyl	111		40-140
2-Fluorobiphenyl	108		40-140
2-Bromonaphthalene	113		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-16  
 Client ID: B408 (15)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 18:46  
 Analyst: SR  
 Percent Solids: 93%

Date Collected: 12/13/16 08:55  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:11  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	6.81	--	1
C19-C36 Aliphatics	ND		mg/kg	6.81	--	1
C11-C22 Aromatics	ND		mg/kg	6.81	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.81	--	1
Naphthalene	ND		mg/kg	0.341	--	1
2-Methylnaphthalene	ND		mg/kg	0.341	--	1
Acenaphthylene	ND		mg/kg	0.341	--	1
Acenaphthene	ND		mg/kg	0.341	--	1
Fluorene	ND		mg/kg	0.341	--	1
Phenanthrene	ND		mg/kg	0.341	--	1
Anthracene	ND		mg/kg	0.341	--	1
Fluoranthene	ND		mg/kg	0.341	--	1
Pyrene	ND		mg/kg	0.341	--	1
Benzo(a)anthracene	ND		mg/kg	0.341	--	1
Chrysene	ND		mg/kg	0.341	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.341	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.341	--	1
Benzo(a)pyrene	ND		mg/kg	0.341	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.341	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.341	--	1
Benzo(ghi)perylene	ND		mg/kg	0.341	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-16

Date Collected: 12/13/16 08:55

Client ID: B408 (15)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	41		40-140
o-Terphenyl	75		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	80		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-17  
 Client ID: B414 (11)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/17/16 12:19  
 Analyst: EK  
 Percent Solids: 86%

Date Collected: 12/13/16 11:20  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:12  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	52.7		mg/kg	7.35	--	1
C19-C36 Aliphatics	256		mg/kg	7.35	--	1
C11-C22 Aromatics	192		mg/kg	7.35	--	1
C11-C22 Aromatics, Adjusted	192		mg/kg	7.35	--	1
Naphthalene	ND		mg/kg	0.367	--	1
2-Methylnaphthalene	ND		mg/kg	0.367	--	1
Acenaphthylene	ND		mg/kg	0.367	--	1
Acenaphthene	ND		mg/kg	0.367	--	1
Fluorene	ND		mg/kg	0.367	--	1
Phenanthrene	ND		mg/kg	0.367	--	1
Anthracene	ND		mg/kg	0.367	--	1
Fluoranthene	ND		mg/kg	0.367	--	1
Pyrene	ND		mg/kg	0.367	--	1
Benzo(a)anthracene	ND		mg/kg	0.367	--	1
Chrysene	ND		mg/kg	0.367	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.367	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.367	--	1
Benzo(a)pyrene	ND		mg/kg	0.367	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.367	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.367	--	1
Benzo(ghi)perylene	ND		mg/kg	0.367	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-17

Date Collected: 12/13/16 11:20

Client ID: B414 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	76		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-18  
 Client ID: B414 (15.5)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/17/16 12:50  
 Analyst: EK  
 Percent Solids: 83%

Date Collected: 12/13/16 11:25  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:12  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	108		mg/kg	7.57	--	1
C19-C36 Aliphatics	175		mg/kg	7.57	--	1
C11-C22 Aromatics	256		mg/kg	7.57	--	1
C11-C22 Aromatics, Adjusted	256		mg/kg	7.57	--	1
Naphthalene	ND		mg/kg	0.379	--	1
2-Methylnaphthalene	ND		mg/kg	0.379	--	1
Acenaphthylene	ND		mg/kg	0.379	--	1
Acenaphthene	ND		mg/kg	0.379	--	1
Fluorene	ND		mg/kg	0.379	--	1
Phenanthrene	ND		mg/kg	0.379	--	1
Anthracene	ND		mg/kg	0.379	--	1
Fluoranthene	ND		mg/kg	0.379	--	1
Pyrene	ND		mg/kg	0.379	--	1
Benzo(a)anthracene	ND		mg/kg	0.379	--	1
Chrysene	ND		mg/kg	0.379	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.379	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.379	--	1
Benzo(a)pyrene	ND		mg/kg	0.379	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.379	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.379	--	1
Benzo(ghi)perylene	ND		mg/kg	0.379	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-18

Date Collected: 12/13/16 11:25

Client ID: B414 (15.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	85		40-140
o-Terphenyl	115		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	107		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-19 D  
 Client ID: B414 (14)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 04:08  
 Analyst: SR  
 Percent Solids: 90%

Date Collected: 12/13/16 11:28  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:12  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	8220		mg/kg	435	--	60
C19-C36 Aliphatics	13200		mg/kg	435	--	60
C11-C22 Aromatics	14100		mg/kg	435	--	60
C11-C22 Aromatics, Adjusted	14100		mg/kg	435	--	60
Naphthalene	ND		mg/kg	21.8	--	60
2-Methylnaphthalene	ND		mg/kg	21.8	--	60
Acenaphthylene	ND		mg/kg	21.8	--	60
Acenaphthene	ND		mg/kg	21.8	--	60
Fluorene	ND		mg/kg	21.8	--	60
Phenanthrene	ND		mg/kg	21.8	--	60
Anthracene	ND		mg/kg	21.8	--	60
Fluoranthene	ND		mg/kg	21.8	--	60
Pyrene	ND		mg/kg	21.8	--	60
Benzo(a)anthracene	ND		mg/kg	21.8	--	60
Chrysene	ND		mg/kg	21.8	--	60
Benzo(b)fluoranthene	ND		mg/kg	21.8	--	60
Benzo(k)fluoranthene	ND		mg/kg	21.8	--	60
Benzo(a)pyrene	ND		mg/kg	21.8	--	60
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	21.8	--	60
Dibenzo(a,h)anthracene	ND		mg/kg	21.8	--	60
Benzo(ghi)perylene	ND		mg/kg	21.8	--	60

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-19 D

Date Collected: 12/13/16 11:28

Client ID: B414 (14)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	81		40-140

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-20  
 Client ID: B417 (11)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/17/16 13:21  
 Analyst: EK  
 Percent Solids: 93%

Date Collected: 12/13/16 12:54  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 02:13  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/16/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	6.94		mg/kg	6.88	--	1
C19-C36 Aliphatics	53.8		mg/kg	6.88	--	1
C11-C22 Aromatics	95.3		mg/kg	6.88	--	1
C11-C22 Aromatics, Adjusted	90.9		mg/kg	6.88	--	1
Naphthalene	ND		mg/kg	0.344	--	1
2-Methylnaphthalene	ND		mg/kg	0.344	--	1
Acenaphthylene	ND		mg/kg	0.344	--	1
Acenaphthene	ND		mg/kg	0.344	--	1
Fluorene	ND		mg/kg	0.344	--	1
Phenanthrene	0.654		mg/kg	0.344	--	1
Anthracene	ND		mg/kg	0.344	--	1
Fluoranthene	0.674		mg/kg	0.344	--	1
Pyrene	0.763		mg/kg	0.344	--	1
Benzo(a)anthracene	0.458		mg/kg	0.344	--	1
Chrysene	0.627		mg/kg	0.344	--	1
Benzo(b)fluoranthene	0.385		mg/kg	0.344	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.344	--	1
Benzo(a)pyrene	0.390		mg/kg	0.344	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.344	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.344	--	1
Benzo(ghi)perylene	0.396		mg/kg	0.344	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-20

Date Collected: 12/13/16 12:54

Client ID: B417 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	80		40-140
o-Terphenyl	120		40-140
2-Fluorobiphenyl	103		40-140
2-Bromonaphthalene	104		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-21  
 Client ID: B417 (15)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/16/16 00:30  
 Analyst: NS  
 Percent Solids: 88%

Date Collected: 12/13/16 12:56  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 16:16  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/15/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.31	--	1
C19-C36 Aliphatics	ND		mg/kg	7.31	--	1
C11-C22 Aromatics	ND		mg/kg	7.31	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.31	--	1
Naphthalene	ND		mg/kg	0.365	--	1
2-Methylnaphthalene	ND		mg/kg	0.365	--	1
Acenaphthylene	ND		mg/kg	0.365	--	1
Acenaphthene	ND		mg/kg	0.365	--	1
Fluorene	ND		mg/kg	0.365	--	1
Phenanthrene	ND		mg/kg	0.365	--	1
Anthracene	ND		mg/kg	0.365	--	1
Fluoranthene	ND		mg/kg	0.365	--	1
Pyrene	ND		mg/kg	0.365	--	1
Benzo(a)anthracene	ND		mg/kg	0.365	--	1
Chrysene	ND		mg/kg	0.365	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.365	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.365	--	1
Benzo(a)pyrene	ND		mg/kg	0.365	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.365	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.365	--	1
Benzo(ghi)perylene	ND		mg/kg	0.365	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-21

Date Collected: 12/13/16 12:56

Client ID: B417 (15)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	80		40-140
o-Terphenyl	89		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	82		40-140

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-22  
 Client ID: B416 (11)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/16/16 16:23  
 Analyst: EK  
 Percent Solids: 94%

Date Collected: 12/13/16 14:05  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 16:16  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/15/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	6.96	--	1
C19-C36 Aliphatics	95.4		mg/kg	6.96	--	1
C11-C22 Aromatics	116		mg/kg	6.96	--	1
C11-C22 Aromatics, Adjusted	114		mg/kg	6.96	--	1
Naphthalene	ND		mg/kg	0.348	--	1
2-Methylnaphthalene	ND		mg/kg	0.348	--	1
Acenaphthylene	ND		mg/kg	0.348	--	1
Acenaphthene	ND		mg/kg	0.348	--	1
Fluorene	ND		mg/kg	0.348	--	1
Phenanthrene	0.400		mg/kg	0.348	--	1
Anthracene	ND		mg/kg	0.348	--	1
Fluoranthene	0.454		mg/kg	0.348	--	1
Pyrene	0.486		mg/kg	0.348	--	1
Benzo(a)anthracene	ND		mg/kg	0.348	--	1
Chrysene	0.409		mg/kg	0.348	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.348	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.348	--	1
Benzo(a)pyrene	ND		mg/kg	0.348	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.348	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.348	--	1
Benzo(ghi)perylene	ND		mg/kg	0.348	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-22

Date Collected: 12/13/16 14:05

Client ID: B416 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	115		40-140
2-Fluorobiphenyl	116		40-140
2-Bromonaphthalene	120		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-23  
 Client ID: B416 (15)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/16/16 01:01  
 Analyst: NS  
 Percent Solids: 81%

Date Collected: 12/13/16 14:00  
 Date Received: 12/13/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/15/16 16:16  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/15/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.14	--	1
C19-C36 Aliphatics	ND		mg/kg	8.14	--	1
C11-C22 Aromatics	ND		mg/kg	8.14	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.14	--	1
Naphthalene	ND		mg/kg	0.407	--	1
2-Methylnaphthalene	ND		mg/kg	0.407	--	1
Acenaphthylene	ND		mg/kg	0.407	--	1
Acenaphthene	ND		mg/kg	0.407	--	1
Fluorene	ND		mg/kg	0.407	--	1
Phenanthrene	ND		mg/kg	0.407	--	1
Anthracene	ND		mg/kg	0.407	--	1
Fluoranthene	ND		mg/kg	0.407	--	1
Pyrene	ND		mg/kg	0.407	--	1
Benzo(a)anthracene	ND		mg/kg	0.407	--	1
Chrysene	ND		mg/kg	0.407	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.407	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.407	--	1
Benzo(a)pyrene	ND		mg/kg	0.407	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.407	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.407	--	1
Benzo(ghi)perylene	ND		mg/kg	0.407	--	1

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16**SAMPLE RESULTS**

Lab ID: L1640521-23

Date Collected: 12/13/16 14:00

Client ID: B416 (15)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	77		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	82		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

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

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 12/16/16 20:25  
Analyst: EK

Extraction Method: EPA 3546  
Extraction Date: 12/15/16 01:40  
Cleanup Method: EPH-04-1  
Cleanup Date: 12/16/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-12,14-20 Batch: WG961349-1					
C9-C18 Aliphatics	ND		mg/kg	6.56	--
C19-C36 Aliphatics	ND		mg/kg	6.56	--
C11-C22 Aromatics	ND		mg/kg	6.56	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.56	--
Naphthalene	ND		mg/kg	0.328	--
2-Methylnaphthalene	ND		mg/kg	0.328	--
Acenaphthylene	ND		mg/kg	0.328	--
Acenaphthene	ND		mg/kg	0.328	--
Fluorene	ND		mg/kg	0.328	--
Phenanthrene	ND		mg/kg	0.328	--
Anthracene	ND		mg/kg	0.328	--
Fluoranthene	ND		mg/kg	0.328	--
Pyrene	ND		mg/kg	0.328	--
Benzo(a)anthracene	ND		mg/kg	0.328	--
Chrysene	ND		mg/kg	0.328	--
Benzo(b)fluoranthene	ND		mg/kg	0.328	--
Benzo(k)fluoranthene	ND		mg/kg	0.328	--
Benzo(a)pyrene	ND		mg/kg	0.328	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.328	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.328	--
Benzo(ghi)perylene	ND		mg/kg	0.328	--

**Project Name:** SPECTRA WEYMOUTH**Lab Number:** L1640521**Project Number:** 140143.0000.4903**Report Date:** 12/22/16

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 98,EPH-04-1.1

Extraction Method: EPA 3546

Analytical Date: 12/16/16 20:25

Extraction Date: 12/15/16 01:40

Analyst: EK

Cleanup Method: EPH-04-1

Cleanup Date: 12/16/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-12,14-20 Batch: WG961349-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	91		40-140
2-Bromonaphthalene	88		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 12/15/16 23:27  
Analyst: SR

Extraction Method: EPA 3546  
Extraction Date: 12/15/16 16:05  
Cleanup Method: EPH-04-1  
Cleanup Date: 12/15/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 21-23 Batch: WG961671-1					
C9-C18 Aliphatics	ND		mg/kg	6.45	--
C19-C36 Aliphatics	ND		mg/kg	6.45	--
C11-C22 Aromatics	ND		mg/kg	6.45	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.45	--
Naphthalene	ND		mg/kg	0.322	--
2-Methylnaphthalene	ND		mg/kg	0.322	--
Acenaphthylene	ND		mg/kg	0.322	--
Acenaphthene	ND		mg/kg	0.322	--
Fluorene	ND		mg/kg	0.322	--
Phenanthrene	ND		mg/kg	0.322	--
Anthracene	ND		mg/kg	0.322	--
Fluoranthene	ND		mg/kg	0.322	--
Pyrene	ND		mg/kg	0.322	--
Benzo(a)anthracene	ND		mg/kg	0.322	--
Chrysene	ND		mg/kg	0.322	--
Benzo(b)fluoranthene	ND		mg/kg	0.322	--
Benzo(k)fluoranthene	ND		mg/kg	0.322	--
Benzo(a)pyrene	ND		mg/kg	0.322	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.322	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.322	--
Benzo(ghi)perylene	ND		mg/kg	0.322	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	71		40-140

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 12/21/16 11:46  
**Analyst:** EK

**Extraction Method:** EPA 3546  
**Extraction Date:** 12/20/16 09:04  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 12/21/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 13 Batch: WG962911-1					
C9-C18 Aliphatics	ND		mg/kg	6.45	--
C19-C36 Aliphatics	ND		mg/kg	6.45	--
C11-C22 Aromatics	ND		mg/kg	6.45	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.45	--
Naphthalene	ND		mg/kg	0.322	--
2-Methylnaphthalene	ND		mg/kg	0.322	--
Acenaphthylene	ND		mg/kg	0.322	--
Acenaphthene	ND		mg/kg	0.322	--
Fluorene	ND		mg/kg	0.322	--
Phenanthrene	ND		mg/kg	0.322	--
Anthracene	ND		mg/kg	0.322	--
Fluoranthene	ND		mg/kg	0.322	--
Pyrene	ND		mg/kg	0.322	--
Benzo(a)anthracene	ND		mg/kg	0.322	--
Chrysene	ND		mg/kg	0.322	--
Benzo(b)fluoranthene	ND		mg/kg	0.322	--
Benzo(k)fluoranthene	ND		mg/kg	0.322	--
Benzo(a)pyrene	ND		mg/kg	0.322	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.322	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.322	--
Benzo(ghi)perylene	ND		mg/kg	0.322	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	99		40-140
2-Fluorobiphenyl	94		40-140
2-Bromonaphthalene	95		40-140

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-12,14-20 Batch: WG961349-2 WG961349-3								
C9-C18 Aliphatics	68		88		40-140	26	Q	25
C19-C36 Aliphatics	82		100		40-140	20		25
C11-C22 Aromatics	90		108		40-140	18		25
Naphthalene	67		88		40-140	27	Q	25
2-Methylnaphthalene	70		89		40-140	24		25
Acenaphthylene	73		91		40-140	22		25
Acenaphthene	80		97		40-140	19		25
Fluorene	84		101		40-140	18		25
Phenanthrene	86		103		40-140	18		25
Anthracene	83		100		40-140	19		25
Fluoranthene	90		108		40-140	18		25
Pyrene	90		110		40-140	20		25
Benzo(a)anthracene	85		106		40-140	22		25
Chrysene	86		111		40-140	25		25
Benzo(b)fluoranthene	89		110		40-140	21		25
Benzo(k)fluoranthene	84		107		40-140	24		25
Benzo(a)pyrene	76		97		40-140	24		25
Indeno(1,2,3-cd)Pyrene	88		109		40-140	21		25
Dibenzo(a,h)anthracene	72		94		40-140	27	Q	25
Benzo(ghi)perylene	83		103		40-140	22		25
Nonane (C9)	51		73		30-140	35	Q	25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-12,14-20 Batch: WG961349-2 WG961349-3								
Decane (C10)	58		81		40-140	33	Q	25
Dodecane (C12)	61		84		40-140	32	Q	25
Tetradecane (C14)	68		87		40-140	25		25
Hexadecane (C16)	74		93		40-140	23		25
Octadecane (C18)	79		97		40-140	20		25
Nonadecane (C19)	78		97		40-140	22		25
Eicosane (C20)	80		98		40-140	20		25
Docosane (C22)	81		99		40-140	20		25
Tetracosane (C24)	80		100		40-140	22		25
Hexacosane (C26)	81		100		40-140	21		25
Octacosane (C28)	81		100		40-140	21		25
Triacontane (C30)	80		99		40-140	21		25
Hexatriacontane (C36)	78		95		40-140	20		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	68		91		40-140
o-Terphenyl	99		112		40-140
2-Fluorobiphenyl	95		97		40-140
2-Bromonaphthalene	99		101		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 21-23 Batch: WG961671-2 WG961671-3								
C9-C18 Aliphatics	81		67		40-140	19		25
C19-C36 Aliphatics	97		80		40-140	19		25
C11-C22 Aromatics	102		81		40-140	23		25
Naphthalene	81		65		40-140	22		25
2-Methylnaphthalene	82		66		40-140	22		25
Acenaphthylene	88		69		40-140	24		25
Acenaphthene	88		70		40-140	23		25
Fluorene	93		72		40-140	25		25
Phenanthrene	98		75		40-140	27	Q	25
Anthracene	100		75		40-140	29	Q	25
Fluoranthene	104		79		40-140	27	Q	25
Pyrene	105		80		40-140	27	Q	25
Benzo(a)anthracene	102		77		40-140	28	Q	25
Chrysene	113		81		40-140	33	Q	25
Benzo(b)fluoranthene	106		80		40-140	28	Q	25
Benzo(k)fluoranthene	106		78		40-140	30	Q	25
Benzo(a)pyrene	100		75		40-140	29	Q	25
Indeno(1,2,3-cd)Pyrene	104		78		40-140	29	Q	25
Dibenzo(a,h)anthracene	87		77		40-140	12		25
Benzo(ghi)perylene	98		74		40-140	28	Q	25
Nonane (C9)	63		51		30-140	21		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 21-23 Batch: WG961671-2 WG961671-3								
Decane (C10)	71		58		40-140	20		25
Dodecane (C12)	74		61		40-140	19		25
Tetradecane (C14)	77		63		40-140	20		25
Hexadecane (C16)	83		68		40-140	20		25
Octadecane (C18)	92		73		40-140	23		25
Nonadecane (C19)	93		74		40-140	23		25
Eicosane (C20)	94		75		40-140	22		25
Docosane (C22)	95		76		40-140	22		25
Tetracosane (C24)	95		76		40-140	22		25
Hexacosane (C26)	96		76		40-140	23		25
Octacosane (C28)	96		77		40-140	22		25
Triacontane (C30)	95		76		40-140	22		25
Hexatriacontane (C36)	86		76		40-140	12		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	79		69		40-140
o-Terphenyl	88		84		40-140
2-Fluorobiphenyl	87		89		40-140
2-Bromonaphthalene	89		90		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 13 Batch: WG962911-2 WG962911-3								
C9-C18 Aliphatics	78		77		40-140	1		25
C19-C36 Aliphatics	92		89		40-140	3		25
C11-C22 Aromatics	107		105		40-140	2		25
Naphthalene	82		83		40-140	1		25
2-Methylnaphthalene	86		86		40-140	0		25
Acenaphthylene	86		86		40-140	0		25
Acenaphthene	95		93		40-140	2		25
Fluorene	99		96		40-140	3		25
Phenanthrene	101		98		40-140	3		25
Anthracene	97		94		40-140	3		25
Fluoranthene	107		103		40-140	4		25
Pyrene	107		105		40-140	2		25
Benzo(a)anthracene	104		100		40-140	4		25
Chrysene	110		107		40-140	3		25
Benzo(b)fluoranthene	112		107		40-140	5		25
Benzo(k)fluoranthene	112		108		40-140	4		25
Benzo(a)pyrene	94		92		40-140	2		25
Indeno(1,2,3-cd)Pyrene	107		104		40-140	3		25
Dibenzo(a,h)anthracene	111		109		40-140	2		25
Benzo(ghi)perylene	99		97		40-140	2		25
Nonane (C9)	61		62		30-140	2		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 13 Batch: WG962911-2 WG962911-3								
Decane (C10)	68		70		40-140	3		25
Dodecane (C12)	74		75		40-140	1		25
Tetradecane (C14)	79		78		40-140	1		25
Hexadecane (C16)	83		80		40-140	4		25
Octadecane (C18)	86		84		40-140	2		25
Nonadecane (C19)	84		82		40-140	2		25
Eicosane (C20)	86		84		40-140	2		25
Docosane (C22)	87		85		40-140	2		25
Tetracosane (C24)	86		84		40-140	2		25
Hexacosane (C26)	86		84		40-140	2		25
Octacosane (C28)	86		85		40-140	1		25
Triacontane (C30)	87		86		40-140	1		25
Hexatriacontane (C36)	88		87		40-140	1		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	70		69		40-140
o-Terphenyl	107		104		40-140
2-Fluorobiphenyl	94		90		40-140
2-Bromonaphthalene	97		93		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

# **INORGANICS & MISCELLANEOUS**

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-01  
**Client ID:** B413 (11)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 10:15  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	81.3		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-02  
**Client ID:** B413 (14-15)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 10:25  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.3		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-03  
**Client ID:** B413 (23)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 10:40  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.6		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-04  
**Client ID:** B412 (11.5)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 11:35  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	59.9		%	0.100	NA	1	-	12/16/16 12:41	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-05  
**Client ID:** B412 (13)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 11:45  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.4		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-06  
**Client ID:** B412 (19)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 11:55  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.4		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-07

Date Collected: 12/12/16 13:25

Client ID: B411 (11.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.3		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640521-08

Date Collected: 12/12/16 13:35

Client ID: B411 (16)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	69.1		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

## SAMPLE RESULTS

Lab ID: L1640521-09

Date Collected: 12/12/16 13:40

Client ID: B411 (14)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.4		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-10  
**Client ID:** B410 (11)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 14:30  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	81.7		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

## SAMPLE RESULTS

Lab ID: L1640521-11

Date Collected: 12/12/16 14:35

Client ID: B410 (12.5)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.2		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

## SAMPLE RESULTS

Lab ID: L1640521-12

Date Collected: 12/12/16 14:40

Client ID: B410 (14)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.5		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-13  
**Client ID:** B409 (10)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 15:15  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.8		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-14  
**Client ID:** B409 (11.5)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/12/16 15:20  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.3		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-15  
**Client ID:** B408 (11)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/13/16 08:50  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.6		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-16  
**Client ID:** B408 (15)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/13/16 08:55  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.6		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

## SAMPLE RESULTS

Lab ID: L1640521-17

Date Collected: 12/13/16 11:20

Client ID: B414 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.8		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-18  
**Client ID:** B414 (15.5)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/13/16 11:25  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.2		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-19  
**Client ID:** B414 (14)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/13/16 11:28  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.6		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-20  
**Client ID:** B417 (11)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/13/16 12:54  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.1		%	0.100	NA	1	-	12/15/16 14:39	121,2540G	RI



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

## SAMPLE RESULTS

Lab ID: L1640521-21

Date Collected: 12/13/16 12:56

Client ID: B417 (15)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.6		%	0.100	NA	1	-	12/15/16 02:31	121,2540G	VB



Project Name: SPECTRA WEYMOUTH

Lab Number: L1640521

Project Number: 140143.0000.4903

Report Date: 12/22/16

## SAMPLE RESULTS

Lab ID: L1640521-22

Date Collected: 12/13/16 14:05

Client ID: B416 (11)

Date Received: 12/13/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.2		%	0.100	NA	1	-	12/15/16 02:31	121,2540G	VB



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640521-23  
**Client ID:** B416 (15)  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/13/16 14:00  
**Date Received:** 12/13/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.5		%	0.100	NA	1	-	12/15/16 02:31	121,2540G	VB



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1640521-01A	Glass 250ml/8oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-02A	Glass 250ml/8oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-03A	Glass 250ml/8oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-04A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-05A	Glass 250ml/8oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-06A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-07A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-08A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-09A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-10A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-11A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-12A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-13A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-14A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-15A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-16A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-17A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-18A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-19A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-20A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-21A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-22A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640521-23A	Glass 120ml/4oz unpreserved	A	N/A	5.0	Y	Absent	TS(7),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
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## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** Data Usability Report



**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
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#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** SPECTRA WEYMOUTH  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640521  
**Report Date:** 12/22/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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

L164052.1

10f2

## CHAIN OF CUSTODY RECORD

Project Name: Weymouth, MA Spectra Weymouth  
 Project No.: 140143.0000.4403  
 Sampling Date(s): 12/12/16 - 12/13/16  
 Laboratory: A1PUC Analytical  
 Laboratory P.O.: \_\_\_\_\_  
 Shipping Date(s): EMU1  
 Shipper's Name: Rmiles@TRCSolutions.com  
617-385-6033

Sample Code	Sampled Date	Container		MATRIX						Description	EPH	Comments	
		Time	G/P	Aqueous	Organic Solvent	Ash/Soil/Sediment (Solid)	Acidic	Basic	Other				
B413 (11)	12/12/16	1015											
B413 (14-15)		1025							X		X		
B413 (23)		1040											
B412 (11.5)		1135											
B412 (13)		1145											
B412 (14)		1155											
B411 (11.5)		1325											
B411 (16)		1335											
B411 (14)		1348											
B410 (11)		1430											
B410 (12.5)		1435											
B410 (14)		1440											
B409 (10)		1515											
B409 (11.5)		1520											
B408 (11)	12/13/16	0850											
B408 (15)		0855											
B414 (11)		1120											
B414 (15.5)		1135											

Relinquished by: COLUMBIA Date/Time: 12/13/16 1745 Relinquished by: Wen Moore Date/Time: 12/13/16 1748  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Remarks (\*): - Follow MCP Analytical Methods - Standard TAT - PM: Rick Arquette - Please email results to Rmiles@TRCSolutions.com

№ 0174

WHITE - Laboratory YELLOW - Laboratory Copy PINK - Office Copy GOLD - Field Copy

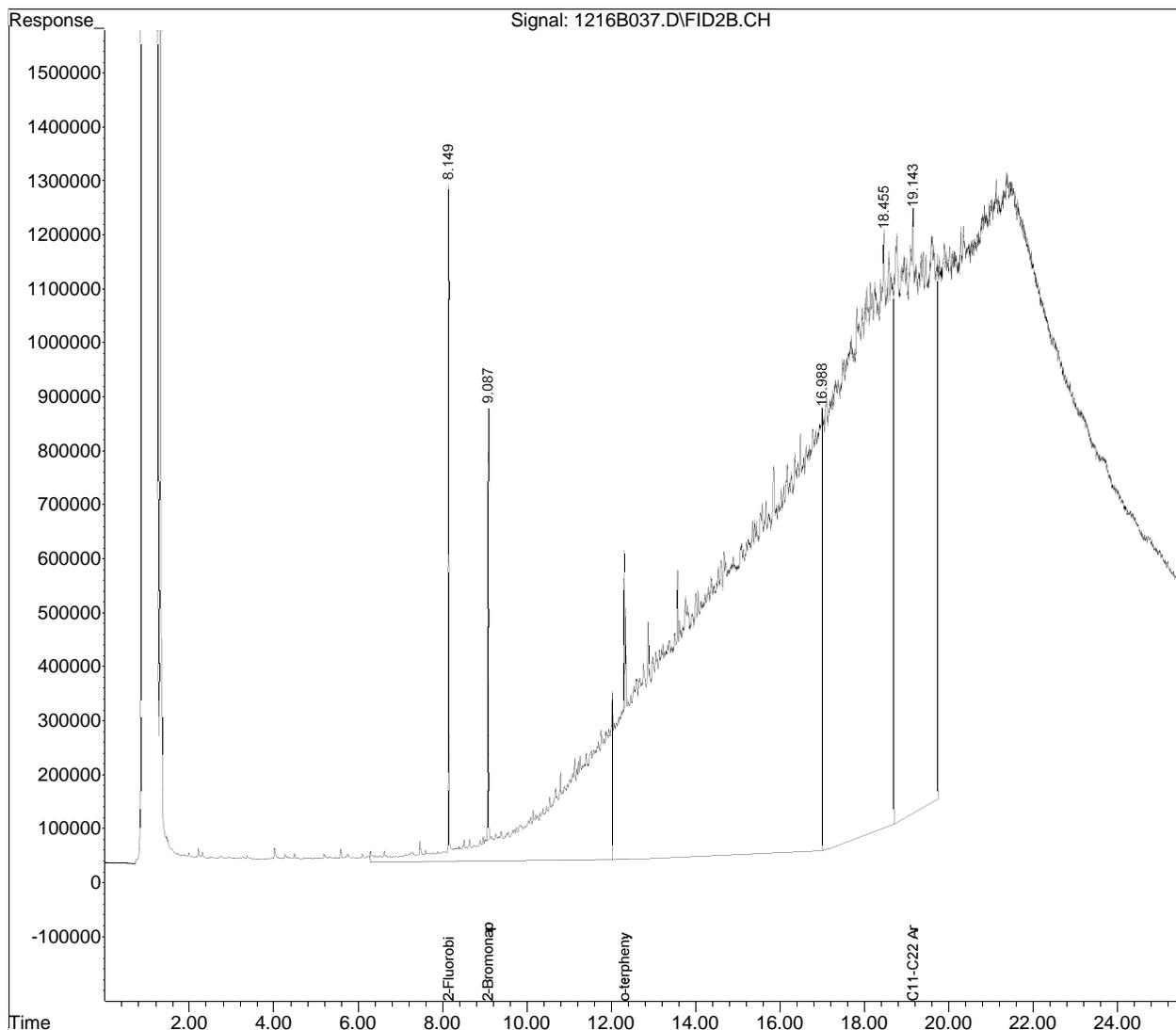


Sub List : Default - All compounds listed Reviewed)

Data Path : I:\Petro10\161216.sec\  
Data File : 1216B037.D  
Signal(s) : FID2B.CH  
Acq On : 17 Dec 2016 8:41 am  
Operator : Petro10b:ek  
Sample : 11640521-10d,42,10,5xfv2  
Misc : wg962095,wg961349,ical12178  
ALS Vial : 87 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Dec 19 16:40:35 2016  
Quant Method : I:\Petro10\161216.sec\MAARO160318.M  
Quant Title : MA EPH Aromatic  
QLast Update : Tue Nov 29 10:02:49 2016  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :  
Signal Phase :  
Signal Info :





## ANALYTICAL REPORT

Lab Number:	L1640742
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	Not Specified
Report Date:	12/21/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1640742-01	B-415-11.8	SOIL	WEYMOUTH, MA	12/14/16 08:35	12/14/16
L1640742-02	B-415-12.2	SOIL	WEYMOUTH, MA	12/14/16 08:40	12/14/16
L1640742-03	B-415-13.4	SOIL	WEYMOUTH, MA	12/14/16 08:45	12/14/16
L1640742-04	B-402-11.6	SOIL	WEYMOUTH, MA	12/14/16 10:10	12/14/16
L1640742-05	B-402-12.2	SOIL	WEYMOUTH, MA	12/14/16 10:15	12/14/16
L1640742-06	B-402-12.8	SOIL	WEYMOUTH, MA	12/14/16 10:20	12/14/16
L1640742-07	B-401-11.5	SOIL	WEYMOUTH, MA	12/14/16 11:00	12/14/16
L1640742-08	B-401-12.2	SOIL	WEYMOUTH, MA	12/14/16 11:10	12/14/16
L1640742-09	B-400-11.4	SOIL	WEYMOUTH, MA	12/14/16 11:50	12/14/16
L1640742-10	B-400-12.4	SOIL	WEYMOUTH, MA	12/14/16 11:55	12/14/16
L1640742-11	B-403-10	SOIL	WEYMOUTH, MA	12/14/16 13:05	12/14/16
L1640742-12	B-403-12	SOIL	WEYMOUTH, MA	12/14/16 13:10	12/14/16
L1640742-13	B-404-11.4	SOIL	WEYMOUTH, MA	12/14/16 13:50	12/14/16
L1640742-14	B-404-12	SOIL	WEYMOUTH, MA	12/14/16 14:00	12/14/16
L1640742-15	B-404-16.5	SOIL	WEYMOUTH, MA	12/14/16 14:10	12/14/16
L1640742-16	B-405-11.5	SOIL	WEYMOUTH, MA	12/14/16 14:40	12/14/16
L1640742-17	B-405-12.5	SOIL	WEYMOUTH, MA	12/14/16 14:50	12/14/16
L1640742-18	B-406-11.8	SOIL	WEYMOUTH, MA	12/14/16 15:10	12/14/16
L1640742-19	B-406-12.5	SOIL	WEYMOUTH, MA	12/14/16 15:20	12/14/16
L1640742-20	B-406-21	SOIL	WEYMOUTH, MA	12/14/16 15:30	12/14/16
L1640742-21	TB01	SOIL	WEYMOUTH, MA	12/14/16 15:22	12/14/16
L1640742-22	B-451-13.4	SOIL	WEYMOUTH, MA	12/14/16 08:45	12/14/16

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

### Case Narrative (continued)

#### MCP Related Narratives

##### VPH

L1640742-19 was outside the recommended 1:1 methanol:soil ratio, due to the amount of soil provided in the sample vial.

In reference to question H:

L1640742-19: The surrogate recoveries are outside the acceptance criteria for 2,5-dibromotoluene-pid (21%) and 2,5-dibromotoluene-fid (23%); however, the sample was not re-analyzed due to coelution with obvious interferences. A copy of the chromatogram is included as an attachment to this report. The results are not considered to be biased.

##### EPH

L1640742-01, -02, -14, -18, and -19: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the target compounds present in the sample.

L1640742-03 and -05: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

In reference to question G:

L1640742-01, -02, -03, -05, -14, -18, and -19: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L1640742-01, -02, -14, and -19: The surrogate recoveries are below the acceptance criteria for chlorooctadecane (0%) and o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

L1640742-18: The surrogate recovery is below the acceptance criteria for o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

The WG962237-2/-3 LCS/LCSD RPD, associated with L1640742-12 through -16, -18, -19, -20, and -22, is above the acceptance criteria for c19-c36 aliphatics (29%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cristin Walker

Title: Technical Director/Representative

Date: 12/21/16

# ORGANICS

# **PETROLEUM HYDROCARBONS**

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-01 D  
 Client ID: B-415-11.8  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 01:26  
 Analyst: SR  
 Percent Solids: 78%

Date Collected: 12/14/16 08:35  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	3250		mg/kg	162	--	20
C19-C36 Aliphatics	6670		mg/kg	162	--	20
C11-C22 Aromatics	8790		mg/kg	162	--	20
C11-C22 Aromatics, Adjusted	8790		mg/kg	162	--	20
Naphthalene	ND		mg/kg	8.08	--	20
2-Methylnaphthalene	ND		mg/kg	8.08	--	20
Acenaphthylene	ND		mg/kg	8.08	--	20
Acenaphthene	ND		mg/kg	8.08	--	20
Fluorene	ND		mg/kg	8.08	--	20
Phenanthrene	ND		mg/kg	8.08	--	20
Anthracene	ND		mg/kg	8.08	--	20
Fluoranthene	ND		mg/kg	8.08	--	20
Pyrene	ND		mg/kg	8.08	--	20
Benzo(a)anthracene	ND		mg/kg	8.08	--	20
Chrysene	ND		mg/kg	8.08	--	20
Benzo(b)fluoranthene	ND		mg/kg	8.08	--	20
Benzo(k)fluoranthene	ND		mg/kg	8.08	--	20
Benzo(a)pyrene	ND		mg/kg	8.08	--	20
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	8.08	--	20
Dibenzo(a,h)anthracene	ND		mg/kg	8.08	--	20
Benzo(ghi)perylene	ND		mg/kg	8.08	--	20

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-01 D

Date Collected: 12/14/16 08:35

Client ID: B-415-11.8

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	70		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-02 D  
 Client ID: B-415-12.2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 23:52  
 Analyst: SR  
 Percent Solids: 76%

Date Collected: 12/14/16 08:40  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	2680		mg/kg	262	--	30
C19-C36 Aliphatics	5500		mg/kg	262	--	30
C11-C22 Aromatics	5710		mg/kg	262	--	30
C11-C22 Aromatics, Adjusted	5710		mg/kg	262	--	30
Naphthalene	ND		mg/kg	13.1	--	30
2-Methylnaphthalene	ND		mg/kg	13.1	--	30
Acenaphthylene	ND		mg/kg	13.1	--	30
Acenaphthene	ND		mg/kg	13.1	--	30
Fluorene	ND		mg/kg	13.1	--	30
Phenanthrene	ND		mg/kg	13.1	--	30
Anthracene	ND		mg/kg	13.1	--	30
Fluoranthene	ND		mg/kg	13.1	--	30
Pyrene	ND		mg/kg	13.1	--	30
Benzo(a)anthracene	ND		mg/kg	13.1	--	30
Chrysene	ND		mg/kg	13.1	--	30
Benzo(b)fluoranthene	ND		mg/kg	13.1	--	30
Benzo(k)fluoranthene	ND		mg/kg	13.1	--	30
Benzo(a)pyrene	ND		mg/kg	13.1	--	30
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	13.1	--	30
Dibenzo(a,h)anthracene	ND		mg/kg	13.1	--	30
Benzo(ghi)perylene	ND		mg/kg	13.1	--	30

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-02 D

Date Collected: 12/14/16 08:40

Client ID: B-415-12.2

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	71		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-03 D  
 Client ID: B-415-13.4  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 00:24  
 Analyst: SR  
 Percent Solids: 71%

Date Collected: 12/14/16 08:45  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	1060		mg/kg	46.0	--	5
C19-C36 Aliphatics	1740		mg/kg	46.0	--	5
C11-C22 Aromatics	1890		mg/kg	46.0	--	5
C11-C22 Aromatics, Adjusted	1890		mg/kg	46.0	--	5
Naphthalene	ND		mg/kg	2.30	--	5
2-Methylnaphthalene	ND		mg/kg	2.30	--	5
Acenaphthylene	ND		mg/kg	2.30	--	5
Acenaphthene	ND		mg/kg	2.30	--	5
Fluorene	ND		mg/kg	2.30	--	5
Phenanthrene	ND		mg/kg	2.30	--	5
Anthracene	ND		mg/kg	2.30	--	5
Fluoranthene	ND		mg/kg	2.30	--	5
Pyrene	ND		mg/kg	2.30	--	5
Benzo(a)anthracene	ND		mg/kg	2.30	--	5
Chrysene	ND		mg/kg	2.30	--	5
Benzo(b)fluoranthene	ND		mg/kg	2.30	--	5
Benzo(k)fluoranthene	ND		mg/kg	2.30	--	5
Benzo(a)pyrene	ND		mg/kg	2.30	--	5
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	2.30	--	5
Dibenzo(a,h)anthracene	ND		mg/kg	2.30	--	5
Benzo(ghi)perylene	ND		mg/kg	2.30	--	5

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-03 D

Date Collected: 12/14/16 08:45

Client ID: B-415-13.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	76		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	82		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-04  
 Client ID: B-402-11.6  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 07:55  
 Analyst: EK  
 Percent Solids: 91%

Date Collected: 12/14/16 10:10  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.18	--	1
C19-C36 Aliphatics	ND		mg/kg	7.18	--	1
C11-C22 Aromatics	ND		mg/kg	7.18	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.18	--	1
Naphthalene	ND		mg/kg	0.359	--	1
2-Methylnaphthalene	ND		mg/kg	0.359	--	1
Acenaphthylene	ND		mg/kg	0.359	--	1
Acenaphthene	ND		mg/kg	0.359	--	1
Fluorene	ND		mg/kg	0.359	--	1
Phenanthrene	ND		mg/kg	0.359	--	1
Anthracene	ND		mg/kg	0.359	--	1
Fluoranthene	ND		mg/kg	0.359	--	1
Pyrene	ND		mg/kg	0.359	--	1
Benzo(a)anthracene	ND		mg/kg	0.359	--	1
Chrysene	ND		mg/kg	0.359	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.359	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.359	--	1
Benzo(a)pyrene	ND		mg/kg	0.359	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.359	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.359	--	1
Benzo(ghi)perylene	ND		mg/kg	0.359	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-04

Date Collected: 12/14/16 10:10

Client ID: B-402-11.6

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	75		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	78		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-05 D  
 Client ID: B-402-12.2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 00:55  
 Analyst: SR  
 Percent Solids: 91%

Date Collected: 12/14/16 10:15  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	353		mg/kg	14.2	--	2
C19-C36 Aliphatics	693		mg/kg	14.2	--	2
C11-C22 Aromatics	776		mg/kg	14.2	--	2
C11-C22 Aromatics, Adjusted	776		mg/kg	14.2	--	2
Naphthalene	ND		mg/kg	0.708	--	2
2-Methylnaphthalene	ND		mg/kg	0.708	--	2
Acenaphthylene	ND		mg/kg	0.708	--	2
Acenaphthene	ND		mg/kg	0.708	--	2
Fluorene	ND		mg/kg	0.708	--	2
Phenanthrene	ND		mg/kg	0.708	--	2
Anthracene	ND		mg/kg	0.708	--	2
Fluoranthene	ND		mg/kg	0.708	--	2
Pyrene	ND		mg/kg	0.708	--	2
Benzo(a)anthracene	ND		mg/kg	0.708	--	2
Chrysene	ND		mg/kg	0.708	--	2
Benzo(b)fluoranthene	ND		mg/kg	0.708	--	2
Benzo(k)fluoranthene	ND		mg/kg	0.708	--	2
Benzo(a)pyrene	ND		mg/kg	0.708	--	2
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.708	--	2
Dibenzo(a,h)anthracene	ND		mg/kg	0.708	--	2
Benzo(ghi)perylene	ND		mg/kg	0.708	--	2

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-05 D

Date Collected: 12/14/16 10:15

Client ID: B-402-12.2

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	76		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	93		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-06  
 Client ID: B-402-12.8  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 08:27  
 Analyst: EK  
 Percent Solids: 78%

Date Collected: 12/14/16 10:20  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.49	--	1
C19-C36 Aliphatics	ND		mg/kg	8.49	--	1
C11-C22 Aromatics	9.61		mg/kg	8.49	--	1
C11-C22 Aromatics, Adjusted	9.61		mg/kg	8.49	--	1
Naphthalene	ND		mg/kg	0.424	--	1
2-Methylnaphthalene	ND		mg/kg	0.424	--	1
Acenaphthylene	ND		mg/kg	0.424	--	1
Acenaphthene	ND		mg/kg	0.424	--	1
Fluorene	ND		mg/kg	0.424	--	1
Phenanthrene	ND		mg/kg	0.424	--	1
Anthracene	ND		mg/kg	0.424	--	1
Fluoranthene	ND		mg/kg	0.424	--	1
Pyrene	ND		mg/kg	0.424	--	1
Benzo(a)anthracene	ND		mg/kg	0.424	--	1
Chrysene	ND		mg/kg	0.424	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.424	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.424	--	1
Benzo(a)pyrene	ND		mg/kg	0.424	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.424	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.424	--	1
Benzo(ghi)perylene	ND		mg/kg	0.424	--	1

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-06

Date Collected: 12/14/16 10:20

Client ID: B-402-12.8

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	87		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	77		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-07  
 Client ID: B-401-11.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 08:58  
 Analyst: EK  
 Percent Solids: 58%

Date Collected: 12/14/16 11:00  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	11.1	--	1
C19-C36 Aliphatics	ND		mg/kg	11.1	--	1
C11-C22 Aromatics	ND		mg/kg	11.1	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	11.1	--	1
Naphthalene	ND		mg/kg	0.557	--	1
2-Methylnaphthalene	ND		mg/kg	0.557	--	1
Acenaphthylene	ND		mg/kg	0.557	--	1
Acenaphthene	ND		mg/kg	0.557	--	1
Fluorene	ND		mg/kg	0.557	--	1
Phenanthrene	ND		mg/kg	0.557	--	1
Anthracene	ND		mg/kg	0.557	--	1
Fluoranthene	ND		mg/kg	0.557	--	1
Pyrene	ND		mg/kg	0.557	--	1
Benzo(a)anthracene	ND		mg/kg	0.557	--	1
Chrysene	ND		mg/kg	0.557	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.557	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.557	--	1
Benzo(a)pyrene	ND		mg/kg	0.557	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.557	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.557	--	1
Benzo(ghi)perylene	ND		mg/kg	0.557	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-07

Date Collected: 12/14/16 11:00

Client ID: B-401-11.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	84		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	86		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-08  
 Client ID: B-401-12.2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 09:30  
 Analyst: EK  
 Percent Solids: 81%

Date Collected: 12/14/16 11:10  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.76	--	1
C19-C36 Aliphatics	ND		mg/kg	7.76	--	1
C11-C22 Aromatics	ND		mg/kg	7.76	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.76	--	1
Naphthalene	ND		mg/kg	0.388	--	1
2-Methylnaphthalene	ND		mg/kg	0.388	--	1
Acenaphthylene	ND		mg/kg	0.388	--	1
Acenaphthene	ND		mg/kg	0.388	--	1
Fluorene	ND		mg/kg	0.388	--	1
Phenanthrene	ND		mg/kg	0.388	--	1
Anthracene	ND		mg/kg	0.388	--	1
Fluoranthene	ND		mg/kg	0.388	--	1
Pyrene	ND		mg/kg	0.388	--	1
Benzo(a)anthracene	ND		mg/kg	0.388	--	1
Chrysene	ND		mg/kg	0.388	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.388	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.388	--	1
Benzo(a)pyrene	ND		mg/kg	0.388	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.388	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.388	--	1
Benzo(ghi)perylene	ND		mg/kg	0.388	--	1

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-08

Date Collected: 12/14/16 11:10

Client ID: B-401-12.2

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	77		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	87		40-140
2-Bromonaphthalene	85		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-09  
 Client ID: B-400-11.4  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 10:01  
 Analyst: EK  
 Percent Solids: 80%

Date Collected: 12/14/16 11:50  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	8.10	--	1
C19-C36 Aliphatics	ND		mg/kg	8.10	--	1
C11-C22 Aromatics	11.0		mg/kg	8.10	--	1
C11-C22 Aromatics, Adjusted	11.0		mg/kg	8.10	--	1
Naphthalene	ND		mg/kg	0.405	--	1
2-Methylnaphthalene	ND		mg/kg	0.405	--	1
Acenaphthylene	ND		mg/kg	0.405	--	1
Acenaphthene	ND		mg/kg	0.405	--	1
Fluorene	ND		mg/kg	0.405	--	1
Phenanthrene	ND		mg/kg	0.405	--	1
Anthracene	ND		mg/kg	0.405	--	1
Fluoranthene	ND		mg/kg	0.405	--	1
Pyrene	ND		mg/kg	0.405	--	1
Benzo(a)anthracene	ND		mg/kg	0.405	--	1
Chrysene	ND		mg/kg	0.405	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.405	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.405	--	1
Benzo(a)pyrene	ND		mg/kg	0.405	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.405	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.405	--	1
Benzo(ghi)perylene	ND		mg/kg	0.405	--	1

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-09

Date Collected: 12/14/16 11:50

Client ID: B-400-11.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	80		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-10  
 Client ID: B-400-12.4  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 10:32  
 Analyst: EK  
 Percent Solids: 70%

Date Collected: 12/14/16 11:55  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	9.26	--	1
C19-C36 Aliphatics	ND		mg/kg	9.26	--	1
C11-C22 Aromatics	15.0		mg/kg	9.26	--	1
C11-C22 Aromatics, Adjusted	15.0		mg/kg	9.26	--	1
Naphthalene	ND		mg/kg	0.463	--	1
2-Methylnaphthalene	ND		mg/kg	0.463	--	1
Acenaphthylene	ND		mg/kg	0.463	--	1
Acenaphthene	ND		mg/kg	0.463	--	1
Fluorene	ND		mg/kg	0.463	--	1
Phenanthrene	ND		mg/kg	0.463	--	1
Anthracene	ND		mg/kg	0.463	--	1
Fluoranthene	ND		mg/kg	0.463	--	1
Pyrene	ND		mg/kg	0.463	--	1
Benzo(a)anthracene	ND		mg/kg	0.463	--	1
Chrysene	ND		mg/kg	0.463	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.463	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.463	--	1
Benzo(a)pyrene	ND		mg/kg	0.463	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.463	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.463	--	1
Benzo(ghi)perylene	ND		mg/kg	0.463	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-10

Date Collected: 12/14/16 11:55

Client ID: B-400-12.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	80		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-11  
 Client ID: B-403-10  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/18/16 11:03  
 Analyst: EK  
 Percent Solids: 94%

Date Collected: 12/14/16 13:05  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/16/16 16:07  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/17/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	6.92	--	1
C19-C36 Aliphatics	ND		mg/kg	6.92	--	1
C11-C22 Aromatics	ND		mg/kg	6.92	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.92	--	1
Naphthalene	ND		mg/kg	0.346	--	1
2-Methylnaphthalene	ND		mg/kg	0.346	--	1
Acenaphthylene	ND		mg/kg	0.346	--	1
Acenaphthene	ND		mg/kg	0.346	--	1
Fluorene	ND		mg/kg	0.346	--	1
Phenanthrene	ND		mg/kg	0.346	--	1
Anthracene	ND		mg/kg	0.346	--	1
Fluoranthene	ND		mg/kg	0.346	--	1
Pyrene	ND		mg/kg	0.346	--	1
Benzo(a)anthracene	ND		mg/kg	0.346	--	1
Chrysene	ND		mg/kg	0.346	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.346	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.346	--	1
Benzo(a)pyrene	ND		mg/kg	0.346	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.346	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.346	--	1
Benzo(ghi)perylene	ND		mg/kg	0.346	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-11

Date Collected: 12/14/16 13:05

Client ID: B-403-10

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	84		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-12  
 Client ID: B-403-12  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/19/16 20:24  
 Analyst: EK  
 Percent Solids: 90%

Date Collected: 12/14/16 13:10  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.29	--	1
C19-C36 Aliphatics	ND		mg/kg	7.29	--	1
C11-C22 Aromatics	ND		mg/kg	7.29	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.29	--	1
Naphthalene	ND		mg/kg	0.364	--	1
2-Methylnaphthalene	ND		mg/kg	0.364	--	1
Acenaphthylene	ND		mg/kg	0.364	--	1
Acenaphthene	ND		mg/kg	0.364	--	1
Fluorene	ND		mg/kg	0.364	--	1
Phenanthrene	ND		mg/kg	0.364	--	1
Anthracene	ND		mg/kg	0.364	--	1
Fluoranthene	ND		mg/kg	0.364	--	1
Pyrene	ND		mg/kg	0.364	--	1
Benzo(a)anthracene	ND		mg/kg	0.364	--	1
Chrysene	ND		mg/kg	0.364	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.364	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.364	--	1
Benzo(a)pyrene	ND		mg/kg	0.364	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.364	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.364	--	1
Benzo(ghi)perylene	ND		mg/kg	0.364	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-12

Date Collected: 12/14/16 13:10

Client ID: B-403-12

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	80		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-13  
 Client ID: B-404-11.4  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/19/16 20:55  
 Analyst: EK  
 Percent Solids: 82%

Date Collected: 12/14/16 13:50  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	165		mg/kg	8.08	--	1
C19-C36 Aliphatics	278		mg/kg	8.08	--	1
C11-C22 Aromatics	708		mg/kg	8.08	--	1
C11-C22 Aromatics, Adjusted	704		mg/kg	8.08	--	1
Naphthalene	ND		mg/kg	0.404	--	1
2-Methylnaphthalene	ND		mg/kg	0.404	--	1
Acenaphthylene	ND		mg/kg	0.404	--	1
Acenaphthene	ND		mg/kg	0.404	--	1
Fluorene	ND		mg/kg	0.404	--	1
Phenanthrene	1.61		mg/kg	0.404	--	1
Anthracene	ND		mg/kg	0.404	--	1
Fluoranthene	ND		mg/kg	0.404	--	1
Pyrene	1.08		mg/kg	0.404	--	1
Benzo(a)anthracene	ND		mg/kg	0.404	--	1
Chrysene	1.19		mg/kg	0.404	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.404	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.404	--	1
Benzo(a)pyrene	ND		mg/kg	0.404	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.404	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.404	--	1
Benzo(ghi)perylene	ND		mg/kg	0.404	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-13

Date Collected: 12/14/16 13:50

Client ID: B-404-11.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	114		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	100		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-14 D  
 Client ID: B-404-12  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 22:19  
 Analyst: SR  
 Percent Solids: 76%

Date Collected: 12/14/16 14:00  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/20/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	12700		mg/kg	495	--	60
C19-C36 Aliphatics	22000		mg/kg	495	--	60
C11-C22 Aromatics	27800		mg/kg	495	--	60
C11-C22 Aromatics, Adjusted	27800		mg/kg	495	--	60
Naphthalene	ND		mg/kg	24.8	--	60
2-Methylnaphthalene	ND		mg/kg	24.8	--	60
Acenaphthylene	ND		mg/kg	24.8	--	60
Acenaphthene	ND		mg/kg	24.8	--	60
Fluorene	ND		mg/kg	24.8	--	60
Phenanthrene	ND		mg/kg	24.8	--	60
Anthracene	ND		mg/kg	24.8	--	60
Fluoranthene	ND		mg/kg	24.8	--	60
Pyrene	ND		mg/kg	24.8	--	60
Benzo(a)anthracene	ND		mg/kg	24.8	--	60
Chrysene	ND		mg/kg	24.8	--	60
Benzo(b)fluoranthene	ND		mg/kg	24.8	--	60
Benzo(k)fluoranthene	ND		mg/kg	24.8	--	60
Benzo(a)pyrene	ND		mg/kg	24.8	--	60
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	24.8	--	60
Dibenzo(a,h)anthracene	ND		mg/kg	24.8	--	60
Benzo(ghi)perylene	ND		mg/kg	24.8	--	60

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-14 D

Date Collected: 12/14/16 14:00

Client ID: B-404-12

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	97		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-15  
 Client ID: B-404-16.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 19:09  
 Analyst: SR  
 Percent Solids: 87%

Date Collected: 12/14/16 14:10  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.55	--	1
C19-C36 Aliphatics	ND		mg/kg	7.55	--	1
C11-C22 Aromatics	9.87		mg/kg	7.55	--	1
C11-C22 Aromatics, Adjusted	9.87		mg/kg	7.55	--	1
Naphthalene	ND		mg/kg	0.377	--	1
2-Methylnaphthalene	ND		mg/kg	0.377	--	1
Acenaphthylene	ND		mg/kg	0.377	--	1
Acenaphthene	ND		mg/kg	0.377	--	1
Fluorene	ND		mg/kg	0.377	--	1
Phenanthrene	ND		mg/kg	0.377	--	1
Anthracene	ND		mg/kg	0.377	--	1
Fluoranthene	ND		mg/kg	0.377	--	1
Pyrene	ND		mg/kg	0.377	--	1
Benzo(a)anthracene	ND		mg/kg	0.377	--	1
Chrysene	ND		mg/kg	0.377	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.377	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.377	--	1
Benzo(a)pyrene	ND		mg/kg	0.377	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.377	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.377	--	1
Benzo(ghi)perylene	ND		mg/kg	0.377	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-15

Date Collected: 12/14/16 14:10

Client ID: B-404-16.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	95		40-140
2-Fluorobiphenyl	95		40-140
2-Bromonaphthalene	94		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-16  
 Client ID: B-405-11.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 18:38  
 Analyst: SR  
 Percent Solids: 52%

Date Collected: 12/14/16 14:40  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	12.7	--	1
C19-C36 Aliphatics	ND		mg/kg	12.7	--	1
C11-C22 Aromatics	59.0		mg/kg	12.7	--	1
C11-C22 Aromatics, Adjusted	49.7		mg/kg	12.7	--	1
Naphthalene	ND		mg/kg	0.636	--	1
2-Methylnaphthalene	0.675		mg/kg	0.636	--	1
Acenaphthylene	ND		mg/kg	0.636	--	1
Acenaphthene	ND		mg/kg	0.636	--	1
Fluorene	ND		mg/kg	0.636	--	1
Phenanthrene	1.99		mg/kg	0.636	--	1
Anthracene	ND		mg/kg	0.636	--	1
Fluoranthene	1.13		mg/kg	0.636	--	1
Pyrene	1.67		mg/kg	0.636	--	1
Benzo(a)anthracene	0.943		mg/kg	0.636	--	1
Chrysene	1.42		mg/kg	0.636	--	1
Benzo(b)fluoranthene	0.655		mg/kg	0.636	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.636	--	1
Benzo(a)pyrene	0.799		mg/kg	0.636	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.636	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.636	--	1
Benzo(ghi)perylene	ND		mg/kg	0.636	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-16

Date Collected: 12/14/16 14:40

Client ID: B-405-11.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	65		40-140
o-Terphenyl	103		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	96		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-17  
 Client ID: B-405-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 13:51  
 Analyst: EK  
 Percent Solids: 85%

Date Collected: 12/14/16 14:50  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/20/16 23:16  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/21/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.65	--	1
C19-C36 Aliphatics	ND		mg/kg	7.65	--	1
C11-C22 Aromatics	ND		mg/kg	7.65	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.65	--	1
Naphthalene	ND		mg/kg	0.383	--	1
2-Methylnaphthalene	ND		mg/kg	0.383	--	1
Acenaphthylene	ND		mg/kg	0.383	--	1
Acenaphthene	ND		mg/kg	0.383	--	1
Fluorene	ND		mg/kg	0.383	--	1
Phenanthrene	ND		mg/kg	0.383	--	1
Anthracene	ND		mg/kg	0.383	--	1
Fluoranthene	ND		mg/kg	0.383	--	1
Pyrene	ND		mg/kg	0.383	--	1
Benzo(a)anthracene	ND		mg/kg	0.383	--	1
Chrysene	ND		mg/kg	0.383	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.383	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.383	--	1
Benzo(a)pyrene	ND		mg/kg	0.383	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.383	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.383	--	1
Benzo(ghi)perylene	ND		mg/kg	0.383	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-17

Date Collected: 12/14/16 14:50

Client ID: B-405-12.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	98		40-140
2-Fluorobiphenyl	92		40-140
2-Bromonaphthalene	90		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-18 D  
 Client ID: B-406-11.8  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 22:50  
 Analyst: SR  
 Percent Solids: 64%

Date Collected: 12/14/16 15:10  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/20/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	5360		mg/kg	205	--	20
C19-C36 Aliphatics	12000		mg/kg	205	--	20
C11-C22 Aromatics	13400		mg/kg	205	--	20
C11-C22 Aromatics, Adjusted	13400		mg/kg	205	--	20
Naphthalene	ND		mg/kg	10.2	--	20
2-Methylnaphthalene	ND		mg/kg	10.2	--	20
Acenaphthylene	ND		mg/kg	10.2	--	20
Acenaphthene	ND		mg/kg	10.2	--	20
Fluorene	ND		mg/kg	10.2	--	20
Phenanthrene	ND		mg/kg	10.2	--	20
Anthracene	ND		mg/kg	10.2	--	20
Fluoranthene	ND		mg/kg	10.2	--	20
Pyrene	ND		mg/kg	10.2	--	20
Benzo(a)anthracene	ND		mg/kg	10.2	--	20
Chrysene	ND		mg/kg	10.2	--	20
Benzo(b)fluoranthene	ND		mg/kg	10.2	--	20
Benzo(k)fluoranthene	ND		mg/kg	10.2	--	20
Benzo(a)pyrene	ND		mg/kg	10.2	--	20
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	10.2	--	20
Dibenzo(a,h)anthracene	ND		mg/kg	10.2	--	20
Benzo(ghi)perylene	ND		mg/kg	10.2	--	20

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-18 D

Date Collected: 12/14/16 15:10

Client ID: B-406-11.8

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	69		40-140

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-19 D  
 Client ID: B-406-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 12/21/16 02:58  
 Analyst: KD  
 Percent Solids: 90%

Date Collected: 12/14/16 15:20  
 Date Received: 12/14/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1.6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	63.0		mg/kg	10.7	--	5
C9-C12 Aliphatics	423		mg/kg	10.7	--	5
C9-C10 Aromatics	44.2		mg/kg	10.7	--	5
C5-C8 Aliphatics, Adjusted	63.0		mg/kg	10.7	--	5
C9-C12 Aliphatics, Adjusted	375		mg/kg	10.7	--	5
Benzene	ND		mg/kg	0.430	--	5
Toluene	ND		mg/kg	0.430	--	5
Ethylbenzene	3.89		mg/kg	0.430	--	5
p/m-Xylene	ND		mg/kg	0.430	--	5
o-Xylene	ND		mg/kg	0.430	--	5
Methyl tert butyl ether	ND		mg/kg	0.215	--	5
Naphthalene	17.3		mg/kg	0.859	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	21	Q	70-130
2,5-Dibromotoluene-FID	23	Q	70-130

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-19 D  
 Client ID: B-406-12.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 23:21  
 Analyst: SR  
 Percent Solids: 90%

Date Collected: 12/14/16 15:20  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/20/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	11200		mg/kg	290	--	40
C19-C36 Aliphatics	16800		mg/kg	290	--	40
C11-C22 Aromatics	20100		mg/kg	290	--	40
C11-C22 Aromatics, Adjusted	20000		mg/kg	290	--	40
Naphthalene	19.6		mg/kg	14.5	--	40
2-Methylnaphthalene	73.4		mg/kg	14.5	--	40
Acenaphthylene	ND		mg/kg	14.5	--	40
Acenaphthene	ND		mg/kg	14.5	--	40
Fluorene	ND		mg/kg	14.5	--	40
Phenanthrene	28.4		mg/kg	14.5	--	40
Anthracene	ND		mg/kg	14.5	--	40
Fluoranthene	ND		mg/kg	14.5	--	40
Pyrene	ND		mg/kg	14.5	--	40
Benzo(a)anthracene	ND		mg/kg	14.5	--	40
Chrysene	ND		mg/kg	14.5	--	40
Benzo(b)fluoranthene	ND		mg/kg	14.5	--	40
Benzo(k)fluoranthene	ND		mg/kg	14.5	--	40
Benzo(a)pyrene	ND		mg/kg	14.5	--	40
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	14.5	--	40
Dibenzo(a,h)anthracene	ND		mg/kg	14.5	--	40
Benzo(ghi)perylene	ND		mg/kg	14.5	--	40

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-19 D

Date Collected: 12/14/16 15:20

Client ID: B-406-12.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	94		40-140
2-Bromonaphthalene	90		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-20  
 Client ID: B-406-21  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 18:07  
 Analyst: SR  
 Percent Solids: 88%

Date Collected: 12/14/16 15:30  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.14	--	1
C19-C36 Aliphatics	ND		mg/kg	7.14	--	1
C11-C22 Aromatics	ND		mg/kg	7.14	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.14	--	1
Naphthalene	ND		mg/kg	0.357	--	1
2-Methylnaphthalene	ND		mg/kg	0.357	--	1
Acenaphthylene	ND		mg/kg	0.357	--	1
Acenaphthene	ND		mg/kg	0.357	--	1
Fluorene	ND		mg/kg	0.357	--	1
Phenanthrene	ND		mg/kg	0.357	--	1
Anthracene	ND		mg/kg	0.357	--	1
Fluoranthene	ND		mg/kg	0.357	--	1
Pyrene	ND		mg/kg	0.357	--	1
Benzo(a)anthracene	ND		mg/kg	0.357	--	1
Chrysene	ND		mg/kg	0.357	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.357	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.357	--	1
Benzo(a)pyrene	ND		mg/kg	0.357	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.357	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.357	--	1
Benzo(ghi)perylene	ND		mg/kg	0.357	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-20

Date Collected: 12/14/16 15:30

Client ID: B-406-21

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	75		40-140
o-Terphenyl	94		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	95		40-140

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-21  
 Client ID: TB01  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 12/20/16 14:54  
 Analyst: KD  
 Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 12/14/16 15:22  
 Date Received: 12/14/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Sample Temperature upon receipt: Received on Ice  
 Were samples received in methanol? Covering the Soil  
 Methanol ratio: 1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	2.67	--	1
C9-C12 Aliphatics	ND		mg/kg	2.67	--	1
C9-C10 Aromatics	ND		mg/kg	2.67	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	2.67	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	2.67	--	1
Benzene	ND		mg/kg	0.107	--	1
Toluene	ND		mg/kg	0.107	--	1
Ethylbenzene	ND		mg/kg	0.107	--	1
p/m-Xylene	ND		mg/kg	0.107	--	1
o-Xylene	ND		mg/kg	0.107	--	1
Methyl tert butyl ether	ND		mg/kg	0.053	--	1
Naphthalene	ND		mg/kg	0.213	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	89		70-130
2,5-Dibromotoluene-FID	94		70-130

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-22  
 Client ID: B-451-13.4  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/20/16 03:14  
 Analyst: DV  
 Percent Solids: 74%

Date Collected: 12/14/16 08:45  
 Date Received: 12/14/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/17/16 06:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/19/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	510		mg/kg	8.69	--	1
C19-C36 Aliphatics	712		mg/kg	8.69	--	1
C11-C22 Aromatics	868		mg/kg	8.69	--	1
C11-C22 Aromatics, Adjusted	866		mg/kg	8.69	--	1
Naphthalene	ND		mg/kg	0.434	--	1
2-Methylnaphthalene	0.675		mg/kg	0.434	--	1
Acenaphthylene	ND		mg/kg	0.434	--	1
Acenaphthene	ND		mg/kg	0.434	--	1
Fluorene	ND		mg/kg	0.434	--	1
Phenanthrene	ND		mg/kg	0.434	--	1
Anthracene	ND		mg/kg	0.434	--	1
Fluoranthene	ND		mg/kg	0.434	--	1
Pyrene	ND		mg/kg	0.434	--	1
Benzo(a)anthracene	0.670		mg/kg	0.434	--	1
Chrysene	0.781		mg/kg	0.434	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.434	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.434	--	1
Benzo(a)pyrene	ND		mg/kg	0.434	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.434	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.434	--	1
Benzo(ghi)perylene	ND		mg/kg	0.434	--	1

**Project Name:** WEYMOUTH C/S**Lab Number:** L1640742**Project Number:** Not Specified**Report Date:** 12/21/16**SAMPLE RESULTS**

Lab ID: L1640742-22

Date Collected: 12/14/16 08:45

Client ID: B-451-13.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	67		40-140
o-Terphenyl	91		40-140
2-Fluorobiphenyl	106		40-140
2-Bromonaphthalene	106		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

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

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 12/18/16 01:09  
Analyst: NS

Extraction Method: EPA 3546  
Extraction Date: 12/16/16 16:07  
Cleanup Method: EPH-04-1  
Cleanup Date: 12/17/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-11 Batch: WG962109-1					
C9-C18 Aliphatics	ND		mg/kg	6.33	--
C19-C36 Aliphatics	ND		mg/kg	6.33	--
C11-C22 Aromatics	ND		mg/kg	6.33	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.33	--
Naphthalene	ND		mg/kg	0.316	--
2-Methylnaphthalene	ND		mg/kg	0.316	--
Acenaphthylene	ND		mg/kg	0.316	--
Acenaphthene	ND		mg/kg	0.316	--
Fluorene	ND		mg/kg	0.316	--
Phenanthrene	ND		mg/kg	0.316	--
Anthracene	ND		mg/kg	0.316	--
Fluoranthene	ND		mg/kg	0.316	--
Pyrene	ND		mg/kg	0.316	--
Benzo(a)anthracene	ND		mg/kg	0.316	--
Chrysene	ND		mg/kg	0.316	--
Benzo(b)fluoranthene	ND		mg/kg	0.316	--
Benzo(k)fluoranthene	ND		mg/kg	0.316	--
Benzo(a)pyrene	ND		mg/kg	0.316	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.316	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.316	--
Benzo(ghi)perylene	ND		mg/kg	0.316	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	88		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 12/19/16 18:51  
**Analyst:** EK

**Extraction Method:** EPA 3546  
**Extraction Date:** 12/17/16 06:19  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 12/19/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 12-16,18-20,22 Batch: WG962237-1					
C9-C18 Aliphatics	ND		mg/kg	6.33	--
C19-C36 Aliphatics	ND		mg/kg	6.33	--
C11-C22 Aromatics	ND		mg/kg	6.33	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.33	--
Naphthalene	ND		mg/kg	0.317	--
2-Methylnaphthalene	ND		mg/kg	0.317	--
Acenaphthylene	ND		mg/kg	0.317	--
Acenaphthene	ND		mg/kg	0.317	--
Fluorene	ND		mg/kg	0.317	--
Phenanthrene	ND		mg/kg	0.317	--
Anthracene	ND		mg/kg	0.317	--
Fluoranthene	ND		mg/kg	0.317	--
Pyrene	ND		mg/kg	0.317	--
Benzo(a)anthracene	ND		mg/kg	0.317	--
Chrysene	ND		mg/kg	0.317	--
Benzo(b)fluoranthene	ND		mg/kg	0.317	--
Benzo(k)fluoranthene	ND		mg/kg	0.317	--
Benzo(a)pyrene	ND		mg/kg	0.317	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.317	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.317	--
Benzo(ghi)perylene	ND		mg/kg	0.317	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 12/19/16 18:51  
**Analyst:** EK

**Extraction Method:** EPA 3546  
**Extraction Date:** 12/17/16 06:19  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 12/19/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 12-16,18-20,22 Batch: WG962237-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	65		40-140
o-Terphenyl	89		40-140
2-Fluorobiphenyl	96		40-140
2-Bromonaphthalene	95		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 12/21/16 11:46  
**Analyst:** EK

**Extraction Method:** EPA 3546  
**Extraction Date:** 12/20/16 09:04  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 12/21/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 17 Batch: WG962911-1					
C9-C18 Aliphatics	ND		mg/kg	6.45	--
C19-C36 Aliphatics	ND		mg/kg	6.45	--
C11-C22 Aromatics	ND		mg/kg	6.45	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.45	--
Naphthalene	ND		mg/kg	0.322	--
2-Methylnaphthalene	ND		mg/kg	0.322	--
Acenaphthylene	ND		mg/kg	0.322	--
Acenaphthene	ND		mg/kg	0.322	--
Fluorene	ND		mg/kg	0.322	--
Phenanthrene	ND		mg/kg	0.322	--
Anthracene	ND		mg/kg	0.322	--
Fluoranthene	ND		mg/kg	0.322	--
Pyrene	ND		mg/kg	0.322	--
Benzo(a)anthracene	ND		mg/kg	0.322	--
Chrysene	ND		mg/kg	0.322	--
Benzo(b)fluoranthene	ND		mg/kg	0.322	--
Benzo(k)fluoranthene	ND		mg/kg	0.322	--
Benzo(a)pyrene	ND		mg/kg	0.322	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.322	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.322	--
Benzo(ghi)perylene	ND		mg/kg	0.322	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	99		40-140
2-Fluorobiphenyl	94		40-140
2-Bromonaphthalene	95		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 12/20/16 09:52  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 19,21 Batch: WG963463-3					
C5-C8 Aliphatics	ND		mg/kg	2.67	--
C9-C12 Aliphatics	ND		mg/kg	2.67	--
C9-C10 Aromatics	ND		mg/kg	2.67	--
C5-C8 Aliphatics, Adjusted	ND		mg/kg	2.67	--
C9-C12 Aliphatics, Adjusted	ND		mg/kg	2.67	--
Benzene	ND		mg/kg	0.107	--
Toluene	ND		mg/kg	0.107	--
Ethylbenzene	ND		mg/kg	0.107	--
p/m-Xylene	ND		mg/kg	0.107	--
o-Xylene	ND		mg/kg	0.107	--
Methyl tert butyl ether	ND		mg/kg	0.053	--
Naphthalene	ND		mg/kg	0.213	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	87		70-130
2,5-Dibromotoluene-FID	90		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-11 Batch: WG962109-2 WG962109-3								
C9-C18 Aliphatics	60		60		40-140	0		25
C19-C36 Aliphatics	72		71		40-140	1		25
C11-C22 Aromatics	89		98		40-140	10		25
Naphthalene	65		69		40-140	6		25
2-Methylnaphthalene	67		70		40-140	4		25
Acenaphthylene	70		72		40-140	3		25
Acenaphthene	74		78		40-140	5		25
Fluorene	78		82		40-140	5		25
Phenanthrene	82		87		40-140	6		25
Anthracene	81		86		40-140	6		25
Fluoranthene	87		93		40-140	7		25
Pyrene	88		94		40-140	7		25
Benzo(a)anthracene	85		91		40-140	7		25
Chrysene	89		96		40-140	8		25
Benzo(b)fluoranthene	89		96		40-140	8		25
Benzo(k)fluoranthene	88		95		40-140	8		25
Benzo(a)pyrene	80		84		40-140	5		25
Indeno(1,2,3-cd)Pyrene	90		95		40-140	5		25
Dibenzo(a,h)anthracene	88		94		40-140	7		25
Benzo(ghi)perylene	86		91		40-140	6		25
Nonane (C9)	47		47		30-140	0		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-11 Batch: WG962109-2 WG962109-3								
Decane (C10)	53		52		40-140	2		25
Dodecane (C12)	55		54		40-140	2		25
Tetradecane (C14)	56		55		40-140	2		25
Hexadecane (C16)	60		60		40-140	0		25
Octadecane (C18)	64		64		40-140	0		25
Nonadecane (C19)	64		65		40-140	2		25
Eicosane (C20)	66		66		40-140	0		25
Docosane (C22)	67		67		40-140	0		25
Tetracosane (C24)	67		67		40-140	0		25
Hexacosane (C26)	67		67		40-140	0		25
Octacosane (C28)	67		67		40-140	0		25
Triacontane (C30)	66		66		40-140	0		25
Hexatriacontane (C36)	66		65		40-140	2		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	61		54		40-140
o-Terphenyl	118		131		40-140
2-Fluorobiphenyl	85		89		40-140
2-Bromonaphthalene	89		93		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 12-16,18-20,22 Batch: WG962237-2 WG962237-3								
C9-C18 Aliphatics	74		76		40-140	3		25
C19-C36 Aliphatics	63		84		40-140	29	Q	25
C11-C22 Aromatics	80		97		40-140	19		25
Naphthalene	68		83		40-140	20		25
2-Methylnaphthalene	69		84		40-140	20		25
Acenaphthylene	66		81		40-140	20		25
Acenaphthene	73		88		40-140	19		25
Fluorene	74		91		40-140	21		25
Phenanthrene	75		91		40-140	19		25
Anthracene	70		86		40-140	21		25
Fluoranthene	78		95		40-140	20		25
Pyrene	80		96		40-140	18		25
Benzo(a)anthracene	76		91		40-140	18		25
Chrysene	82		98		40-140	18		25
Benzo(b)fluoranthene	82		96		40-140	16		25
Benzo(k)fluoranthene	81		95		40-140	16		25
Benzo(a)pyrene	66		82		40-140	22		25
Indeno(1,2,3-cd)Pyrene	82		98		40-140	18		25
Dibenzo(a,h)anthracene	81		96		40-140	17		25
Benzo(ghi)perylene	78		94		40-140	19		25
Nonane (C9)	62		63		30-140	2		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

Parameter	LCS		LCSD		%Recovery		RPD	
	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 12-16,18-20,22 Batch: WG962237-2 WG962237-3								
Decane (C10)	68		69		40-140	1		25
Dodecane (C12)	69		71		40-140	3		25
Tetradecane (C14)	71		73		40-140	3		25
Hexadecane (C16)	74		75		40-140	1		25
Octadecane (C18)	78		78		40-140	0		25
Nonadecane (C19)	77		78		40-140	1		25
Eicosane (C20)	80		79		40-140	1		25
Docosane (C22)	80		80		40-140	0		25
Tetracosane (C24)	80		80		40-140	0		25
Hexacosane (C26)	80		80		40-140	0		25
Octacosane (C28)	80		80		40-140	0		25
Triacontane (C30)	79		79		40-140	0		25
Hexatriacontane (C36)	79		80		40-140	1		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	70		69		40-140
o-Terphenyl	81		95		40-140
2-Fluorobiphenyl	78		97		40-140
2-Bromonaphthalene	82		100		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 17 Batch: WG962911-2 WG962911-3								
C9-C18 Aliphatics	78		77		40-140	1		25
C19-C36 Aliphatics	92		89		40-140	3		25
C11-C22 Aromatics	107		105		40-140	2		25
Naphthalene	82		83		40-140	1		25
2-Methylnaphthalene	86		86		40-140	0		25
Acenaphthylene	86		86		40-140	0		25
Acenaphthene	95		93		40-140	2		25
Fluorene	99		96		40-140	3		25
Phenanthrene	101		98		40-140	3		25
Anthracene	97		94		40-140	3		25
Fluoranthene	107		103		40-140	4		25
Pyrene	107		105		40-140	2		25
Benzo(a)anthracene	104		100		40-140	4		25
Chrysene	110		107		40-140	3		25
Benzo(b)fluoranthene	112		107		40-140	5		25
Benzo(k)fluoranthene	112		108		40-140	4		25
Benzo(a)pyrene	94		92		40-140	2		25
Indeno(1,2,3-cd)Pyrene	107		104		40-140	3		25
Dibenzo(a,h)anthracene	111		109		40-140	2		25
Benzo(ghi)perylene	99		97		40-140	2		25
Nonane (C9)	61		62		30-140	2		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 17 Batch: WG962911-2 WG962911-3								
Decane (C10)	68		70		40-140	3		25
Dodecane (C12)	74		75		40-140	1		25
Tetradecane (C14)	79		78		40-140	1		25
Hexadecane (C16)	83		80		40-140	4		25
Octadecane (C18)	86		84		40-140	2		25
Nonadecane (C19)	84		82		40-140	2		25
Eicosane (C20)	86		84		40-140	2		25
Docosane (C22)	87		85		40-140	2		25
Tetracosane (C24)	86		84		40-140	2		25
Hexacosane (C26)	86		84		40-140	2		25
Octacosane (C28)	86		85		40-140	1		25
Triacontane (C30)	87		86		40-140	1		25
Hexatriacontane (C36)	88		87		40-140	1		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	70		69		40-140
o-Terphenyl	107		104		40-140
2-Fluorobiphenyl	94		90		40-140
2-Bromonaphthalene	97		93		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 19,21 Batch: WG963463-1 WG963463-2								
C5-C8 Aliphatics	97		97		70-130	0		25
C9-C12 Aliphatics	105		104		70-130	1		25
C9-C10 Aromatics	96		96		70-130	0		25
Benzene	93		94		70-130	1		25
Toluene	93		94		70-130	1		25
Ethylbenzene	95		95		70-130	1		25
p/m-Xylene	95		95		70-130	1		25
o-Xylene	95		96		70-130	1		25
Methyl tert butyl ether	94		95		70-130	2		25
Naphthalene	96		97		70-130	1		25
1,2,4-Trimethylbenzene	96		96		70-130	0		25
Pentane	89		88		70-130	0		25
2-Methylpentane	96		96		70-130	0		25
2,2,4-Trimethylpentane	103		102		70-130	1		25
n-Nonane	104		104		30-130	0		25
n-Decane	105		104		70-130	1		25
n-Butylcyclohexane	106		106		70-130	0		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 19,21 Batch: WG963463-1 WG963463-2								

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
2,5-Dibromotoluene-PID	93		93		70-130
2,5-Dibromotoluene-FID	97		96		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-01  
**Client ID:** B-415-11.8  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 08:35  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.7		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-02  
**Client ID:** B-415-12.2  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 08:40  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.1		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-03  
**Client ID:** B-415-13.4  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 08:45  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	71.0		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-04  
**Client ID:** B-402-11.6  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 10:10  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.8		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-05  
**Client ID:** B-402-12.2  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 10:15  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.4		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

## SAMPLE RESULTS

Lab ID: L1640742-06

Date Collected: 12/14/16 10:20

Client ID: B-402-12.8

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.0		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-07

Date Collected: 12/14/16 11:00

Client ID: B-401-11.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	57.9		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-08  
**Client ID:** B-401-12.2  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 11:10  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.0		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-09

Date Collected: 12/14/16 11:50

Client ID: B-400-11.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.1		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-10

Date Collected: 12/14/16 11:55

Client ID: B-400-12.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.4		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-11  
**Client ID:** B-403-10  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 13:05  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.4		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-12  
**Client ID:** B-403-12  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 13:10  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.1		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-13

Date Collected: 12/14/16 13:50

Client ID: B-404-11.4

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.0		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-14  
**Client ID:** B-404-12  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 14:00  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.9		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-15  
**Client ID:** B-404-16.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 14:10  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

**SAMPLE RESULTS**

Lab ID: L1640742-16

Date Collected: 12/14/16 14:40

Client ID: B-405-11.5

Date Received: 12/14/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	51.7		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-17  
**Client ID:** B-405-12.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 14:50  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.4		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-18  
**Client ID:** B-406-11.8  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 15:10  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	64.4		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-19  
**Client ID:** B-406-12.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 15:20  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.4		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-20  
**Client ID:** B-406-21  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 15:30  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.7		%	0.100	NA	1	-	12/15/16 04:13	121,2540G	VB



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

**SAMPLE RESULTS**

**Lab ID:** L1640742-22  
**Client ID:** B-451-13.4  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/14/16 08:45  
**Date Received:** 12/14/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.9		%	0.100	NA	1	-	12/15/16 02:47	121,2540G	VB



## Lab Duplicate Analysis

Batch Quality Control

Project Name: WEYMOUTH C/S

Project Number: Not Specified

Lab Number: L1640742

Report Date: 12/21/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-20 QC Batch ID: WG961361-1 QC Sample: L1640742-01 Client ID: B-415-11.8						
Solids, Total	77.7	77.3	%	1		20

Project Name: WEYMOUTH C/S

Lab Number: L1640742

Project Number: Not Specified

Report Date: 12/21/16

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1640742-01A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-02A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-03A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-04A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-05A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-06A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-07A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-08A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-09A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-10A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-11A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-12A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-13A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-14A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-15A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-16A	Glass 250ml/8oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-17A	Glass 250ml/8oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-18A	Glass 250ml/8oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-19A	Glass 250ml/8oz unpreserved	A	N/A	2.3	Y	Absent	EPH-DELUX-10(14)
L1640742-19B	Plastic 2oz unpreserved for TS	A	N/A	2.3	Y	Absent	TS(7)
L1640742-19C	Vial MeOH preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(28)
L1640742-20A	Glass 250ml/8oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640742-21A	Vial MeOH preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(28)
L1640742-22A	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	TS(7),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** Not Specified

**Lab Number:** L1640742  
**Report Date:** 12/21/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE 1 OF 3

Date Rec'd in Lab: 12/14/16

ALPHA Job #: 21640748

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

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

### Project Information

Project Name: Weymouth e/s  
Project Location: Weymouth, MA  
Project #: 140143.0000.4903  
Project Manager: Rick Paquette  
ALPHA Quote #:

### Report Information - Data Deliverables

ADEX  EMAIL

### Billing Information

Same as Client info PO #:

### Client Information

Client: TRC  
Address: 2 Liberty Square  
Boston, MA  
Phone: 617-385-6033  
Email: RNiles@TRCsolutions.com

### Regulatory Requirements & Project Information Requirements

Yes  No MA MCP Analytical Methods  Yes  No CT RCP Analytical Methods  
 Yes  No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
 Yes  No GW1 Standards (Info Required for Metals & EPH with Targets)  
 Yes  No NPDES RGP  
 Other State / Fed Program RCGW-2, RES-1 Criteria

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due:

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	<input type="checkbox"/> PCB <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	SAMPLE INFO	TOTAL # BOTTLES
									Filtration	
									<input type="checkbox"/> Field	
									<input type="checkbox"/> Lab to do	
									Preservation	
									<input type="checkbox"/> Lab to do	
									Sample Comments	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
40742-01	B-415-11.8	12/14/16	0835	Soil	CF
02	B-415-12.2		0840		
03	B-415-13.4		0845		
04	B-402-11.6		1010		
05	B-402-12.2		1015		
06	B-402-12.8		1020		
07	B-401-11.5		1100		
08	B-401-12.2		1110		
09	B-400-11.4		1150		
10	B-400-12.4		1155		

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

**Preservative**  
A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type	A
Preservative	A
Relinquished By:	12/14/16, 0705
Date/Time	12/14/16, 1405
Received By:	
Date/Time	

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
FORM NO: 01-01 (rev. 12-Mar-2012)



# CHAIN OF CUSTODY

PAGE 2 OF 3 <sup>BA</sup>

Date Rec'd in Lab: 12/14/16

ALPHA Job #: C1640742

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

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

**Client Information**

Client: TRC

Address: 2 Liberty Square  
Boston, MA

Phone: 617-385-6033

Email: RNiles@TRCSolutions.com

**Project Information**

Project Name: Weymouth C/S

Project Location: Weymouth, MA

Project #: 1410143.0000-4403

Project Manager: Rice Paquette

ALPHA Quote #:

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due:

**Report Information - Data Deliverables**

ADEx  EMAIL

Same as Client info PO #:

**Regulatory Requirements & Project Information Requirements**

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

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

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

Yes  No NPDES RGP

Other State /Fed Program RCGW-2, RCS-1 Criteria

**ANALYSIS**

VOC:  8260  624  524.2

SVOC:  ABN  PAH

METALS:  MCP 13  MCP 14  RCP 15

METALS:  RCRA5  RCRA8

EPH:  Ranges & Targets  Ranges Only

VPH:  Ranges & Targets  Ranges Only

PCB  PEST

TPH:  Quant Only  Fingerprint

**SAMPLE INFO**

Filtration

Field  Lab to do

Preservation

Lab to do

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS	SAMPLE INFO	Sample Comments	TOTAL # BOTTLES
		Date	Time						
<u>40712-11</u>	<u>B-403-10</u>	<u>12/14/16</u>	<u>1305</u>	<u>CF</u>	<u>CF</u>	<u>X</u>			<u>1</u>
<u>12</u>	<u>B-403-12</u>		<u>1310</u>						<u>1</u>
<u>13</u>	<u>B-404-11.4</u>		<u>1350</u>						<u>1</u>
<u>14</u>	<u>B-404-12</u>		<u>1400</u>						<u>1</u>
<u>15</u>	<u>B-404-16.5</u>		<u>1410</u>						<u>1</u>
<u>16</u>	<u>B-405-11.5</u>		<u>1440</u>						<u>1</u>
<u>17</u>	<u>B-405-12.5</u>		<u>1450</u>						<u>1</u>
<u>18</u>	<u>B-406-11.8</u>		<u>1510</u>						<u>1</u>
<u>19</u>	<u>B-406-12.5</u>		<u>1520</u>			<u>X</u>			<u>1</u>
<u>20</u>	<u>B-406-21</u>		<u>1530</u>					<u>CH3OH</u>	<u>3</u>

**Container Type**

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

**Preservative**

A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type	<u>AV</u>
Preservative	<u>AF</u>

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>12/14/16 07:05 am</u>	<u>[Signature]</u>	<u>12/14/16 19:05</u>

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

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



# CHAIN OF CUSTODY

PAGE 3 OF 3

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

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

Date Rec'd in Lab: 12/14/16

ALPHA Job #: 11040742

### Project Information

Project Name: Weymouth, C/S  
Project Location: Weymouth, MA  
Project #: 140143.0000.4903  
Project Manager: Rick Payette  
ALPHA Quote #:

### Report Information - Data Deliverables

ADEX  EMAIL

### Billing Information

Same as Client info PO #:

### Client Information

Client: TRE  
Address: 2 Liberty Square  
Boston, MA  
Phone: 617-385-6333  
Email: RNiles@TRCSolutions.com

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due:

### Regulatory Requirements & Project Information Requirements

Yes  No MA MCP Analytical Methods  Yes  No CT RCP Analytical Methods  
 Yes  No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
 Yes  No GW1 Standards (Info Required for Metals & EPH with Targets)  
 Yes  No NPDES RGP  
 Other State /Fed Program RCWA, PCS-1 Criteria

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2
	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH
	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15
	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8
	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only
	VPH: <input checked="" type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only
	<input type="checkbox"/> PCB <input type="checkbox"/> PEST
	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint

### SAMPLE INFO

Filtration  
 Field  
 Lab to do

Preservation  
 Lab to do

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	Filtration	Preservation	Sample Comments	TOTAL # BOTTLES
		Date	Time														
<u>40742-21</u>	<u>TB01</u>	<u>12/14/16</u>	<u>1500</u>	<u>Blank</u>	<u>CF</u>											<u>Trip Blank</u>	<u>1</u>
<u>22</u>	<u>B-451-13.4</u>	<u>12/14/16</u>	<u>0845</u>	<u>Soil</u>	<u>CF</u>												

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

**Preservative**  
A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type CF  
Preservative OF

Relinquished By: [Signature] Date/Time: 12/14/16 0745

Received By: [Signature] Date/Time: 12/14/16 1905

CH<sub>3</sub>OH

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

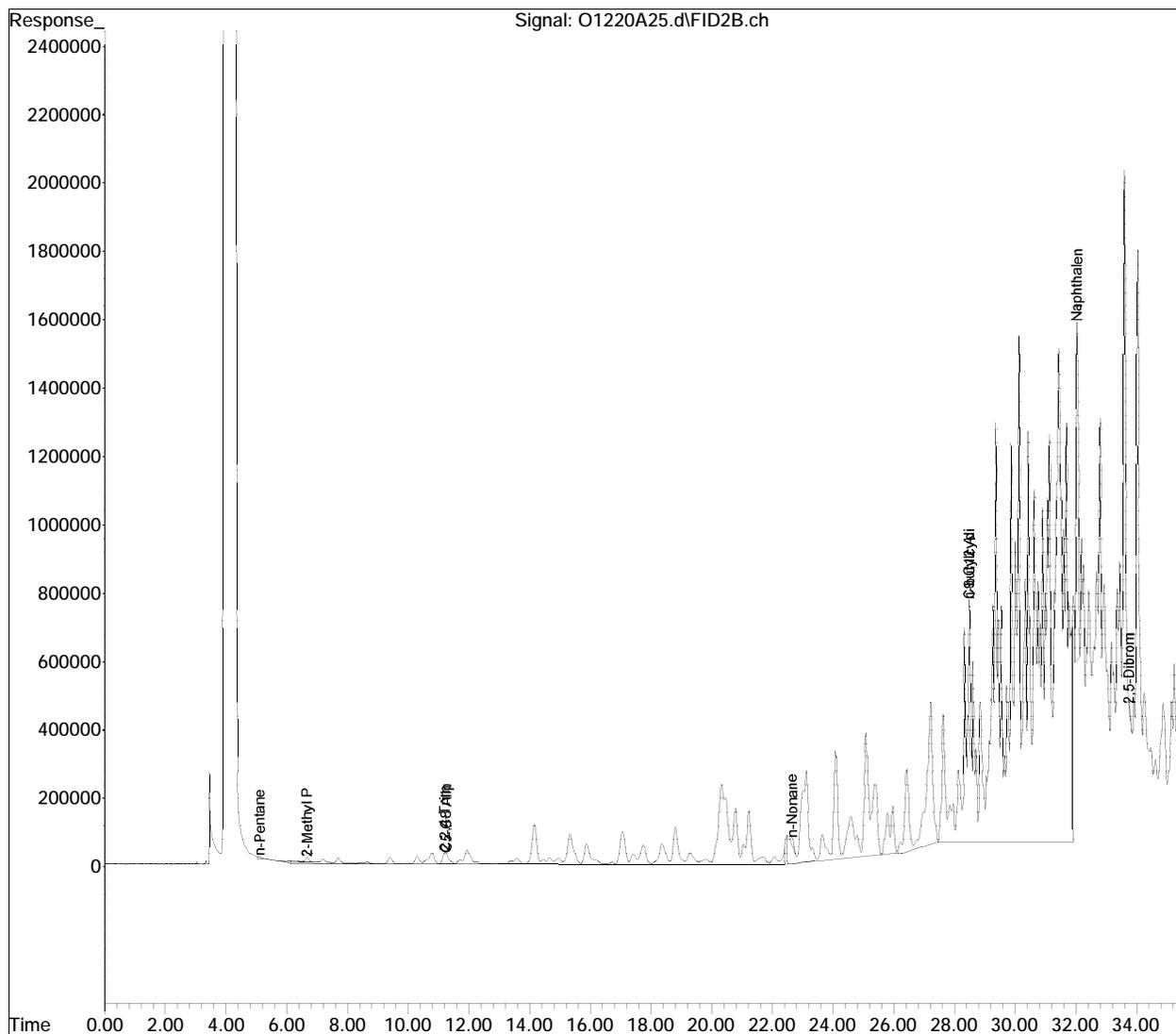
## Quantitation Report (QT Reviewed)

Data Path : I:\OVPH\161220ali\  
Data File : O1220A25.d  
Signal(s) : FID2B.ch  
Acq On : 21 Dec 2016 2:58 am  
Operator : OVPH:KD  
Sample : 11640742-19D,41,16,23.5,.02  
Misc : WG963463,ICAL12828  
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Dec 21 12:39:50 2016  
Quant Method : I:\OVPH\161220ali\vph-ali160830.m  
Quant Title : VPH ALIPHATIC  
QLast Update : Wed Aug 31 07:53:22 2016  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

Sub List : Default - All compounds listed



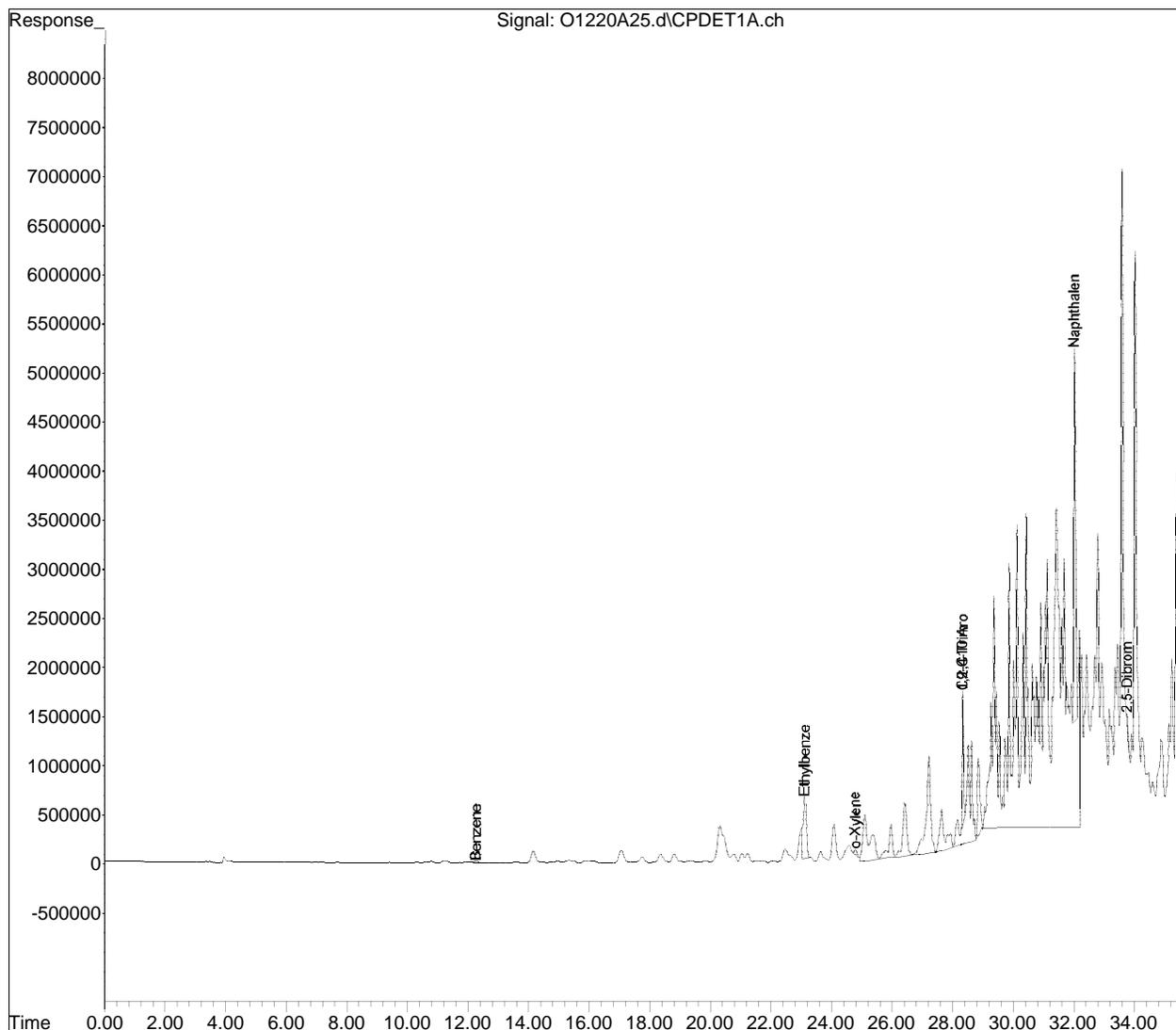
## Quantitation Report (QT Reviewed)

Data Path : I:\OVPH\161220aro\  
Data File : O1220A25.d  
Signal(s) : CPDET1A.ch  
Acq On : 21 Dec 2016 2:58 am  
Operator : OVPH:KD  
Sample : 11640742-19D,41,16,23.5,.02  
Misc : WG963463,ICAL12829  
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Dec 21 12:48:36 2016  
Quant Method : I:\OVPH\161220aro\vph-aro160830.m  
Quant Title : VPH AROMATIC  
QLast Update : Wed Aug 31 07:50:36 2016  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

Sub List : Default - All compounds listed





## ANALYTICAL REPORT

Lab Number:	L1640954
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	12/22/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1640954-01	B-407-11.8	SOIL	WEYMOUTH, MA	12/15/16 14:40	12/15/16
L1640954-02	B-407-12.8	SOIL	WEYMOUTH, MA	12/15/16 14:50	12/15/16
L1640954-03	B-407-17.5	SOIL	WEYMOUTH, MA	12/15/16 15:00	12/15/16

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

---

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

### Case Narrative (continued)

#### MCP Related Narratives

#### EPH

L1640954-01: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the target compounds present in the sample.

L1640954-02: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

In reference to question G:

L1640954-01 and -02: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L1640954-01: The surrogate recoveries are below the acceptance criteria for chloro-octadecane (0%) and o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 12/22/16

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640954-01 D  
 Client ID: B-407-11.8  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 12:50  
 Analyst: SR  
 Percent Solids: 91%

Date Collected: 12/15/16 14:40  
 Date Received: 12/15/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/18/16 17:10  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/21/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	12300		mg/kg	210	--	30
C19-C36 Aliphatics	21200		mg/kg	210	--	30
C11-C22 Aromatics	19900		mg/kg	210	--	30
C11-C22 Aromatics, Adjusted	19800		mg/kg	210	--	30
Naphthalene	14.5		mg/kg	10.5	--	30
2-Methylnaphthalene	ND		mg/kg	10.5	--	30
Acenaphthylene	ND		mg/kg	10.5	--	30
Acenaphthene	ND		mg/kg	10.5	--	30
Fluorene	ND		mg/kg	10.5	--	30
Phenanthrene	21.5		mg/kg	10.5	--	30
Anthracene	ND		mg/kg	10.5	--	30
Fluoranthene	ND		mg/kg	10.5	--	30
Pyrene	ND		mg/kg	10.5	--	30
Benzo(a)anthracene	ND		mg/kg	10.5	--	30
Chrysene	ND		mg/kg	10.5	--	30
Benzo(b)fluoranthene	ND		mg/kg	10.5	--	30
Benzo(k)fluoranthene	ND		mg/kg	10.5	--	30
Benzo(a)pyrene	ND		mg/kg	10.5	--	30
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	10.5	--	30
Dibenzo(a,h)anthracene	ND		mg/kg	10.5	--	30
Benzo(ghi)perylene	ND		mg/kg	10.5	--	30

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640954-01 D  
 Client ID: B-407-11.8  
 Sample Location: WEYMOUTH, MA

Date Collected: 12/15/16 14:40  
 Date Received: 12/15/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	102		40-140
2-Bromonaphthalene	107		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640954-02 D  
 Client ID: B-407-12.8  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 13:27  
 Analyst: SR  
 Percent Solids: 89%

Date Collected: 12/15/16 14:50  
 Date Received: 12/15/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/18/16 17:10  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/21/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	3300		mg/kg	72.7	--	10
C19-C36 Aliphatics	5650		mg/kg	72.7	--	10
C11-C22 Aromatics	6740		mg/kg	72.7	--	10
C11-C22 Aromatics, Adjusted	6670		mg/kg	72.7	--	10
Naphthalene	11.8		mg/kg	3.63	--	10
2-Methylnaphthalene	45.2		mg/kg	3.63	--	10
Acenaphthylene	ND		mg/kg	3.63	--	10
Acenaphthene	ND		mg/kg	3.63	--	10
Fluorene	ND		mg/kg	3.63	--	10
Phenanthrene	8.97		mg/kg	3.63	--	10
Anthracene	ND		mg/kg	3.63	--	10
Fluoranthene	ND		mg/kg	3.63	--	10
Pyrene	ND		mg/kg	3.63	--	10
Benzo(a)anthracene	ND		mg/kg	3.63	--	10
Chrysene	ND		mg/kg	3.63	--	10
Benzo(b)fluoranthene	ND		mg/kg	3.63	--	10
Benzo(k)fluoranthene	ND		mg/kg	3.63	--	10
Benzo(a)pyrene	ND		mg/kg	3.63	--	10
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	3.63	--	10
Dibenzo(a,h)anthracene	ND		mg/kg	3.63	--	10
Benzo(ghi)perylene	ND		mg/kg	3.63	--	10

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640954-02 D  
 Client ID: B-407-12.8  
 Sample Location: WEYMOUTH, MA

Date Collected: 12/15/16 14:50  
 Date Received: 12/15/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	117		40-140
2-Fluorobiphenyl	106		40-140
2-Bromonaphthalene	110		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640954-03  
 Client ID: B-407-17.5  
 Sample Location: WEYMOUTH, MA  
 Matrix: Soil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 12/21/16 00:00  
 Analyst: EK  
 Percent Solids: 89%

Date Collected: 12/15/16 15:00  
 Date Received: 12/15/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/18/16 17:10  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 12/20/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		mg/kg	7.36	--	1
C19-C36 Aliphatics	ND		mg/kg	7.36	--	1
C11-C22 Aromatics	ND		mg/kg	7.36	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.36	--	1
Naphthalene	ND		mg/kg	0.368	--	1
2-Methylnaphthalene	ND		mg/kg	0.368	--	1
Acenaphthylene	ND		mg/kg	0.368	--	1
Acenaphthene	ND		mg/kg	0.368	--	1
Fluorene	ND		mg/kg	0.368	--	1
Phenanthrene	ND		mg/kg	0.368	--	1
Anthracene	ND		mg/kg	0.368	--	1
Fluoranthene	ND		mg/kg	0.368	--	1
Pyrene	ND		mg/kg	0.368	--	1
Benzo(a)anthracene	ND		mg/kg	0.368	--	1
Chrysene	ND		mg/kg	0.368	--	1
Benzo(b)fluoranthene	ND		mg/kg	0.368	--	1
Benzo(k)fluoranthene	ND		mg/kg	0.368	--	1
Benzo(a)pyrene	ND		mg/kg	0.368	--	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.368	--	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.368	--	1
Benzo(ghi)perylene	ND		mg/kg	0.368	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

Lab ID: L1640954-03  
 Client ID: B-407-17.5  
 Sample Location: WEYMOUTH, MA

Date Collected: 12/15/16 15:00  
 Date Received: 12/15/16  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	48		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	86		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 12/21/16 22:24  
**Analyst:** NS

**Extraction Method:** EPA 3546  
**Extraction Date:** 12/18/16 17:10  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 12/20/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03 Batch: WG962413-1					
C9-C18 Aliphatics	ND		mg/kg	6.39	--
C19-C36 Aliphatics	ND		mg/kg	6.39	--
C11-C22 Aromatics	ND		mg/kg	6.39	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.39	--
Naphthalene	ND		mg/kg	0.319	--
2-Methylnaphthalene	ND		mg/kg	0.319	--
Acenaphthylene	ND		mg/kg	0.319	--
Acenaphthene	ND		mg/kg	0.319	--
Fluorene	ND		mg/kg	0.319	--
Phenanthrene	ND		mg/kg	0.319	--
Anthracene	ND		mg/kg	0.319	--
Fluoranthene	ND		mg/kg	0.319	--
Pyrene	ND		mg/kg	0.319	--
Benzo(a)anthracene	ND		mg/kg	0.319	--
Chrysene	ND		mg/kg	0.319	--
Benzo(b)fluoranthene	ND		mg/kg	0.319	--
Benzo(k)fluoranthene	ND		mg/kg	0.319	--
Benzo(a)pyrene	ND		mg/kg	0.319	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.319	--
Dibenzo(a,h)anthracene	ND		mg/kg	0.319	--
Benzo(ghi)perylene	ND		mg/kg	0.319	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	59		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	72		40-140

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG962413-2 WG962413-3								
C9-C18 Aliphatics	55		60		40-140	9		25
C19-C36 Aliphatics	72		73		40-140	1		25
C11-C22 Aromatics	88		94		40-140	7		25
Naphthalene	59		60		40-140	2		25
2-Methylnaphthalene	61		62		40-140	2		25
Acenaphthylene	62		64		40-140	3		25
Acenaphthene	66		69		40-140	4		25
Fluorene	70		74		40-140	6		25
Phenanthrene	78		81		40-140	4		25
Anthracene	78		81		40-140	4		25
Fluoranthene	85		88		40-140	3		25
Pyrene	86		89		40-140	3		25
Benzo(a)anthracene	84		88		40-140	5		25
Chrysene	93		97		40-140	4		25
Benzo(b)fluoranthene	89		93		40-140	4		25
Benzo(k)fluoranthene	89		93		40-140	4		25
Benzo(a)pyrene	77		83		40-140	8		25
Indeno(1,2,3-cd)Pyrene	84		88		40-140	5		25
Dibenzo(a,h)anthracene	80		84		40-140	5		25
Benzo(ghi)perylene	79		82		40-140	4		25
Nonane (C9)	44		44		30-140	0		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG962413-2 WG962413-3								
Decane (C10)	50		50		40-140	0		25
Dodecane (C12)	51		52		40-140	2		25
Tetradecane (C14)	52		54		40-140	4		25
Hexadecane (C16)	57		58		40-140	2		25
Octadecane (C18)	66		65		40-140	2		25
Nonadecane (C19)	66		66		40-140	0		25
Eicosane (C20)	68		68		40-140	0		25
Docosane (C22)	68		68		40-140	0		25
Tetracosane (C24)	68		68		40-140	0		25
Hexacosane (C26)	68		69		40-140	1		25
Octacosane (C28)	69		69		40-140	0		25
Triacontane (C30)	70		70		40-140	0		25
Hexatriacontane (C36)	64		69		40-140	8		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	57		50		40-140
o-Terphenyl	107		109		40-140
2-Fluorobiphenyl	82		80		40-140
2-Bromonaphthalene	85		83		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

# **INORGANICS & MISCELLANEOUS**

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640954-01  
**Client ID:** B-407-11.8  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/15/16 14:40  
**Date Received:** 12/15/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.9		%	0.100	NA	1	-	12/16/16 12:41	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640954-02  
**Client ID:** B-407-12.8  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/15/16 14:50  
**Date Received:** 12/15/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.9		%	0.100	NA	1	-	12/16/16 12:41	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

**SAMPLE RESULTS**

**Lab ID:** L1640954-03  
**Client ID:** B-407-17.5  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Soil

**Date Collected:** 12/15/16 15:00  
**Date Received:** 12/15/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.1		%	0.100	NA	1	-	12/16/16 12:41	121,2540G	RI



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1640954-01A	Glass 250ml/8oz unpreserved	A	N/A	3.2	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640954-02A	Glass 250ml/8oz unpreserved	A	N/A	3.2	Y	Absent	TS(7),EPH-DELUX-10(14)
L1640954-03A	Glass 250ml/8oz unpreserved	A	N/A	3.2	Y	Absent	TS(7),EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1640954  
**Report Date:** 12/22/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 7

Department: **Quality Assurance**

Published Date: 8/5/2016 11:25:56 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.**EPA 300:** DW: Bromide**EPA 6860:** NPW and SCM: Perchlorate**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation**EPA 9012B:** NPW: Total Cyanide**EPA 9050A:** NPW: Specific Conductance**SM3500:** NPW: Ferrous Iron**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**SM5310C:** DW: Dissolved Organic Carbon**Mansfield Facility****SM 2540D:** TSS**EPA 3005A** NPW**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.****EPA 624:** Volatile Halocarbons & Aromatics,**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.****Mansfield Facility:****Drinking Water****EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.**EPA 245.1 Hg.****SM2340B**

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



# CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

Date Rec'd in Lab: 12/15/16

ALPHA Job #: C1640954

## Project Information

Project Name: Weymouth C/S  
Project Location: Weymouth, MA  
Project #: 140143 0000 4903  
Project Manager: Rick Paquette  
ALPHA Quote #:

## Report Information - Data Deliverables

ADEX  EMAIL

## Billing Information

Same as Client info PO #: 103294

## Client Information

Client: TRC  
Address: 2 Liberty Square  
Boston, MA  
Phone: 617-385-6033  
Email: rnikes@treresolutions.com

## Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)  
Date Due:

## Regulatory Requirements & Project Information Requirements

Yes  No MA MCP Analytical Methods  Yes  No CT RCP Analytical Methods  
 Yes  No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
 Yes  No GW1 Standards (Info Required for Metals & EPH with Targets)  
 Yes  No NPDES RGP  
 Other State /Fed Program RCGW-2, RCS-1 Criteria

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	EPH: <input checked="" type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	SAMPLE INFO Filtration <input type="checkbox"/> Field <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do	TOTAL # BOTTLES
			METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8					

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS	SVOC	METALS	METALS	EPH	VPH	TPH	SAMPLE INFO	TOTAL # BOTTLES
		Date	Time											
40954-01	B-407-11.8	12/15/16	1440	Soil	CF					X				1
02	B-407-12.8	12/15/16	1450	Soil	CF					X				1
03	B-407-17.5	12/15/16	1500	Soil	CF					X				1

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

**Preservative**  
A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type	A
Preservative	A

Relinquished By: *[Signature]* Date/Time: 12/15/16 1750  
Received By: *[Signature]* Date/Time: 12/15/16 1750

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
FORM NO. 01-01 (rev. 12-Mar-2012)



## ANALYTICAL REPORT

Lab Number:	L1635344
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	ATLANTIC BRIDGE
Project Number:	140143.0000.7478
Report Date:	11/03/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1635344-01	MW-202	WATER	WEYMOUTH, MA	11/01/16 11:38	11/01/16
L1635344-02	MW-203	WATER	WEYMOUTH, MA	11/01/16 12:05	11/01/16
L1635344-03	MW-204	WATER	WEYMOUTH, MA	11/01/16 13:30	11/01/16
L1635344-04	MW-205	WATER	WEYMOUTH, MA	11/01/16 13:55	11/01/16
L1635344-05	MW-206	WATER	WEYMOUTH, MA	11/01/16 15:50	11/01/16

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

**MADEP MCP Response Action Analytical Report Certification**

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

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

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

### Case Narrative (continued)

#### MCP Related Narratives

##### VPH

L1635344-01 and -05: The sample has elevated detection limits due to the dilution required by the sample matrix (foam).

In reference to question G:

L1635344-01 and -05: One or more of the target analytes did not achieve the requested CAM reporting limits.

##### EPH

In reference to question G:

L1635344-01 through -05: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG948103-2/-3 LCS/LCSD RPD, associated with L1635344-01 through -05, is above the acceptance criteria for dibenzo(a,h)anthracene (40%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 11/03/16

# ORGANICS

# **PETROLEUM HYDROCARBONS**

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-01  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/03/16 10:09  
 Analyst: SR

Date Collected: 11/01/16 11:38  
 Date Received: 11/01/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/01/16 21:15  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/02/16

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved  
 Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-01

Date Collected: 11/01/16 11:38

Client ID: MW-202

Date Received: 11/01/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	91		40-140
o-Terphenyl	129		40-140
2-Fluorobiphenyl	63		40-140
2-Bromonaphthalene	62		40-140

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-01 D  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/02/16 20:27  
 Analyst: JM

Date Collected: 11/01/16 11:38  
 Date Received: 11/01/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	102		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-02  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/02/16 18:27  
 Analyst: JM

Date Collected: 11/01/16 12:05  
 Date Received: 11/01/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	90		70-130
2,5-Dibromotoluene-FID	100		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-02  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/02/16 21:40  
 Analyst: SR

Date Collected: 11/01/16 12:05  
 Date Received: 11/01/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/01/16 21:15  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/02/16

**Quality Control Information**

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-02

Date Collected: 11/01/16 12:05

Client ID: MW-203

Date Received: 11/01/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	43		40-140
o-Terphenyl	93		40-140
2-Fluorobiphenyl	97		40-140
2-Bromonaphthalene	102		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-03  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/02/16 19:07  
 Analyst: JM

Date Collected: 11/01/16 13:30  
 Date Received: 11/01/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

### SAMPLE RESULTS

Lab ID: L1635344-03  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/02/16 22:18  
 Analyst: SR

Date Collected: 11/01/16 13:30  
 Date Received: 11/01/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/01/16 21:15  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/02/16

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635344**Project Number:** 140143.0000.7478**Report Date:** 11/03/16**SAMPLE RESULTS**

Lab ID: L1635344-03

Date Collected: 11/01/16 13:30

Client ID: MW-204

Date Received: 11/01/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	82		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-04  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/02/16 19:47  
 Analyst: JM

Date Collected: 11/01/16 13:55  
 Date Received: 11/01/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635344**Project Number:** 140143.0000.7478**Report Date:** 11/03/16**SAMPLE RESULTS**

Lab ID: L1635344-04  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/02/16 22:56  
 Analyst: SR

Date Collected: 11/01/16 13:55  
 Date Received: 11/01/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/01/16 21:15  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/02/16

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635344**Project Number:** 140143.0000.7478**Report Date:** 11/03/16**SAMPLE RESULTS**

Lab ID: L1635344-04

Date Collected: 11/01/16 13:55

Client ID: MW-205

Date Received: 11/01/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	80		40-140
2-Fluorobiphenyl	72		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

### SAMPLE RESULTS

Lab ID: L1635344-05  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/03/16 14:02  
 Analyst: SR

Date Collected: 11/01/16 15:50  
 Date Received: 11/01/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/01/16 21:15  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/02/16

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635344**Project Number:** 140143.0000.7478**Report Date:** 11/03/16**SAMPLE RESULTS**

Lab ID: L1635344-05

Date Collected: 11/01/16 15:50

Client ID: MW-206

Date Received: 11/01/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	79		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	83		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

**SAMPLE RESULTS**

Lab ID: L1635344-05 D  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/02/16 21:07  
 Analyst: JM

Date Collected: 11/01/16 15:50  
 Date Received: 11/01/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	90		70-130
2,5-Dibromotoluene-FID	100		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 11/02/16 20:24  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 11/01/16 21:15  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 11/02/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-05 Batch: WG948103-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	80		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

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

Analytical Method: 100, VPH-04-1.1  
Analytical Date: 11/02/16 09:46  
Analyst: JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-05 Batch: WG948658-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	85		70-130
2,5-Dibromotoluene-FID	97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG948103-2 WG948103-3								
C9-C18 Aliphatics	71		71		40-140	0		25
C19-C36 Aliphatics	84		76		40-140	10		25
C11-C22 Aromatics	102		86		40-140	17		25
Naphthalene	85		71		40-140	18		25
2-Methylnaphthalene	87		73		40-140	18		25
Acenaphthylene	89		75		40-140	17		25
Acenaphthene	92		78		40-140	16		25
Fluorene	100		88		40-140	13		25
Phenanthrene	103		90		40-140	13		25
Anthracene	97		84		40-140	14		25
Fluoranthene	102		87		40-140	16		25
Pyrene	104		88		40-140	17		25
Benzo(a)anthracene	98		84		40-140	15		25
Chrysene	102		87		40-140	16		25
Benzo(b)fluoranthene	98		86		40-140	13		25
Benzo(k)fluoranthene	96		84		40-140	13		25
Benzo(a)pyrene	89		75		40-140	17		25
Indeno(1,2,3-cd)Pyrene	96		80		40-140	18		25
Dibenzo(a,h)anthracene	96		64		40-140	40	Q	25
Benzo(ghi)perylene	93		77		40-140	19		25
Nonane (C9)	46		50		30-140	8		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG948103-2 WG948103-3								
Decane (C10)	60		60		40-140	0		25
Dodecane (C12)	71		67		40-140	6		25
Tetradecane (C14)	76		71		40-140	7		25
Hexadecane (C16)	80		75		40-140	6		25
Octadecane (C18)	83		76		40-140	9		25
Nonadecane (C19)	82		74		40-140	10		25
Eicosane (C20)	82		75		40-140	9		25
Docosane (C22)	82		75		40-140	9		25
Tetracosane (C24)	80		73		40-140	9		25
Hexacosane (C26)	81		74		40-140	9		25
Octacosane (C28)	81		74		40-140	9		25
Triacontane (C30)	81		73		40-140	10		25
Hexatriacontane (C36)	79		69		40-140	14		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	71		63		40-140
o-Terphenyl	104		90		40-140
2-Fluorobiphenyl	96		83		40-140
2-Bromonaphthalene	104		88		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG948658-1 WG948658-2								
C5-C8 Aliphatics	91		88		70-130	3		25
C9-C12 Aliphatics	85		81		70-130	5		25
C9-C10 Aromatics	89		89		70-130	0		25
Benzene	82		81		70-130	2		25
Toluene	85		85		70-130	1		25
Ethylbenzene	87		87		70-130	1		25
p/m-Xylene	89		89		70-130	1		25
o-Xylene	88		87		70-130	1		25
Methyl tert butyl ether	86		83		70-130	3		25
Naphthalene	99		94		70-130	4		25
1,2,4-Trimethylbenzene	89		89		70-130	0		25
Pentane	90		88		70-130	3		25
2-Methylpentane	92		91		70-130	1		25
2,2,4-Trimethylpentane	88		86		70-130	2		25
n-Nonane	89		84		30-130	5		25
n-Decane	88		83		70-130	5		25
n-Butylcyclohexane	90		86		70-130	5		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG948658-1 WG948658-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	90		83		70-130
2,5-Dibromotoluene-FID	98		92		70-130

Project Name: ATLANTIC BRIDGE

Lab Number: L1635344

Project Number: 140143.0000.7478

Report Date: 11/03/16

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1635344-01A	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-01B	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-01C	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-01D	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-01E	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-02A	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-02B	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-02C	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-02D	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-02E	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-03A	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-03B	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-03C	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-03D	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-03E	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-04A	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-04B	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-04C	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-04D	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-04E	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-05A	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-05B	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-05C	Vial HCl preserved	A	N/A	3.7	Y	Absent	VPH-DELUX-10(14)
L1635344-05D	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)
L1635344-05E	Amber 1000ml HCl preserved	A	<2	3.7	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635344  
**Report Date:** 11/03/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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

# CHAIN OF CUSTODY

PAGE 1 OF 1



## Project Information

Project Name: Atlantic Bridge

Project Location: Weymouth, MA

Project #: 140143.0000.7478

Project Manager: Rick Paquette

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: 11/3/16 Time: 1600

Westborough, MA    Mansfield, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

## Client Information

Client: TRC  
 Address: 2 Liberty Square  
 Boston, MA 02109

Phone: 617-350-3443

Fax: 617-350-3444

Email: riles@trcsolutions.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 11/1/16

ALPHA Job #: 21635349

## Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info PO #: 102044

## Regulatory Requirements/Report Limits

State/Fed Program Criteria  
 MCP RCGW-2

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes  No Are MCP Analytical Methods Required?  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

VPH	EPH																	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAMPLE HANDLING  
 Filtration  
 Done  
 Not Needed  
 Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	VPH	EPH											
		Date	Time															
353M-01	MW-202	11/1/16	1138	Aq	LVH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
02	MW-203	11/1/16	1205	Aq	CF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
03	MW-204	11/1/16	1330	Aq	LVH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
04	MW-205	11/1/16	1355	Aq	CF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
05	MW-206	11/1/16	1550	Aq	CF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP or CT RCP?**

FORM NO 01-01(1)  
 (rev. 5-JAN-12)

Container Type	V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	B	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	11/01/16 19:15	<i>[Signature]</i>	11/1/16 19:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## ANALYTICAL REPORT

Lab Number:	L1635611
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	ATLANTIC BRIDGE
Project Number:	140143.0000.7478
Report Date:	11/07/16

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1635611-01	MW-201	WATER	WEYMOUTH, MA	11/03/16 12:15	11/03/16
L1635611-02	MW-221	WATER	WEYMOUTH, MA	11/03/16 11:15	11/03/16

Project Name: ATLANTIC BRIDGE

Lab Number: L1635611

Project Number: 140143.0000.7478

Report Date: 11/07/16

**MADEP MCP Response Action Analytical Report Certification**

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

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

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

### Case Narrative (continued)

#### MCP Related Narratives

##### VPH

L1635611-01 and -02: The sample has elevated detection limits due to the dilution required by the sample matrix (Foam).

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

##### EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG949548-3 LCSD recovery, associated with L1635611-01 and -02, is outside the acceptance criteria for c9-c18 aliphatics (39%); however, the target carbon ranges and analytes are within overall method allowances. The results of the original analysis are reported.

The WG949548-2/-3 LCS/LCSD RPDs, associated with L1635611-01 and -02, are above the acceptance criteria for c9-c18 aliphatics (61%), c11-c22 aromatics (34%), naphthalene (32%), 2-methylnaphthalene (31%), acenaphthylene (31%), acenaphthene (30%), fluorene (31%), phenanthrene (31%), anthracene (31%), fluoranthene (29%), pyrene (29%), benzo(a)anthracene (31%), chrysene (31%), benzo(b)fluoranthene (32%), benzo(k)fluoranthene (32%), benzo(a)pyrene (31%), indeno(1,2,3-cd)pyrene (31%), dibenzo(a,h)anthracene (32%) and benzo(ghi)perylene (31%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cristin Walker

Title: Technical Director/Representative

Date: 11/07/16

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

### SAMPLE RESULTS

Lab ID: L1635611-01  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/06/16 13:47  
 Analyst: SR

Date Collected: 11/03/16 12:15  
 Date Received: 11/03/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/05/16 15:25  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/06/16

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635611**Project Number:** 140143.0000.7478**Report Date:** 11/07/16**SAMPLE RESULTS**

Lab ID: L1635611-01

Date Collected: 11/03/16 12:15

Client ID: MW-201

Date Received: 11/03/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	77		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	66		40-140
2-Bromonaphthalene	65		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

**SAMPLE RESULTS**

Lab ID: L1635611-01 D  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/04/16 23:41  
 Analyst: JM

Date Collected: 11/03/16 12:15  
 Date Received: 11/03/16  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	93		70-130
2,5-Dibromotoluene-FID	104		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

### SAMPLE RESULTS

Lab ID: L1635611-02  
 Client ID: MW-221  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/06/16 14:19  
 Analyst: SR

Date Collected: 11/03/16 11:15  
 Date Received: 11/03/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 11/05/16 15:25  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/06/16

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635611**Project Number:** 140143.0000.7478**Report Date:** 11/07/16**SAMPLE RESULTS**

Lab ID: L1635611-02

Date Collected: 11/03/16 11:15

Client ID: MW-221

Date Received: 11/03/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	95		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

### SAMPLE RESULTS

Lab ID: L1635611-02 D  
 Client ID: MW-221  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 11/05/16 00:21  
 Analyst: JM

Date Collected: 11/03/16 11:15  
 Date Received: 11/03/16  
 Field Prep: Not Specified

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	87		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

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

Analytical Method: 100,VPH-04-1.1  
Analytical Date: 11/04/16 09:37  
Analyst: JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-02 Batch: WG949269-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	87		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

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

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 11/06/16 12:44  
Analyst: SR

Extraction Method: EPA 3510C  
Extraction Date: 11/05/16 15:25  
Cleanup Method: EPH-04-1  
Cleanup Date: 11/06/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-02 Batch: WG949548-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	67		40-140
2-Bromonaphthalene	65		40-140



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1635611

Project Number: 140143.0000.7478

Report Date: 11/07/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02 Batch: WG949269-1 WG949269-2								
C5-C8 Aliphatics	99		96		70-130	3		25
C9-C12 Aliphatics	94		88		70-130	6		25
C9-C10 Aromatics	93		92		70-130	1		25
Benzene	88		84		70-130	4		25
Toluene	90		88		70-130	3		25
Ethylbenzene	92		90		70-130	2		25
p/m-Xylene	94		93		70-130	2		25
o-Xylene	93		90		70-130	3		25
Methyl tert butyl ether	88		86		70-130	2		25
Naphthalene	103		98		70-130	5		25
1,2,4-Trimethylbenzene	93		92		70-130	1		25
Pentane	95		95		70-130	1		25
2-Methylpentane	101		98		70-130	3		25
2,2,4-Trimethylpentane	101		98		70-130	4		25
n-Nonane	100		94		30-130	6		25
n-Decane	92		86		70-130	6		25
n-Butylcyclohexane	99		95		70-130	4		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02 Batch: WG949269-1 WG949269-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	97		92		70-130
2,5-Dibromotoluene-FID	107		101		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1635611

Project Number: 140143.0000.7478

Report Date: 11/07/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02 Batch: WG949548-2 WG949548-3								
C9-C18 Aliphatics	73		39	Q	40-140	61	Q	25
C19-C36 Aliphatics	88		77		40-140	13		25
C11-C22 Aromatics	64		90		40-140	34	Q	25
Naphthalene	50		69		40-140	32	Q	25
2-Methylnaphthalene	51		70		40-140	31	Q	25
Acenaphthylene	54		74		40-140	31	Q	25
Acenaphthene	56		76		40-140	30	Q	25
Fluorene	58		79		40-140	31	Q	25
Phenanthrene	60		82		40-140	31	Q	25
Anthracene	59		81		40-140	31	Q	25
Fluoranthene	64		86		40-140	29	Q	25
Pyrene	65		87		40-140	29	Q	25
Benzo(a)anthracene	62		85		40-140	31	Q	25
Chrysene	65		89		40-140	31	Q	25
Benzo(b)fluoranthene	64		88		40-140	32	Q	25
Benzo(k)fluoranthene	63		87		40-140	32	Q	25
Benzo(a)pyrene	59		81		40-140	31	Q	25
Indeno(1,2,3-cd)Pyrene	63		86		40-140	31	Q	25
Dibenzo(a,h)anthracene	63		87		40-140	32	Q	25
Benzo(ghi)perylene	61		83		40-140	31	Q	25
Nonane (C9)	56		52		30-140	7		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02 Batch: WG949548-2 WG949548-3								
Decane (C10)	64		59		40-140	8		25
Dodecane (C12)	67		63		40-140	6		25
Tetradecane (C14)	72		66		40-140	9		25
Hexadecane (C16)	78		69		40-140	12		25
Octadecane (C18)	85		74		40-140	14		25
Nonadecane (C19)	84		74		40-140	13		25
Eicosane (C20)	86		76		40-140	12		25
Docosane (C22)	86		75		40-140	14		25
Tetracosane (C24)	85		75		40-140	13		25
Hexacosane (C26)	84		75		40-140	11		25
Octacosane (C28)	84		74		40-140	13		25
Triacontane (C30)	83		73		40-140	13		25
Hexatriacontane (C36)	81		71		40-140	13		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	72		54		40-140
o-Terphenyl	73		110		40-140
2-Fluorobiphenyl	58		79		40-140
2-Bromonaphthalene	59		81		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635611**Project Number:** 140143.0000.7478**Report Date:** 11/07/16**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1635611-01A	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1635611-01B	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1635611-01C	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1635611-01D	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1635611-01E	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1635611-02A	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1635611-02B	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1635611-02C	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1635611-02D	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1635611-02E	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635611  
**Report Date:** 11/07/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE 1 OF 1

## Project Information

Project Name: Atlantic Bridge

Project Location: Weymouth, MA

Project #: 140143.0000.7478

Project Manager: Rick Paquette

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: 11/7/16 Time: 1600

Westborough, MA    Mansfield, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

## Client Information

Client: TRC

Address: 2 Liberty Square

Boston, MA 02109

Phone: 617-350-3443

Fax: 617-350-3444

Email: miles@trcsolutions.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 11/3/16

ALPHA Job #: L1635611

## Report Information Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

## Billing Information

Same as Client info PO #: 102044

## Regulatory Requirements/Report Limits

State/Fed Program MCP Criteria RCGW-2

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes  No Are MCP Analytical Methods Required?  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

VPH	EPH																	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
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SAMPLE HANDLING  
 Filtration  
 Done  
 Not Needed  
 Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	VPH	EPH											
		Date	Time															
35611-01	MW-201	11/3/16	1215	Aq	LVH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
-02	MW-221	11/3/16	1115	Aq	LVH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	B	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Lauren V. Stone</i>	11/3/16 1412	<i>Paula Hayes DAC</i>	11/3/16 1412
<i>Paula Hayes DAC</i>	11/3/16 16:38	<i>[Signature]</i>	11/9/16 1605

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01 (I)  
 (rev. 5-JAN-12)



8100 Secura Way • Santa Fe Springs, CA 90670  
Telephone (562) 347-2500 • Fax (562) 907-3610

January 30, 2017

Ryan Niles  
TRC Companies, Inc.  
2 Liberty Square 6th Floor  
Boston, MA 02109

Re: PTS File No: 47030  
Physical Properties Data  
Atlantic Bridge Project; 140143.0000.4903

Dear Mr. Niles:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your Atlantic Bridge Project; 140143.0000.4903 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,  
PTS Laboratories, Inc.

Michael Mark Brady, P.G.  
Laboratory Director

Encl.

**Project Name:** Atlantic Bridge Project  
**Project Number:** 140143.0000.4903

**PTS File No:** 47030  
**Client:** TRC Companies, Inc.

**TEST PROGRAM - 20170119**

FLUID ID	Date	Time	Fluid Type	Fluid Cleaning	3-Point Viscosity LNAPL				Comments
			Method:	Proprietary	ASTM D445, D1481				
Date Received: 20170119									
MW-201 LNAPL	20170105/ 20170117	1500	LNAPL	X	X				
<b>TOTALS:</b>				1	1				1

**Laboratory Test Program Notes**

Standard TAT for basic analysis is 10-15 business days.

3-point viscosity includes viscosity and density at three temperatures (70, 100, 130°F).

Per client request in COC comments, run 3-point viscosity and density at 50, 70, and 100°F.

PTS File No: 47030  
 Client: TRC Companies, Inc.  
 Report Date: 01/30/17

**VISCOSITY, DENSITY, and SPECIFIC GRAVITY DATA**  
 (METHODOLOGY: ASTM D445, ASTM D1481, API RP40)

Project Name: Atlantic Bridge Project  
 Project No: 140143.0000.4903

SAMPLE ID	MATRIX	TEMPERATURE, °F	SPECIFIC GRAVITY	DENSITY, g/cc	VISCOSITY	
					centistokes	centipoise
MW-201 LNAPL	NAPL	50	0.9787	0.9785	44600	43600
		70	0.9792	0.9724	10700	10400
		100	0.9761	0.9624	2070	1990

**QUALITY CONTROL DATA**

Date: 01/20/17	01/24/17
FLUID TYPE: Cannon® CVS S3	Cannon® CVS S3
TEMPERATURE, °F: 70	
DENSITY, MEASURED: 0.8669	
DENSITY, PUBLISHED: 0.8666	
RPD: 0.04	
VISCOSITY, MEASURED: 4.64	4.65
VISCOSITY, PUBLISHED: 4.57	4.57
RPD: 1.57	1.88
CVS Lot #: 16101	CVS = Certified Viscosity Standard





## ANALYTICAL REPORT

Lab Number:	L1627080
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Ryan Niles
Phone:	(617) 385-6033
Project Name:	ATLANTIC BRIDGE
Project Number:	140143.0000.7215
Report Date:	08/31/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1627080-01	MW-201 (LNAPL)	OIL	BRIDGE ST. WEYMOUTH, MA	08/29/16 10:45	08/29/16

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

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**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

### Case Narrative (continued)

#### MCP Related Narratives

##### Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

#### Petroleum Hydrocarbon Identification by GC-FID

##### Petroleum Hydrocarbon Quantitation / Total Petroleum Hydrocarbons (TPH) by GC/FID

The sample was extracted and then analyzed using a gas chromatograph equipped with a flame ionization detector (GC/FID). The temperature program and associated experimental conditions were optimized to obtain maximum resolution in an eighty minute chromatographic run representative of hydrocarbons in the n-Octane (C8) to n-Tetracontane (C40) range. Qualitative evaluation of the sample is conducted by reviewing the sample chromatogram in conjunction with a chromatogram of a normal alkane series generated with the same chromatographic conditions. Chromatograms of hydrocarbon reference materials obtained from our library of 74 reference standards are also utilized to provide the best possible sample match. Quantitative determination of the sample hydrocarbon concentration is performed in accordance with EPA Method 8015M. The sample total hydrocarbon concentration and all associated quality control data are included in the report.

The following qualitative information is based on a tentative interpretation of chromatographic pattern recognition and boiling point ranges:

#### Total Petroleum Hydrocarbon Identification

L1627080-01 contains material eluting in the range of n-Nonane (C9) to after the elution of n-Octatriacontane (C38).

Based on the data generated, L1627080-01 contains a mixture of material eluting in the low, mid and high molecular weight ranges of the chromatogram. The mixture is a combination of Diesel Fuel/Fuel Oil #2 and material which is similar to a lubricating, motor or waste oil type product. As the product deteriorates, the n-alkanes are preferentially degraded, leaving behind other constituents such as isoprenoids.

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

**Case Narrative (continued)**

The analytical testing of the sample identified a pattern of isoprenoids. The level of alkanes and their ratios to the isoprenoids present indicates that the fuel oil has undergone degradation.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Susan O'Neil

Title: Technical Director/Representative

Date: 08/31/16

# ORGANICS

# **PETROLEUM HYDROCARBONS**

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1627080**Project Number:** 140143.0000.7215**Report Date:** 08/31/16**SAMPLE RESULTS**

Lab ID: L1627080-01

Date Collected: 08/29/16 10:45

Client ID: MW-201 (LNAPL)

Date Received: 08/29/16

Sample Location: BRIDGE ST. WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Oil

Extraction Method: EPA 3580A

Analytical Method: 1,8015D(M)

Extraction Date: 08/30/16 06:23

Analytical Date: 08/30/16 15:50

Analyst: WR

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

Petroleum Hydrocarbon Identification by GC-FID - Mansfield Lab						
--	--	--	--	--	--	--

Total Petroleum Hydrocarbons (C9-C44)	491000		mg/kg	5670	--	1
---------------------------------------	--------	--	-------	------	----	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	101		50-130
d50-Tetracosane	98		50-130

Project Name: ATLANTIC BRIDGE

Lab Number: L1627080

Project Number: 140143.0000.7215

Report Date: 08/31/16

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8015D(M)  
 Analytical Date: 08/30/16 09:57  
 Analyst: WR

Extraction Method: EPA 3580A  
 Extraction Date: 08/30/16 06:23

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Identification by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG927146-1					
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/kg	6600	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	101		50-130
d50-Tetracosane	98		50-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1627080

Project Number: 140143.0000.7215

Report Date: 08/31/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Identification by GC-FID - Mansfield Lab Associated sample(s): 01 Batch: WG927146-2 WG927146-3								
Nonane (C9)	91		95		50-130	4		30
Decane (C10)	86		90		50-130	5		30
Dodecane (C12)	82		84		50-130	2		30
Tetradecane (C14)	96		94		50-130	2		30
Hexadecane (C16)	104		107		50-130	3		30
Octadecane (C18)	106		106		50-130	0		30
Nonadecane (C19)	97		97		50-130	0		30
Eicosane (C20)	100		100		50-130	0		30
Docosane (C22)	101		101		50-130	0		30
Tetracosane (C24)	102		100		50-130	2		30
Hexacosane (C26)	100		99		50-130	1		30
Octacosane (C28)	102		101		50-130	1		30
Triacontane (C30)	101		100		50-130	1		30
Hexatriacontane (C36)	98		98		50-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	101		103		50-130
d50-Tetracosane	96		98		50-130

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1627080**Project Number:** 140143.0000.7215**Report Date:** 08/31/16**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1627080-01A	Glass 60mL/2oz unpreserved	A	N/A	3.8	Y	Absent	A2-PHI(365)

\*Values in parentheses indicate holding time in days

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7215

**Lab Number:** L1627080  
**Report Date:** 08/31/16

## REFERENCES

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

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

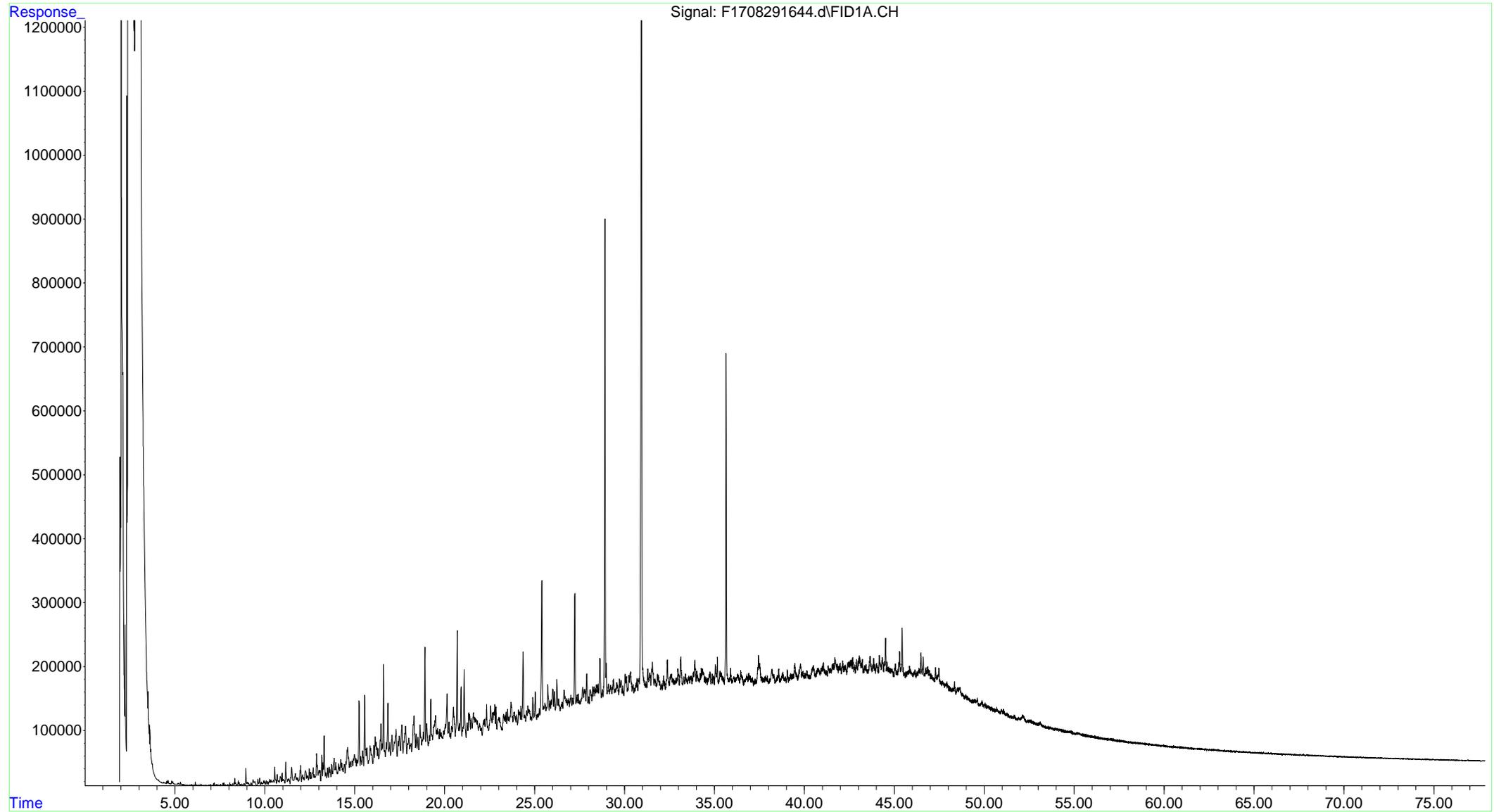
**SM2340B**

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

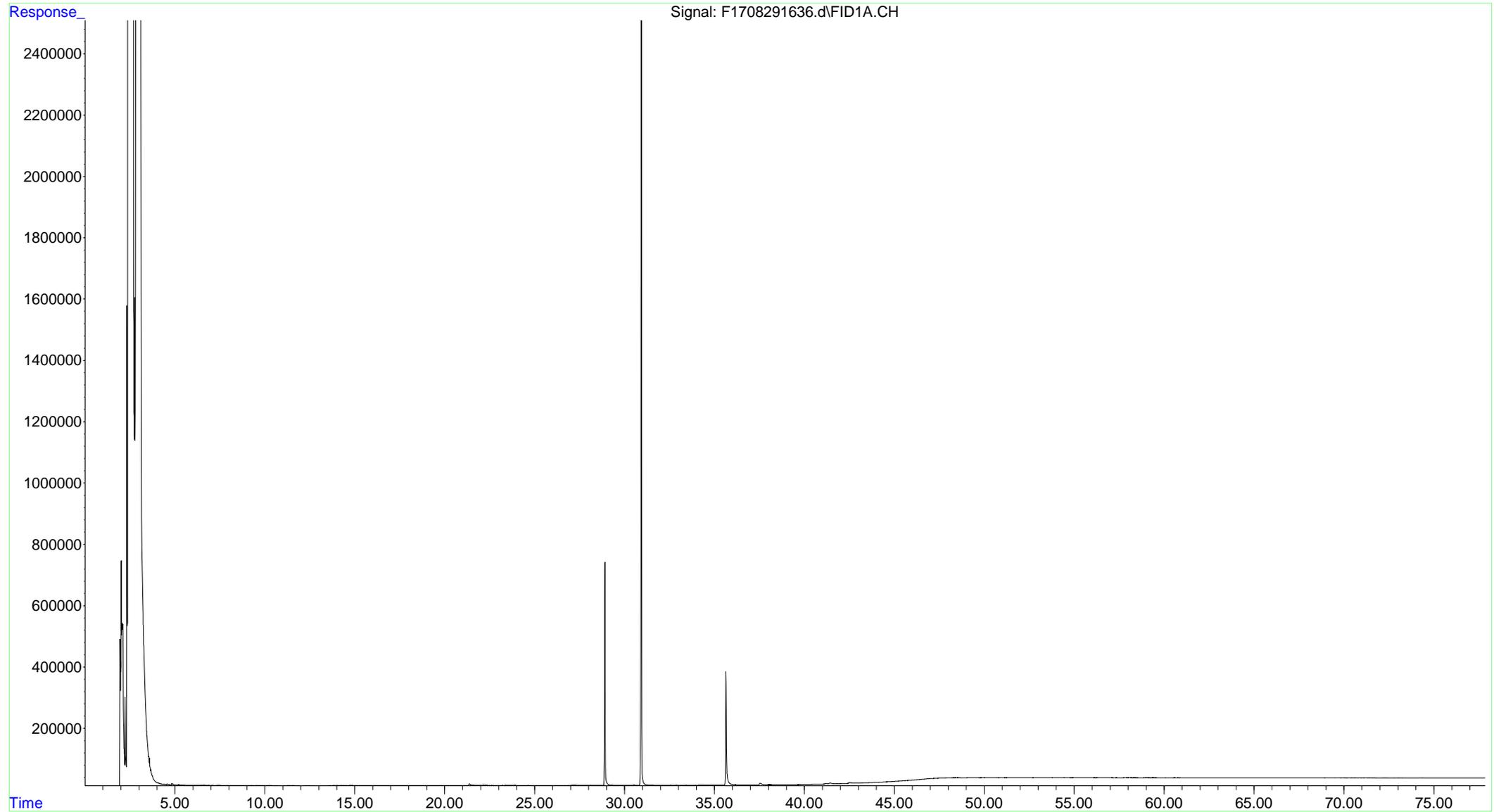


# **GC-FID Chromatogram**

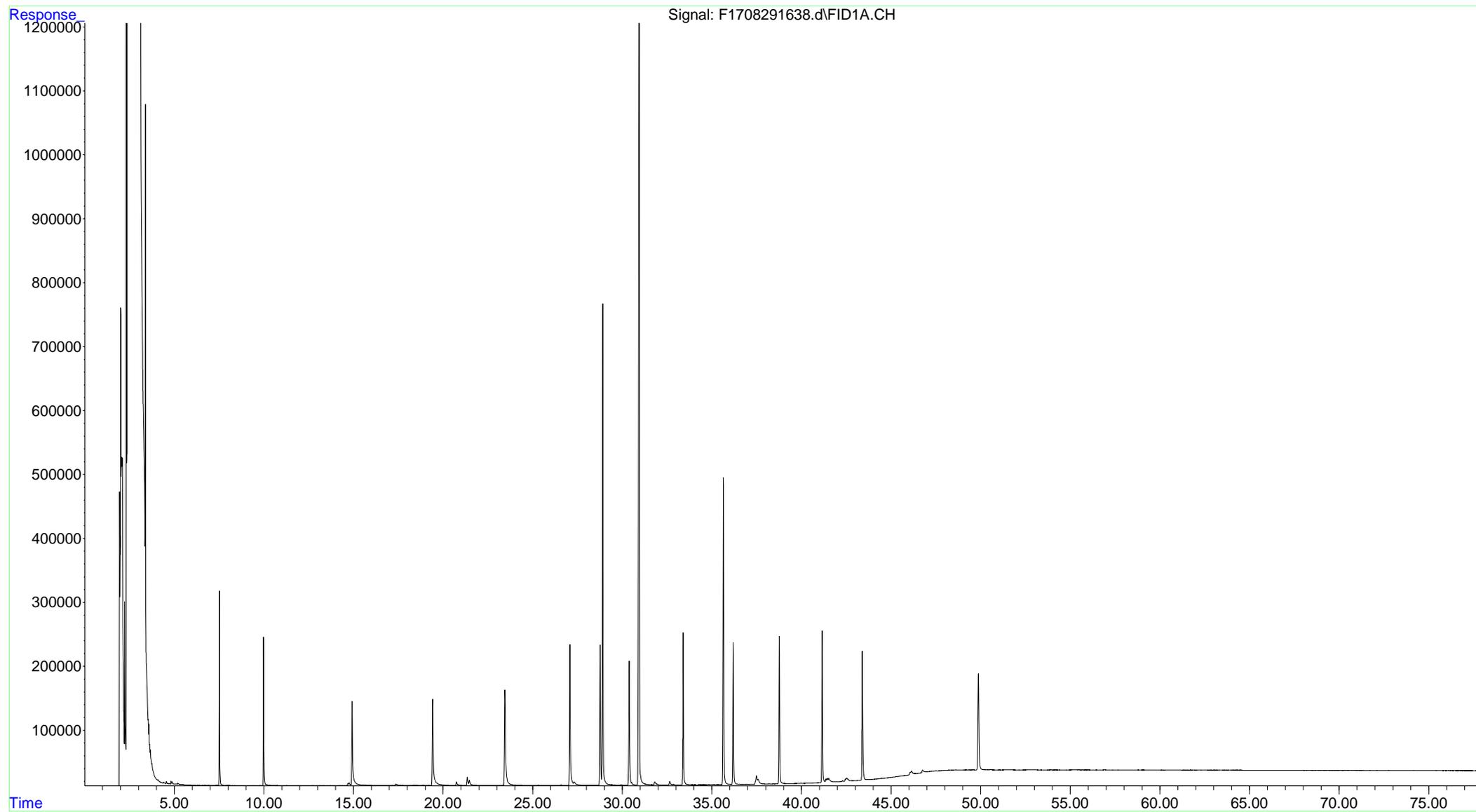
File :O:\Forensics\Data\FID17\2016\Aug\Aug29\F1708291644.d  
Operator : FID17:WR  
Acquired : 30 Aug 2016 3:50 pm using AcqMethod FID17.M  
Instrument : FID17  
Sample : L1627080-01  
Misc Info : WG927410,WG927146,ICAL11783  
ALS Vial : 22



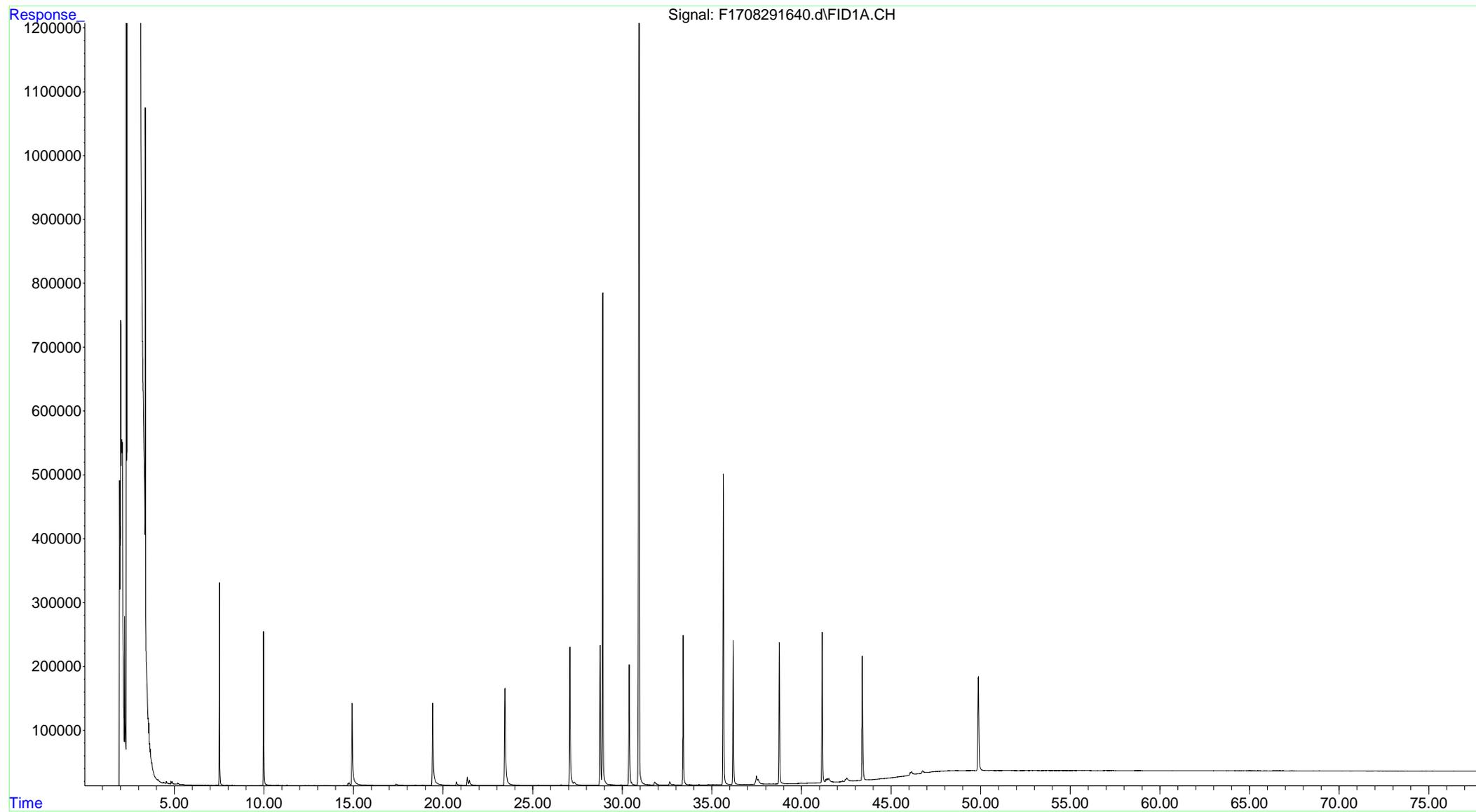
File :O:\Forensics\Data\FID17\2016\Aug\Aug29\F1708291636.d  
Operator : FID17:WR  
Acquired : 30 Aug 2016 9:57 am using AcqMethod FID17.M  
Instrument : FID17  
Sample : WG927146-1 (Method Blank)  
Misc Info : WG927410,WG927146,ICAL11783  
ALS Vial : 18



File :O:\Forensics\Data\FID17\2016\Aug\Aug29\F1708291638.d  
Operator : FID17:WR  
Acquired : 30 Aug 2016 11:25 am using AcqMethod FID17.M  
Instrument : FID17  
Sample : WG927146-2 (Laboratory Control Sample)  
Misc Info : WG927410,WG927146,ICAL11783  
ALS Vial : 19



File :O:\Forensics\Data\FID17\2016\Aug\Aug29\F1708291640.d  
Operator : FID17:WR  
Acquired : 30 Aug 2016 12:53 pm using AcqMethod FID17.M  
Instrument : FID17  
Sample : WG927146-3 (Laboratory Control Sample Duplicate)  
Misc Info : WG927410,WG927146,ICAL11783  
ALS Vial : 20



# **Petroleum Reference Standards**

Data Path : O:\Forensics\Data\FID17\2016\Aug\Aug29\  
 Data File : F1708291646.d  
 Signal(s) : FID1A.CH  
 Acq On : 30 Aug 2016 5:19 pm  
 Operator : FID17:WR  
 Sample : Alkane Reference Standard (C8 - C40)  
 Misc : WG927410,FRAX49  
 ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E  
 Quant Time: Aug 31 10:05:54 2016  
 Quant Method : O:\Forensics\Data\FID17\2016\Aug\Aug29\HC17102615F.M  
 Quant Title : FID Forensics  
 QLast Update : Tue Aug 30 09:55:44 2016  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0  
 Signal Phase : Rtx-5MS  
 Signal Info : 0.25mm

Sub List : CCAL - CCAL

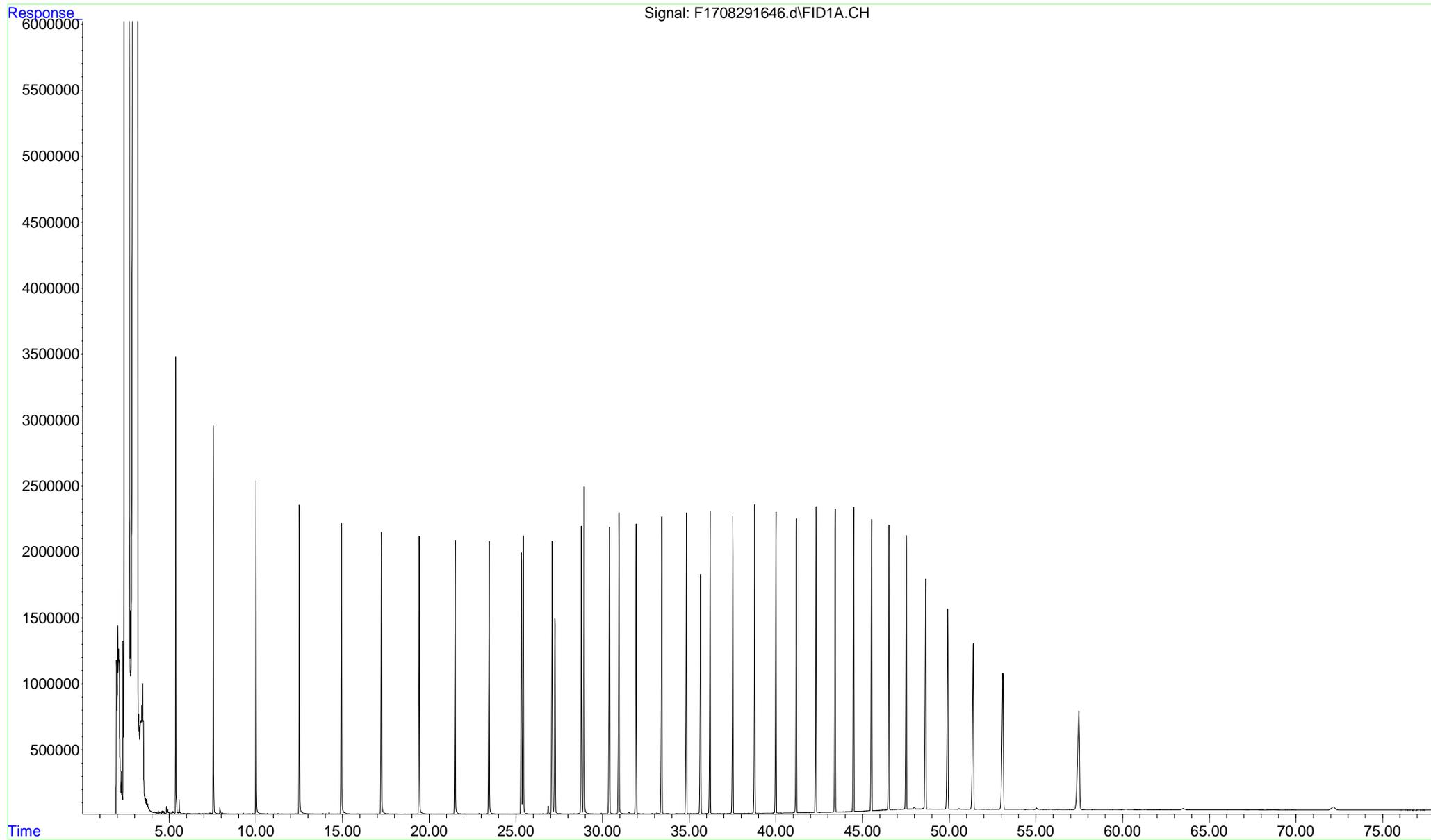
Compound	R.T.	Response	Conc	Units
Internal Standards				
1) I 5-alpha-androstane	30.949	58901570	50.000	ug/mL M4
System Monitoring Compounds				
19) s ortho-terphenyl	28.933	63551905	50.752	ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery =	101.50%	
24) s d50-Tetracosane	35.654	51543199	49.142	ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery =	98.28%	
Target Compounds				
2) t n-Octane (C8)	5.368	43434341	45.473	ug/mL M4
3) t n-Nonane (C9)	7.534	45928865	46.551	ug/mL M4
4) t n-Decane (C10)	9.999	48346475	47.440	ug/mL M4
5) t n-Undecane (C11)	12.504	49561403	48.210	ug/mL M4
6) t n-Dodecane (C12)	14.929	51399059	49.152	ug/mL M4
7) t n-Tridecane (C13)	17.238	52467545	49.919	ug/mL M4
9) t n-Tetradecane (C14)	19.425	53452943	50.248	ug/mL M4
11) t n-Pentadecane (C15)	21.494	54979172	50.786	ug/mL M4
12) t n-Hexadecane (C16)	23.454	55504875	51.345	ug/mL M4
14) t n-Heptadecane (C17)	25.319	55049109	50.383	ug/mL M4
15) t Pristane	25.427	57053658	51.845	ug/mL M4
16) t n-Octadecane (C18)	27.091	57019124	51.382	ug/mL M4
17) t Phytane	27.251	50065683	51.482	ug/mL M4
18) t n-Nonadecane (C19)	28.782	56709327	51.410	ug/mL M4
20) t n-Eicosane (C20)	30.396	56670814	51.508	ug/mL M4
21) t n-Heneicosane (C21)	31.939	57266169	51.610	ug/mL M4
22) t n-Docosane (C22)	33.419	57534914	51.453	ug/mL M4
23) t n-Tricosane (C23)	34.836	57915797	51.362	ug/mL M4
25) t n-Tetracosane (C24)	36.202	57975971	51.263	ug/mL M4
26) t n-Pentacosane (C25)	37.515	57406299	51.215	ug/mL M4
27) t n-Hexacosane (C26)	38.782	58536715	51.118	ug/mL M4
28) t n-Heptacosane (C27)	40.000	57821608	51.000	ug/mL M4
29) t n-Octacosane (C28)	41.180	57723599	51.180	ug/mL M4
30) t n-Nonacosane (C29)	42.317	57696990	50.894	ug/mL M4
31) t n-Triacontane (C30)	43.420	57695232	50.803	ug/mL M4
32) t n-Hentriacontane (C31)	44.486	57722753	50.696	ug/mL M4
33) t n-Dotriacontane (C32)	45.519	58189009	50.763	ug/mL M4
34) t n-Tritriacontane (C33)	46.521	54900357	50.694	ug/mL M4
35) t n-tetratriacontane (C34)	47.524	57414025	50.647	ug/mL M4
36) t n-Pentatriacontane (C35)	48.641	57725878	50.638	ug/mL M4
37) t n-Hexatriacontane (C36)	49.915	59109947	50.508	ug/mL M4
38) t n-Heptatriacontane (C37)	51.381	57562682	50.398	ug/mL M4
39) t n-Octatriacontane (C38)	53.094	56248451	50.218	ug/mL M4
41) t n-Tetracontane (C40)	57.482	57472467	49.402	ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

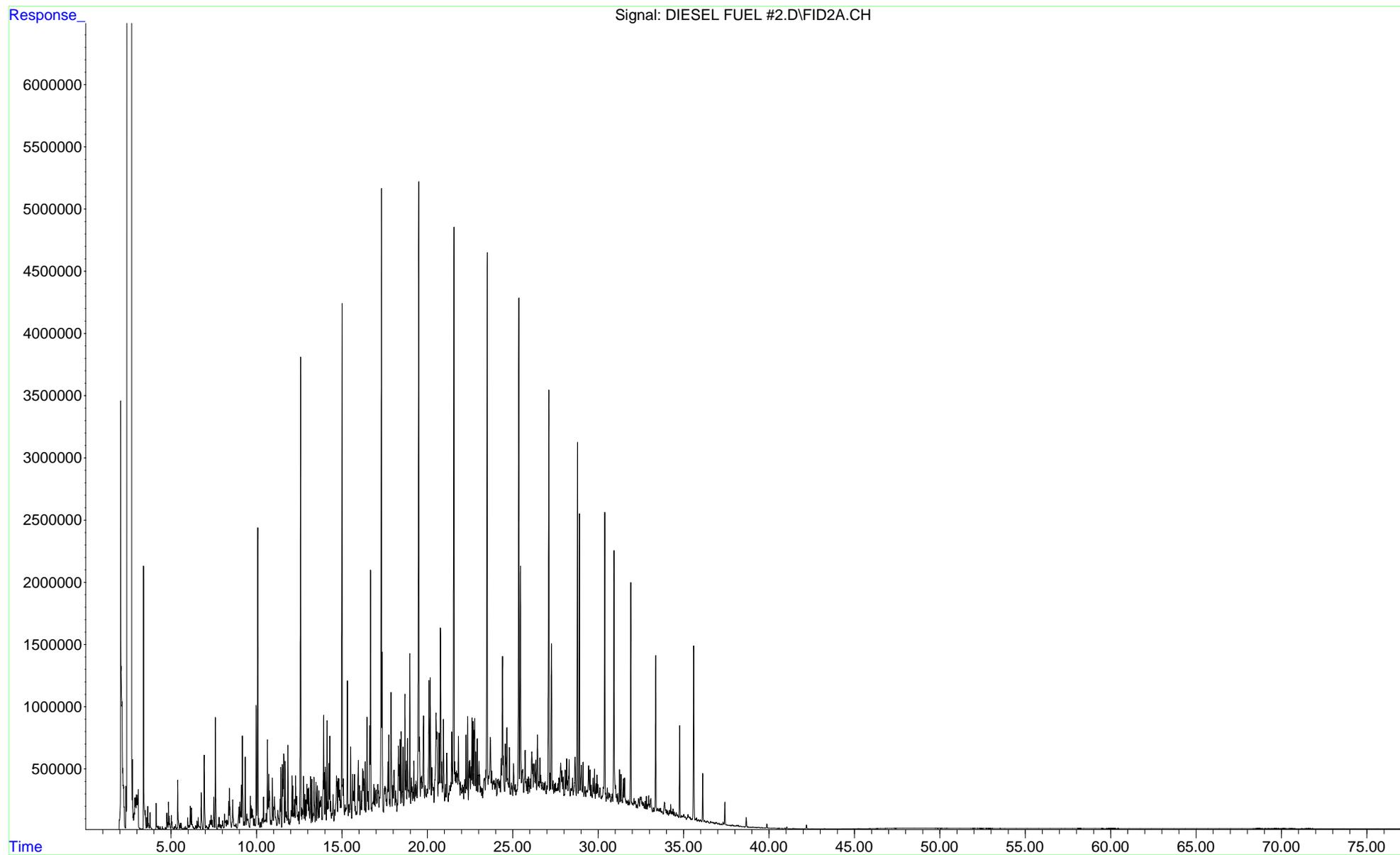
(f)=RT Delta > 1/2 Window

(m)=manual int.

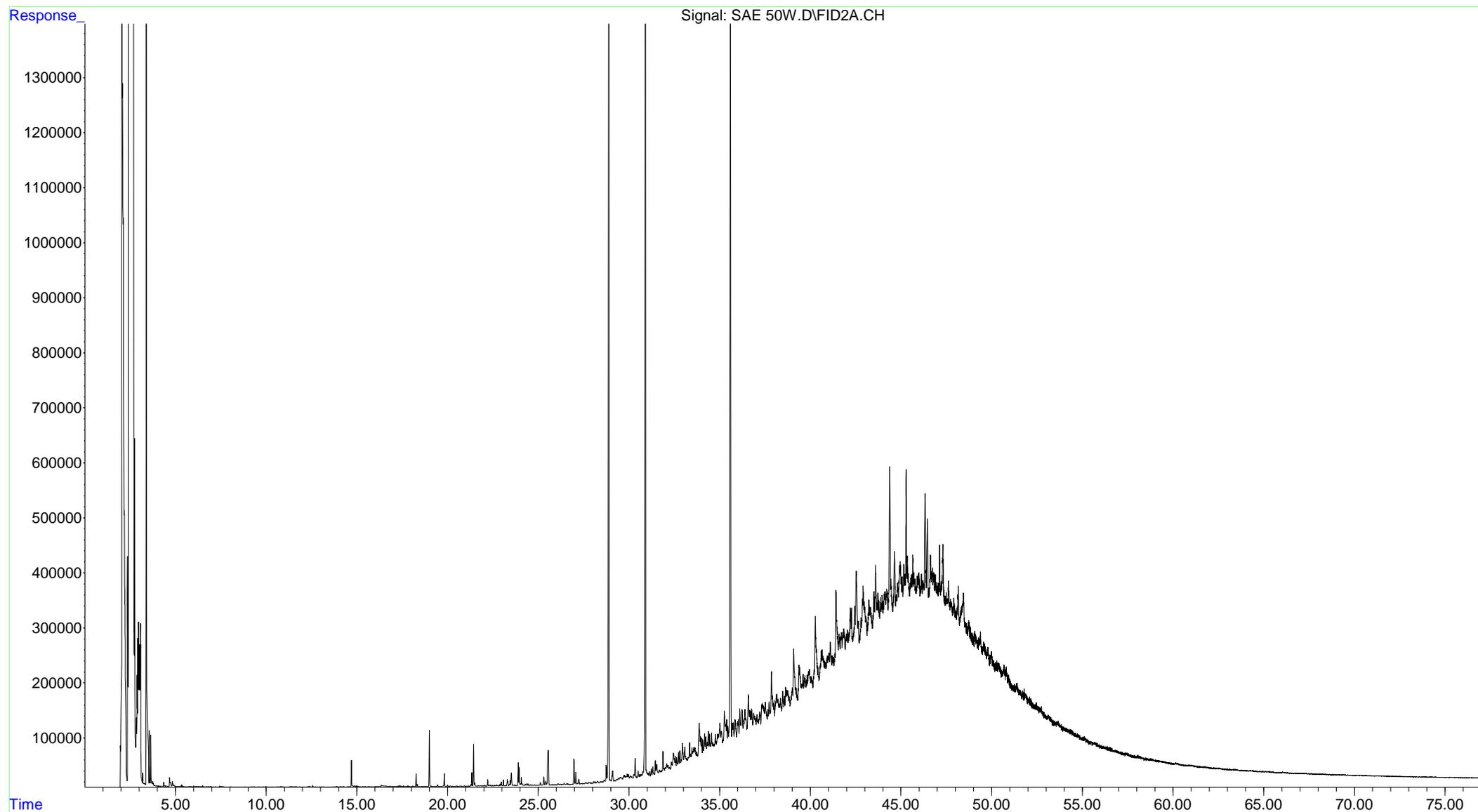
Data Path : O:\Forensics\Data\FID17\2016\Aug\Aug29\  
Data File : F1708291646.d  
Operator : FID17:WR  
Acquired : 30 Aug 2016 5:19 pm using AcqMethod FID17.M  
Instrument: FID17  
Sample : Alkane Reference Standard (C8 - C40)  
Misc Info : WG927410,FRAX49  
ALS Vial : 23



File :O:\FORENSICS\LIBRARY\HYDROCARBON REFERENCE STANDARDS\DIESEL  
... FUEL #2.D  
Operator : PAH2:AC  
Instrument : PAH 2  
Acquired : 18 Nov 2011 8:19 pm using AcqMethod FRNC2AF.M  
Sample : #2 DIESEL FUEL  
Misc Info : F050410A



File :O:\Forensics\LIBRARY\Hydrocarbon Reference Standards\SAE 50W  
... .D  
Operator : PAH2:AC  
Instrument : PAH 2  
Acquired : 19 Nov 2011 2:34 am using AcqMethod FRNC2AF.M  
Sample : SAE 50W Motor Oil  
Misc Info : 1X





## ANALYTICAL REPORT

Lab Number:	L1635614
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	ATLANTIC BRIDGE
Project Number:	140143.0000.7478
Report Date:	11/29/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1635614-01	MW-201 (LNAPL)	OIL	WEYMOUTH, MA	11/03/16 09:30	11/03/16

Project Name: ATLANTIC BRIDGE

Lab Number: L1635614

Project Number: 140143.0000.7478

Report Date: 11/29/16

**MADEP MCP Response Action Analytical Report Certification**

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

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

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



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

### Case Narrative (continued)

#### Report Submission

This final report replaces the partial report issued November 10, 2016 and includes the results of all requested analyses.

The analyses of Viscosity, Density, and Molecular Weight were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

#### MCP Related Narratives

##### VPH

L1635614-01: The sample has elevated detection limits due to the dilution required by the sample matrix.

In reference to question H:

L1635614-01: The surrogate recovery is outside the acceptance criteria for 2,5-Dibromotoluene-FID (167%); however, the sample was not re-analyzed due to coelution with obvious interferences. A copy of the chromatogram is included as an attachment to this report. The results are not considered to be biased.

##### EPH

L1635614-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

In reference to question H:

L1635614-01: The surrogate recoveries are below the acceptance criteria for chloro-octadecane (0%) and o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 11/29/16

# ORGANICS

# **PETROLEUM HYDROCARBONS**

Project Name: ATLANTIC BRIDGE

Lab Number: L1635614

Project Number: 140143.0000.7478

Report Date: 11/29/16

**SAMPLE RESULTS**

Lab ID: L1635614-01 D

Date Collected: 11/03/16 09:30

Client ID: MW-201 (LNAPL)

Date Received: 11/03/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Matrix: Oil

Analytical Method: 100, VPH-04-1.1

Analytical Date: 11/09/16 10:13

Analyst: JM

Percent Solids: Results are reported on an 'AS RECEIVED' basis.

**Quality Control Information**

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Were samples received in methanol?	Covering the Soil
Methanol ratio:	8.8:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	484	--	20
C9-C12 Aliphatics	2120		mg/kg	484	--	20
C9-C10 Aromatics	1390		mg/kg	484	--	20
C5-C8 Aliphatics, Adjusted	ND		mg/kg	484	--	20
C9-C12 Aliphatics, Adjusted	730		mg/kg	484	--	20
Benzene	ND		mg/kg	19.4	--	20
Toluene	ND		mg/kg	19.4	--	20
Ethylbenzene	ND		mg/kg	19.4	--	20
p/m-Xylene	ND		mg/kg	19.4	--	20
o-Xylene	ND		mg/kg	19.4	--	20
Methyl tert butyl ether	ND		mg/kg	9.69	--	20
Naphthalene	ND		mg/kg	38.8	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	127		70-130
2,5-Dibromotoluene-FID	167	Q	70-130

**Project Name:** ATLANTIC BRIDGE**Lab Number:** L1635614**Project Number:** 140143.0000.7478**Report Date:** 11/29/16**SAMPLE RESULTS**

Lab ID: L1635614-01 D  
 Client ID: MW-201 (LNAPL)  
 Sample Location: WEYMOUTH, MA  
 Matrix: Oil  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 11/09/16 00:20  
 Analyst: DV  
 Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 11/03/16 09:30  
 Date Received: 11/03/16  
 Field Prep: Not Specified  
 Extraction Method: EPA 3580A  
 Extraction Date: 11/07/16 17:15  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 11/07/16

**Quality Control Information**

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	58700		mg/kg	1700	--	20
C19-C36 Aliphatics	93200		mg/kg	1700	--	20
C11-C22 Aromatics	93200		mg/kg	1700	--	20
C11-C22 Aromatics, Adjusted	93200		mg/kg	1700	--	20
Naphthalene	ND		mg/kg	84.9	--	20
2-Methylnaphthalene	ND		mg/kg	84.9	--	20
Acenaphthylene	ND		mg/kg	84.9	--	20
Acenaphthene	ND		mg/kg	84.9	--	20
Fluorene	ND		mg/kg	84.9	--	20
Phenanthrene	ND		mg/kg	84.9	--	20
Anthracene	ND		mg/kg	84.9	--	20
Fluoranthene	ND		mg/kg	84.9	--	20
Pyrene	ND		mg/kg	84.9	--	20
Benzo(a)anthracene	ND		mg/kg	84.9	--	20
Chrysene	ND		mg/kg	84.9	--	20
Benzo(b)fluoranthene	ND		mg/kg	84.9	--	20
Benzo(k)fluoranthene	ND		mg/kg	84.9	--	20
Benzo(a)pyrene	ND		mg/kg	84.9	--	20
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	84.9	--	20
Dibenzo(a,h)anthracene	ND		mg/kg	84.9	--	20
Benzo(ghi)perylene	ND		mg/kg	84.9	--	20

Project Name: ATLANTIC BRIDGE

Lab Number: L1635614

Project Number: 140143.0000.7478

Report Date: 11/29/16

**SAMPLE RESULTS**

Lab ID: L1635614-01 D

Date Collected: 11/03/16 09:30

Client ID: MW-201 (LNAPL)

Date Received: 11/03/16

Sample Location: WEYMOUTH, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	93		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

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

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 11/08/16 01:46  
Analyst: DV

Extraction Method: EPA 3580A  
Extraction Date: 11/07/16 17:15  
Cleanup Method: EPH-04-1  
Cleanup Date: 11/07/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG949964-1					
C9-C18 Aliphatics	ND		mg/kg	895	--
C19-C36 Aliphatics	ND		mg/kg	895	--
C11-C22 Aromatics	ND		mg/kg	895	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	895	--
Naphthalene	ND		mg/kg	44.8	--
2-Methylnaphthalene	ND		mg/kg	44.8	--
Acenaphthylene	ND		mg/kg	44.8	--
Acenaphthene	ND		mg/kg	44.8	--
Fluorene	ND		mg/kg	44.8	--
Phenanthrene	ND		mg/kg	44.8	--
Anthracene	ND		mg/kg	44.8	--
Fluoranthene	ND		mg/kg	44.8	--
Pyrene	ND		mg/kg	44.8	--
Benzo(a)anthracene	ND		mg/kg	44.8	--
Chrysene	ND		mg/kg	44.8	--
Benzo(b)fluoranthene	ND		mg/kg	44.8	--
Benzo(k)fluoranthene	ND		mg/kg	44.8	--
Benzo(a)pyrene	ND		mg/kg	44.8	--
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	44.8	--
Dibenzo(a,h)anthracene	ND		mg/kg	44.8	--
Benzo(ghi)perylene	ND		mg/kg	44.8	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

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

Analytical Method: 100, VPH-04-1.1  
Analytical Date: 11/09/16 09:17  
Analyst: JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG950701-3					
C5-C8 Aliphatics	ND		mg/kg	26.6	--
C9-C12 Aliphatics	ND		mg/kg	26.6	--
C9-C10 Aromatics	ND		mg/kg	26.6	--
C5-C8 Aliphatics, Adjusted	ND		mg/kg	26.6	--
C9-C12 Aliphatics, Adjusted	ND		mg/kg	26.6	--
Benzene	ND		mg/kg	1.07	--
Toluene	ND		mg/kg	1.07	--
Ethylbenzene	ND		mg/kg	1.07	--
p/m-Xylene	ND		mg/kg	1.07	--
o-Xylene	ND		mg/kg	1.07	--
Methyl tert butyl ether	ND		mg/kg	0.533	--
Naphthalene	ND		mg/kg	2.13	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	93		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1635614

Project Number: 140143.0000.7478

Report Date: 11/29/16

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG949964-2 WG949964-3								
C9-C18 Aliphatics	109		117		40-140	7		25
C19-C36 Aliphatics	114		135		40-140	17		25
C11-C22 Aromatics	109		97		40-140	12		25
Naphthalene	82		69		40-140	17		25
2-Methylnaphthalene	80		68		40-140	16		25
Acenaphthylene	85		72		40-140	17		25
Acenaphthene	85		70		40-140	19		25
Fluorene	82		69		40-140	17		25
Phenanthrene	80		67		40-140	18		25
Anthracene	83		68		40-140	20		25
Fluoranthene	85		72		40-140	17		25
Pyrene	88		74		40-140	17		25
Benzo(a)anthracene	78		66		40-140	17		25
Chrysene	85		72		40-140	17		25
Benzo(b)fluoranthene	80		71		40-140	12		25
Benzo(k)fluoranthene	88		74		40-140	17		25
Benzo(a)pyrene	79		68		40-140	15		25
Indeno(1,2,3-cd)Pyrene	75		66		40-140	13		25
Dibenzo(a,h)anthracene	77		63		40-140	20		25
Benzo(ghi)perylene	80		70		40-140	13		25
Nonane (C9)	76		78		30-140	3		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG949964-2 WG949964-3								
Decane (C10)	81		82		40-140	1		25
Dodecane (C12)	82		84		40-140	2		25
Tetradecane (C14)	82		84		40-140	2		25
Hexadecane (C16)	85		89		40-140	5		25
Octadecane (C18)	89		95		40-140	7		25
Nonadecane (C19)	85		88		40-140	3		25
Eicosane (C20)	90		96		40-140	6		25
Docosane (C22)	90		94		40-140	4		25
Tetracosane (C24)	88		93		40-140	6		25
Hexacosane (C26)	86		91		40-140	6		25
Octacosane (C28)	86		90		40-140	5		25
Triacontane (C30)	83		88		40-140	6		25
Hexatriacontane (C36)	81		86		40-140	6		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	77		89		40-140
o-Terphenyl	86		77		40-140
2-Fluorobiphenyl	95		76		40-140
2-Bromonaphthalene	94		74		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ATLANTIC BRIDGE

Lab Number: L1635614

Project Number: 140143.0000.7478

Report Date: 11/29/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG950701-1 WG950701-2								
C5-C8 Aliphatics	89		96		70-130	7		25
C9-C12 Aliphatics	100		106		70-130	6		25
C9-C10 Aromatics	95		99		70-130	5		25
Benzene	91		98		70-130	7		25
Toluene	94		100		70-130	6		25
Ethylbenzene	95		100		70-130	6		25
p/m-Xylene	95		100		70-130	5		25
o-Xylene	96		101		70-130	5		25
Methyl tert butyl ether	88		98		70-130	10		25
Naphthalene	91		102		70-130	12		25
1,2,4-Trimethylbenzene	95		99		70-130	5		25
Pentane	81		87		70-130	7		25
2-Methylpentane	89		96		70-130	7		25
2,2,4-Trimethylpentane	95		101		70-130	6		25
n-Nonane	100		105		30-130	5		25
n-Decane	101		105		70-130	4		25
n-Butylcyclohexane	101		107		70-130	6		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG950701-1 WG950701-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	92		100		70-130
2,5-Dibromotoluene-FID	91		100		70-130

Project Name: ATLANTIC BRIDGE

Lab Number: L1635614

Project Number: 140143.0000.7478

Report Date: 11/29/16

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1635614-01A	Glass 60mL/2oz unpreserved	A	N/A	3.8	Y	Absent	-
L1635614-01B	Glass 500ml/16oz unpreserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(28),EPH-DELUX-10(14)
L1635614-01C	Glass 500ml/16oz unpreserved	A	N/A	3.8	Y	Absent	SUB-MOLECULARWEIGHT(14),SUB-DENSITY(28),SUB-VISCOSITY()
L1635614-01X	Vial unpreserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(28)

\*Values in parentheses indicate holding time in days

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** ATLANTIC BRIDGE  
**Project Number:** 140143.0000.7478

**Lab Number:** L1635614  
**Report Date:** 11/29/16

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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





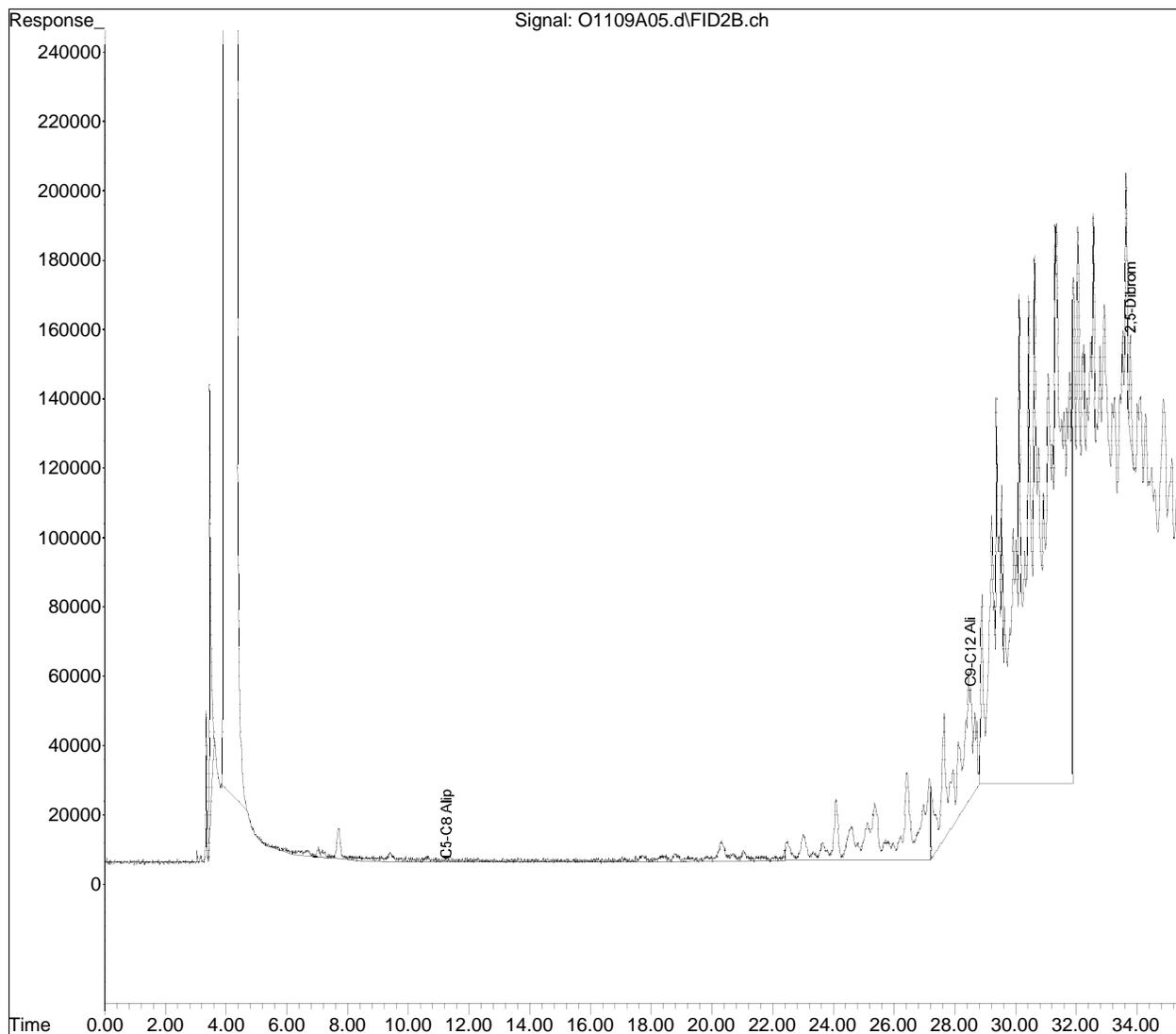
## Quantitation Report (QT Reviewed)

Data Path : I:\OVPH\161109ali\  
Data File : O1109A05.d  
Signal(s) : FID2B.ch  
Acq On : 9 Nov 2016 10:13 am  
Operator : OVPH:JM  
Sample : 11635614-01D,41,10.66,1.1,.005  
Misc : WG950701,ICAL12828  
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Nov 09 10:56:15 2016  
Quant Method : I:\OVPH\161109ali\vph-ali160830.m  
Quant Title : VPH ALIPHATIC  
QLast Update : Wed Aug 31 07:53:22 2016  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

Sub List : Default - All compounds listed





Certificate of Analysis  
Number: 1030-16110356-001A

Houston Laboratories  
8820 Interchange Drive  
Houston, TX 77054  
Phone 713-660-0901

Ashaley Kane  
Alpha Analytical  
8 Walkup Drive  
Westborough, MA 01581

Nov. 29, 2016

Station Name: MW-201 (LNAPL)  
Sample Conditions:

Sampled By: N/A  
Sample Of: Liquid Spot  
Sample Date: 11/03/2016 09:30

### Analytical Data

Test	Method	Result	Units	Detection Limit	Lab Tech.	Analysis Date
Viscosity - Kinematic @ 104°F	ASTM D-445	1560	cSt		FM	11/29/2016
Viscosity - Kinematic @ 104°F	ASTM D-445	7228	SUS		FM	11/29/2016
API Gravity @ 60° F	ASTM D-5002	13.54	°		JJH	11/10/2016
Specific Gravity @ 60/60° F	ASTM D-5002	0.9756	—		JJH	11/10/2016
Density @ 60° F	ASTM D-5002	0.9746	g/ml		JJH	11/10/2016
Molecular Weight	Proprietary	485	g/mol		JSG	11/11/2016

**Comments:**

AS-D-445: Analysis performed on hydrocarbon layer.

Hydrocarbon Laboratory Manager

Quality Assurance:

The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

21635614

		SPL Work Order No.:		Acct. Mate Code:		Dept. Code:		Page	Pages	
		1		1						
<b>Report To:</b> (Company Name): Alpha Analytical		<b>Project/Station Name:</b>		<b>Project/Station Number:</b>		<b>Project/Station Location:</b>		<b>Requested TAT*</b>  <b>10 business days</b>		
Address: 8 Walkup Drive		Special Instructions:								
City/State/Zip: Westboro MA 1581		Contact: Ashaley Kane subreports@alphalab.com		Indicate Billing Type: (Place "X", where appropriate)		Net 30 day Acct.		Check #		
Phone: 508-439-5158 Fax: 508-898-9193		Credit Card		<<<Contact SPL, Inc for CC payment arrangements		* Surcharges May Apply (See quote for details)				
<b>Invoice To:</b> (Company Name): Alpha Analytical		Address: 8 Walkup Drive		City/State/Zip: Westboro MA 1581		Contact: Accounts Payable ap@alphalab.com		Phone: 508-439-5158 Fax: 508-898-9193		
Client PO# or Ref. No.: N/A		Contract/Proposal #: <b>SPLQ7378</b> (i.e. SPLQ####)		* Terms: Cylinders will be rented for \$10/cyl. All cylinders checked out are to be returned within 21 days, whether they contain sample or not. Cylinders not returned after 30 days will be considered lost and will be billed at current replacement cost.		<b>Requested Analysis</b> (Place an "X" next to Sample ID below)		Comments		
Cylinder Tracking Info		AS-D-445 AS-D-5002 AS-MOLWT		AS-D-445 AS-D-5002 AS-MOLWT		AS-D-445 AS-D-5002 AS-MOLWT		AS-D-445 AS-D-5002 AS-MOLWT		
Sample ID (used to log/track sample)	Sample Date	Sample Time	Sample Type (Gas/Liq./Solid)	Duplicate	Composite	Spot	Cylinder #	Date Out	Date In	Comments
MW-201 (NAP)	11/16	9:30	Oil							
Sampled By-Print Name: _____		Received By-Company: _____		Signature: _____		Signature: _____		Signature: _____		
Relinquished By-Print Name: Elizabeth Kane		Date: 11/7/16		Time: 14:25		Received By-Print Name: _____		Date: 11/8		
Signature: _____		Signature: _____		Signature: _____		Signature: _____		Time: 12:31		
Relinquished By-Print Name: _____		Date: _____		Time: _____		Received By-Print Name: _____		Date: _____		
Signature: _____		Signature: _____		Signature: _____		Signature: _____		Time: _____		
Relinquished By-Print Name: _____		Date: _____		Time: _____		Received By-Print Name: _____		Date: _____		
Signature: _____		Signature: _____		Signature: _____		Signature: _____		Time: _____		



## ANALYTICAL REPORT

Lab Number:	L1700253
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	01/11/17

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1700253-01	MW-416	WATER	WEYMOUTH, MA	01/03/17 10:55	01/04/17
L1700253-02	MW-417	WATER	WEYMOUTH, MA	01/03/17 10:45	01/04/17
L1700253-03	MW-400	WATER	WEYMOUTH, MA	01/03/17 13:35	01/04/17
L1700253-04	MW-401	WATER	WEYMOUTH, MA	01/03/17 13:50	01/04/17
L1700253-05	MW-203	WATER	WEYMOUTH, MA	01/03/17 15:20	01/04/17
L1700253-06	MW-205	WATER	WEYMOUTH, MA	01/03/17 15:25	01/04/17
L1700253-07	TRIP BLANK	WATER	WEYMOUTH, MA	01/03/17 16:00	01/04/17
L1700253-08	MW-204	WATER	WEYMOUTH, MA	01/04/17 09:55	01/04/17
L1700253-09	MW-202	WATER	WEYMOUTH, MA	01/04/17 10:00	01/04/17
L1700253-10	MW-411	WATER	WEYMOUTH, MA	01/04/17 11:25	01/04/17
L1700253-11	MW-409	WATER	WEYMOUTH, MA	01/04/17 11:40	01/04/17
L1700253-12	MW-206	WATER	WEYMOUTH, MA	01/04/17 13:10	01/04/17
L1700253-13	TRIP BLANK	WATER	WEYMOUTH, MA	01/04/17 14:50	01/04/17
L1700253-14	MW-405	WATER	WEYMOUTH, MA	01/04/17 14:40	01/04/17
L1700253-15	MW-403	WATER	WEYMOUTH, MA	01/04/17 14:55	01/04/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**Case Narrative (continued)**

MCP Related Narratives

EPH

In reference to question G:

L1700253-01 through -06, -08 through -12, -14 and -15: One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 01/11/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-01  
 Client ID: MW-416  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/08/17 02:13  
 Analyst: KD

Date Collected: 01/03/17 10:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	96		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

### SAMPLE RESULTS

Lab ID: L1700253-01  
 Client ID: MW-416  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 03:18  
 Analyst: NS

Date Collected: 01/03/17 10:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/09/17 09:35  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-01  
 Client ID: MW-416  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/03/17 10:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	85		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-02  
 Client ID: MW-417  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/08/17 02:53  
 Analyst: KD

Date Collected: 01/03/17 10:45  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	94		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-02  
 Client ID: MW-417  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 08:11  
 Analyst: EK

Date Collected: 01/03/17 10:45  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.9	--	1
2-Methylnaphthalene	ND		ug/l	10.9	--	1
Acenaphthylene	ND		ug/l	10.9	--	1
Acenaphthene	ND		ug/l	10.9	--	1
Fluorene	ND		ug/l	10.9	--	1
Phenanthrene	ND		ug/l	10.9	--	1
Anthracene	ND		ug/l	10.9	--	1
Fluoranthene	ND		ug/l	10.9	--	1
Pyrene	ND		ug/l	10.9	--	1
Benzo(a)anthracene	ND		ug/l	10.9	--	1
Chrysene	ND		ug/l	10.9	--	1
Benzo(b)fluoranthene	ND		ug/l	10.9	--	1
Benzo(k)fluoranthene	ND		ug/l	10.9	--	1
Benzo(a)pyrene	ND		ug/l	10.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.9	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.9	--	1
Benzo(ghi)perylene	ND		ug/l	10.9	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-02  
 Client ID: MW-417  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/03/17 10:45  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	68		40-140
o-Terphenyl	58		40-140
2-Fluorobiphenyl	64		40-140
2-Bromonaphthalene	56		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-03  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/08/17 03:34  
 Analyst: KD

Date Collected: 01/03/17 13:35  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	96		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-03  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 08:42  
 Analyst: EK

Date Collected: 01/03/17 13:35  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.9	--	1
2-Methylnaphthalene	ND		ug/l	10.9	--	1
Acenaphthylene	ND		ug/l	10.9	--	1
Acenaphthene	ND		ug/l	10.9	--	1
Fluorene	ND		ug/l	10.9	--	1
Phenanthrene	ND		ug/l	10.9	--	1
Anthracene	ND		ug/l	10.9	--	1
Fluoranthene	ND		ug/l	10.9	--	1
Pyrene	ND		ug/l	10.9	--	1
Benzo(a)anthracene	ND		ug/l	10.9	--	1
Chrysene	ND		ug/l	10.9	--	1
Benzo(b)fluoranthene	ND		ug/l	10.9	--	1
Benzo(k)fluoranthene	ND		ug/l	10.9	--	1
Benzo(a)pyrene	ND		ug/l	10.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.9	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.9	--	1
Benzo(ghi)perylene	ND		ug/l	10.9	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-03  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/03/17 13:35  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-04  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/08/17 04:14  
 Analyst: KD

Date Collected: 01/03/17 13:50  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	96		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-04  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 09:14  
 Analyst: EK

Date Collected: 01/03/17 13:50  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-04  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/03/17 13:50  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	82		40-140
o-Terphenyl	91		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-05  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 15:34  
 Analyst: JM

Date Collected: 01/03/17 15:20  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	101		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-05  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 09:45  
 Analyst: EK

Date Collected: 01/03/17 15:20  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-05  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/03/17 15:20  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	67		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-06  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 20:09  
 Analyst: JM

Date Collected: 01/03/17 15:25  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	89		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-06  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 10:16  
 Analyst: EK

Date Collected: 01/03/17 15:25  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-06  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/03/17 15:25  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	91		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	77		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-07  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 18:49  
 Analyst: JM

Date Collected: 01/03/17 16:00  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	90		70-130
2,5-Dibromotoluene-FID	86		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-08  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 20:49  
 Analyst: JM

Date Collected: 01/04/17 09:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	92		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-08  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 00:20  
 Analyst: EK

Date Collected: 01/04/17 09:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-08  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 09:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	83		40-140
o-Terphenyl	89		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-09  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 21:29  
 Analyst: JM

Date Collected: 01/04/17 10:00  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	95		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-09  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 00:51  
 Analyst: EK

Date Collected: 01/04/17 10:00  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-09  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 10:00  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	57		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-10  
 Client ID: MW-411  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 22:09  
 Analyst: JM

Date Collected: 01/04/17 11:25  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	94		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-10  
 Client ID: MW-411  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 01:23  
 Analyst: EK

Date Collected: 01/04/17 11:25  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:23  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-10  
 Client ID: MW-411  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 11:25  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	85		40-140
o-Terphenyl	92		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	86		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-11  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 22:49  
 Analyst: JM

Date Collected: 01/04/17 11:40  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	92		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-11  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 01:54  
 Analyst: EK

Date Collected: 01/04/17 11:40  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 07:24  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-11  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 11:40  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	71		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-12  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 23:28  
 Analyst: JM

Date Collected: 01/04/17 13:10  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	88		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-12  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 02:25  
 Analyst: EK

Date Collected: 01/04/17 13:10  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 09:58  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-12  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 13:10  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	68		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-13  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/09/17 19:29  
 Analyst: JM

Date Collected: 01/04/17 14:50  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	88		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-14  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 00:08  
 Analyst: JM

Date Collected: 01/04/17 14:40  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	89		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

### SAMPLE RESULTS

**Lab ID:** L1700253-14  
**Client ID:** MW-405  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 01/07/17 02:57  
**Analyst:** EK

**Date Collected:** 01/04/17 14:40  
**Date Received:** 01/04/17  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/05/17 09:58  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 01/05/17

### Quality Control Information

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice  
**Sample Extraction method:** Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-14  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 14:40  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	86		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	80		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-15  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/11/17 09:34  
 Analyst: JM

Date Collected: 01/04/17 14:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	100		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-15  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/07/17 03:28  
 Analyst: EK

Date Collected: 01/04/17 14:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/05/17 09:58  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/05/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**SAMPLE RESULTS**

Lab ID: L1700253-15  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/04/17 14:55  
 Date Received: 01/04/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	87		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	74		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 01/07/17 04:31  
**Analyst:** EK

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/05/17 07:23  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 01/05/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02-06,08-12,14-15 Batch: WG967074-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 01/07/17 04:31  
**Analyst:** EK

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/05/17 07:23  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 01/05/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02-06,08-12,14-15 Batch: WG967074-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	85		40-140
o-Terphenyl	98		40-140
2-Fluorobiphenyl	91		40-140
2-Bromonaphthalene	83		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 01/10/17 01:47  
**Analyst:** NS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/09/17 09:35  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 01/09/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG967974-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 01/07/17 12:15  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-04 Batch: WG968130-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	89		70-130
2,5-Dibromotoluene-FID	88		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 01/09/17 17:42  
**Analyst:** KD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 06-14 Batch: WG968507-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	89		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 01/10/17 10:16  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 05 Batch: WG968737-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	95		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 01/11/17 08:39  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 15 Batch: WG968743-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	99		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-06,08-12,14-15 Batch: WG967074-2 WG967074-3								
C9-C18 Aliphatics	72		72		40-140	0		25
C19-C36 Aliphatics	91		95		40-140	4		25
C11-C22 Aromatics	90		81		40-140	11		25
Naphthalene	71		63		40-140	12		25
2-Methylnaphthalene	72		64		40-140	12		25
Acenaphthylene	78		68		40-140	14		25
Acenaphthene	80		70		40-140	13		25
Fluorene	82		71		40-140	14		25
Phenanthrene	86		78		40-140	10		25
Anthracene	88		80		40-140	10		25
Fluoranthene	91		83		40-140	9		25
Pyrene	93		84		40-140	10		25
Benzo(a)anthracene	87		80		40-140	8		25
Chrysene	94		86		40-140	9		25
Benzo(b)fluoranthene	91		84		40-140	8		25
Benzo(k)fluoranthene	93		85		40-140	9		25
Benzo(a)pyrene	86		78		40-140	10		25
Indeno(1,2,3-cd)Pyrene	88		80		40-140	10		25
Dibenzo(a,h)anthracene	91		85		40-140	7		25
Benzo(ghi)perylene	86		79		40-140	8		25
Nonane (C9)	52		52		30-140	0		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-06,08-12,14-15 Batch: WG967074-2 WG967074-3								
Decane (C10)	61		60		40-140	2		25
Dodecane (C12)	69		67		40-140	3		25
Tetradecane (C14)	74		72		40-140	3		25
Hexadecane (C16)	79		81		40-140	3		25
Octadecane (C18)	85		88		40-140	3		25
Nonadecane (C19)	85		88		40-140	3		25
Eicosane (C20)	87		90		40-140	3		25
Docosane (C22)	88		91		40-140	3		25
Tetracosane (C24)	88		92		40-140	4		25
Hexacosane (C26)	89		92		40-140	3		25
Octacosane (C28)	89		93		40-140	4		25
Triacontane (C30)	88		92		40-140	4		25
Hexatriacontane (C36)	87		91		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	85		89		40-140
o-Terphenyl	94		84		40-140
2-Fluorobiphenyl	88		78		40-140
2-Bromonaphthalene	86		75		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG967974-2 WG967974-3								
C9-C18 Aliphatics	80		74		40-140	8		25
C19-C36 Aliphatics	82		81		40-140	1		25
C11-C22 Aromatics	91		76		40-140	18		25
Naphthalene	67		57		40-140	16		25
2-Methylnaphthalene	67		58		40-140	14		25
Acenaphthylene	70		62		40-140	12		25
Acenaphthene	75		66		40-140	13		25
Fluorene	80		71		40-140	12		25
Phenanthrene	78		68		40-140	14		25
Anthracene	79		69		40-140	14		25
Fluoranthene	83		72		40-140	14		25
Pyrene	86		74		40-140	15		25
Benzo(a)anthracene	89		77		40-140	14		25
Chrysene	91		79		40-140	14		25
Benzo(b)fluoranthene	93		80		40-140	15		25
Benzo(k)fluoranthene	93		80		40-140	15		25
Benzo(a)pyrene	87		75		40-140	15		25
Indeno(1,2,3-cd)Pyrene	94		81		40-140	15		25
Dibenzo(a,h)anthracene	90		83		40-140	8		25
Benzo(ghi)perylene	90		77		40-140	16		25
Nonane (C9)	58		60		30-140	3		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG967974-2 WG967974-3								
Decane (C10)	65		68		40-140	5		25
Dodecane (C12)	66		70		40-140	6		25
Tetradecane (C14)	67		72		40-140	7		25
Hexadecane (C16)	71		76		40-140	7		25
Octadecane (C18)	75		78		40-140	4		25
Nonadecane (C19)	75		78		40-140	4		25
Eicosane (C20)	76		78		40-140	3		25
Docosane (C22)	77		80		40-140	4		25
Tetracosane (C24)	78		80		40-140	3		25
Hexacosane (C26)	78		81		40-140	4		25
Octacosane (C28)	79		81		40-140	3		25
Triacontane (C30)	80		82		40-140	2		25
Hexatriacontane (C36)	82		84		40-140	2		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	70		72		40-140
o-Terphenyl	85		73		40-140
2-Fluorobiphenyl	84		71		40-140
2-Bromonaphthalene	87		74		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04 Batch: WG968130-1 WG968130-2								
C5-C8 Aliphatics	103		99		70-130	4		25
C9-C12 Aliphatics	92		84		70-130	9		25
C9-C10 Aromatics	102		99		70-130	3		25
Benzene	102		101		70-130	1		25
Toluene	103		102		70-130	1		25
Ethylbenzene	103		100		70-130	3		25
p/m-Xylene	103		100		70-130	3		25
o-Xylene	102		99		70-130	3		25
Methyl tert butyl ether	103		101		70-130	2		25
Naphthalene	103		99		70-130	4		25
1,2,4-Trimethylbenzene	102		99		70-130	3		25
Pentane	102		99		70-130	3		25
2-Methylpentane	104		101		70-130	3		25
2,2,4-Trimethylpentane	104		99		70-130	5		25
n-Nonane	96		88		30-130	8		25
n-Decane	94		86		70-130	8		25
n-Butylcyclohexane	99		91		70-130	8		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04 Batch: WG968130-1 WG968130-2								

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
2,5-Dibromotoluene-PID	102		96		70-130
2,5-Dibromotoluene-FID	100		95		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 06-14 Batch: WG968507-1 WG968507-2								
C5-C8 Aliphatics	93		93		70-130	1		25
C9-C12 Aliphatics	75		73		70-130	3		25
C9-C10 Aromatics	94		93		70-130	1		25
Benzene	99		100		70-130	0		25
Toluene	100		100		70-130	0		25
Ethylbenzene	98		98		70-130	0		25
p/m-Xylene	97		96		70-130	0		25
o-Xylene	96		96		70-130	1		25
Methyl tert butyl ether	99		100		70-130	2		25
Naphthalene	95		96		70-130	1		25
1,2,4-Trimethylbenzene	94		93		70-130	1		25
Pentane	97		97		70-130	1		25
2-Methylpentane	95		96		70-130	1		25
2,2,4-Trimethylpentane	90		90		70-130	0		25
n-Nonane	80		78		30-130	2		25
n-Decane	81		78		70-130	3		25
n-Butylcyclohexane	83		82		70-130	2		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 06-14 Batch: WG968507-1 WG968507-2

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	89		90		70-130
2,5-Dibromotoluene-FID	86		86		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 05 Batch: WG968737-1 WG968737-2								
C5-C8 Aliphatics	91		97		70-130	6		25
C9-C12 Aliphatics	98		103		70-130	5		25
C9-C10 Aromatics	92		96		70-130	4		25
Benzene	89		93		70-130	5		25
Toluene	90		94		70-130	5		25
Ethylbenzene	90		95		70-130	5		25
p/m-Xylene	90		95		70-130	5		25
o-Xylene	90		94		70-130	5		25
Methyl tert butyl ether	87		88		70-130	2		25
Naphthalene	90		90		70-130	0		25
1,2,4-Trimethylbenzene	92		96		70-130	4		25
Pentane	85		90		70-130	6		25
2-Methylpentane	90		96		70-130	6		25
2,2,4-Trimethylpentane	96		101		70-130	6		25
n-Nonane	97		102		30-130	5		25
n-Decane	98		102		70-130	4		25
n-Butylcyclohexane	99		104		70-130	5		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 05 Batch: WG968737-1 WG968737-2								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2,5-Dibromotoluene-PID	86		85		70-130
2,5-Dibromotoluene-FID	86		86		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 15 Batch: WG968743-1 WG968743-2								
C5-C8 Aliphatics	98		100		70-130	2		25
C9-C12 Aliphatics	107		108		70-130	1		25
C9-C10 Aromatics	100		102		70-130	2		25
Benzene	94		98		70-130	4		25
Toluene	95		98		70-130	3		25
Ethylbenzene	96		99		70-130	3		25
p/m-Xylene	99		99		70-130	0		25
o-Xylene	98		99		70-130	2		25
Methyl tert butyl ether	87		95		70-130	9		25
Naphthalene	92		94		70-130	3		25
1,2,4-Trimethylbenzene	100		102		70-130	2		25
Pentane	91		91		70-130	0		25
2-Methylpentane	98		100		70-130	2		25
2,2,4-Trimethylpentane	104		105		70-130	1		25
n-Nonane	107		107		30-130	0		25
n-Decane	108		108		70-130	0		25
n-Butylcyclohexane	106		108		70-130	2		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 15 Batch: WG968743-1 WG968743-2								

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
2,5-Dibromotoluene-PID	94		95		70-130
2,5-Dibromotoluene-FID	93		96		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent  
 B Absent  
 C Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700253-01A	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-01B	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-01C	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-01D	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-01E	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-02A	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-02B	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-02C	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-02D	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-02E	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-03A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-03B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-03C	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-03D	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-03E	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-04A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-04B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-04C	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-04D	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-04E	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-05A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-05B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-05C	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-05D	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-05E	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-06A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-06B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700253-06C	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-06D	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-06E	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-07A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-07B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-08A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-08B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-08C	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-08D	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-08E	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-09A	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-09B	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-09C	Vial HCl preserved	B	N/A	2.7	Y	Absent	VPH-DELUX-10(14)
L1700253-09D	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-09E	Amber 1000ml HCl preserved	B	<2	2.7	Y	Absent	EPH-DELUX-10(14)
L1700253-10A	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-10B	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-10C	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-10D	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-10E	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-11A	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-11B	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-11C	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-11D	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-11E	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-12A	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-12B	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-12C	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-12D	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-12E	Amber 1000ml HCl preserved	C	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700253-13A	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-13B	Vial HCl preserved	C	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700253-14A	Vial HCl preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(14)
L1700253-14B	Vial HCl preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(14)
L1700253-14C	Vial HCl preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(14)
L1700253-14D	Amber 1000ml HCl preserved	A	<2	2.3	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700253-14E	Amber 1000ml HCl preserved	A	<2	2.3	Y	Absent	EPH-DELUX-10(14)
L1700253-15A	Vial HCl preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(14)
L1700253-15B	Vial HCl preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(14)
L1700253-15C	Vial HCl preserved	A	N/A	2.3	Y	Absent	VPH-DELUX-10(14)
L1700253-15D	Amber 1000ml HCl preserved	A	<2	2.3	Y	Absent	EPH-DELUX-10(14)
L1700253-15E	Amber 1000ml HCl preserved	A	<2	2.3	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700253  
**Report Date:** 01/11/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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

# CHAIN OF CUSTODY

PAGE 1 OF 2



WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

Date Rec'd in Lab: 1/4/17

ALPHA Job #: L1700253

## Project Information

Project Name: Weymouth C/S

Project Location: Weymouth, MA

Project #: 140143.0000.4903

Project Manager: Rick Paquette

ALPHA Quote #: 1907

## Report Information - Data Deliverables

- FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info PO #: 103294

## Client Information

Client: TRC

Address: 2 Liberty Square  
Boston, MA

Phone: 617-385-6033

Fax: 617-350-3443

Email: RNiles@TRCSolutions.com

These samples have been previously analyzed by Alpha

## Turn-Around Time

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

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

## Regulatory Requirements/Report Limits

State /Fed Program MCP Criteria REGW-2

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

- Yes  No Are MCP Analytical Methods Required?  
 Yes  No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS	UPH DELUXE	GPH DELUXE											TOTAL # BOTTLES
			<p><b>SAMPLE HANDLING</b></p> <p>Filtration _____</p> <p><input type="checkbox"/> Done</p> <p><input type="checkbox"/> Not needed</p> <p><input type="checkbox"/> Lab to do</p> <p><input type="checkbox"/> Lab to do</p> <p>Preservation _____</p> <p><input type="checkbox"/> Lab to do</p> <p>(Please specify below)</p> <p>Sample Specific Comments</p>										

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials											TOTAL # BOTTLES						
		Date	Time																			
00253-01	MW-416	1/3/17	10 <sup>55</sup> <del>45</del>	GW		x	x														5	
-02	MW-417		10 <sup>55</sup> <del>45</del>																			5
-03	MW-400		1335																			5
-04	MW-401		1350																			5
-05	MW-203		1520																			5
-06	MW-205		15 <sup>25</sup> <del>45</del>																			5
-07	MW T8010310 Blank	1/3/17	1600			X	X															2 5
-08	MW-204	1/4/17	0955																			5
-09	MW-202		1000																			5
-10	MW-411		1125																			5

PLEASE ANSWER QUESTIONS ABOVE!

Container Type V A  
Preservative B B

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	1/4/17		1/4/17 1500
	1/4/17 1715		1/4/17 1715

# CHAIN OF CUSTODY

PAGE 1 OF 2



WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

Date Rec'd in Lab: 1/4/17

ALPHA Job #: L1700253

## Client Information

Client: TRC  
Address: 2 Liberty Square  
Boston, MA  
Phone: 617-385-6033  
Fax: 617-350-3443  
Email: RNiles@TRCSolutions.com

These samples have been previously analyzed by Alpha

## Project Information

Project Name: Weymouth C/S  
Project Location: Weymouth, MA  
Project #: 140143.0000.4903  
Project Manager: Rick Paquette  
ALPHA Quote #: 1907

## Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

## Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info PO #: 103294

## Regulatory Requirements/Report Limits

State /Fed Program MCP Criteria REGW-2

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes  No Are MCP Analytical Methods Required?  
 Yes  No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS

UPH DELUXE

GPH DELUXE

SAMPLE HANDLING

Filtration \_\_\_\_\_

Done

Not needed

Lab to do

Lab to do

(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Sample Specific Comments															
		Date	Time																		
00253-01	MW-416	1/3/17	1045	GW		x	x														5
-02	MW-417		1055																		5
-03	MW-400		1335																		5
-04	MW-401		1350																		5
-05	MW-203		1520																		5
-06	MW-205		1545																		5
-07	MW <del>FB0103</del> <sup>BA</sup> <del>Blank</del> <sup>TIP</sup>	1/3/17	1600			X	X														2 5
-08	MW-204	1/4/17	0955																		5
-09	MW-202		1000																		5
-10	MW-411		1125																		5

PLEASE ANSWER QUESTIONS ABOVE!

Container Type V A  
Preservative B B

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	1/4/17 1522		1/4/17 1520
	1/4/17 1715		1/4/17 1715





## ANALYTICAL REPORT

Lab Number:	L1700387
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	01/12/17

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1700387-01	MW-402	WATER	WEYMOUTH, MA	01/05/17 09:30	01/05/17
L1700387-02	MW-408	WATER	WEYMOUTH, MA	01/05/17 09:50	01/05/17
L1700387-03	MW-412	WATER	WEYMOUTH, MA	01/05/17 11:30	01/05/17
L1700387-04	DUP-1	WATER	WEYMOUTH, MA	01/05/17 00:00	01/05/17
L1700387-05	MW-413	WATER	WEYMOUTH, MA	01/05/17 11:40	01/05/17
L1700387-06	MW-404	WATER	WEYMOUTH, MA	01/05/17 14:05	01/05/17
L1700387-07	MW-415	WATER	WEYMOUTH, MA	01/05/17 14:20	01/05/17
L1700387-08	TRIP BLANK	WATER	WEYMOUTH, MA	01/05/17 14:30	01/05/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

---

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### Case Narrative (continued)

#### MCP Related Narratives

##### EPH

In reference to question G:

L1700387-01 through -07: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG967737-3 LCSD recovery, associated with L1700387-01 through -07, is below the acceptance criteria for naphthalene (39%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this target compound.

The WG967737-2/-3 LCS/LCSD RPDs, associated with L1700387-01 through -07, are above the acceptance criteria for c11-c22 aromatics (42%), naphthalene (42%), 2-methylnaphthalene (43%), acenaphthylene (43%), acenaphthene (42%), fluorene (43%), phenanthrene (43%), anthracene (43%), fluoranthene (43%), pyrene (43%), benzo(a)anthracene (44%), chrysene (45%), benzo(b)fluoranthene (45%), benzo(k)fluoranthene (44%), benzo(a)pyrene (44%), indeno(1,2,3-cd)pyrene (44%), dibenzo(a,h)anthracene (45%), and benzo(ghi)perylene (45%).

##### VPH

L1700387-01 through -07: The sample has elevated detection limits due to the dilution required by the sample matrix (foam).

In reference to question G:

L1700387-01 through -07: One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 01/12/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-01  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 08:36  
 Analyst: NS

Date Collected: 01/05/17 09:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-01  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 09:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	67		40-140
o-Terphenyl	61		40-140
2-Fluorobiphenyl	62		40-140
2-Bromonaphthalene	65		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-01 D  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 19:34  
 Analyst: JM

Date Collected: 01/05/17 09:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	100	--	2
C9-C12 Aliphatics	ND		ug/l	100	--	2
C9-C10 Aromatics	ND		ug/l	100	--	2
C5-C8 Aliphatics, Adjusted	ND		ug/l	100	--	2
C9-C12 Aliphatics, Adjusted	ND		ug/l	100	--	2
Benzene	ND		ug/l	4.00	--	2
Toluene	ND		ug/l	4.00	--	2
Ethylbenzene	ND		ug/l	4.00	--	2
p/m-Xylene	ND		ug/l	4.00	--	2
o-Xylene	ND		ug/l	4.00	--	2
Methyl tert butyl ether	ND		ug/l	6.00	--	2
Naphthalene	ND		ug/l	8.00	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### SAMPLE RESULTS

Lab ID: L1700387-02  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 07:50  
 Analyst: NS

Date Collected: 01/05/17 09:50  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-02  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 09:50  
 Date Received: 01/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	75		40-140
2-Fluorobiphenyl	72		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-02 D  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 20:14  
 Analyst: JM

Date Collected: 01/05/17 09:50  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	97		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-03  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 07:05  
 Analyst: NS

Date Collected: 01/05/17 11:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	102		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	102		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-03  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 11:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	82		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-03 D  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 20:53  
 Analyst: JM

Date Collected: 01/05/17 11:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	95		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### SAMPLE RESULTS

Lab ID: L1700387-04  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 06:19  
 Analyst: NS

Date Collected: 01/05/17 00:00  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-04  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 00:00  
 Date Received: 01/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	41		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	61		40-140
2-Bromonaphthalene	63		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-04 D  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 21:33  
 Analyst: JM

Date Collected: 01/05/17 00:00  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### SAMPLE RESULTS

Lab ID: L1700387-05  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 05:34  
 Analyst: NS

Date Collected: 01/05/17 11:40  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-05  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 11:40  
 Date Received: 01/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	59		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-05 D  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 22:13  
 Analyst: JM

Date Collected: 01/05/17 11:40  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-06  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 04:49  
 Analyst: NS

Date Collected: 01/05/17 14:05  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-06  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 14:05  
 Date Received: 01/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	71		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-06 D  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 22:53  
 Analyst: JM

Date Collected: 01/05/17 14:05  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	100	--	2
C9-C12 Aliphatics	ND		ug/l	100	--	2
C9-C10 Aromatics	ND		ug/l	100	--	2
C5-C8 Aliphatics, Adjusted	ND		ug/l	100	--	2
C9-C12 Aliphatics, Adjusted	ND		ug/l	100	--	2
Benzene	ND		ug/l	4.00	--	2
Toluene	ND		ug/l	4.00	--	2
Ethylbenzene	ND		ug/l	4.00	--	2
p/m-Xylene	ND		ug/l	4.00	--	2
o-Xylene	ND		ug/l	4.00	--	2
Methyl tert butyl ether	ND		ug/l	6.00	--	2
Naphthalene	ND		ug/l	8.00	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	97		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-07  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/10/17 04:03  
 Analyst: NS

Date Collected: 01/05/17 14:20  
 Date Received: 01/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-07  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 14:20  
 Date Received: 01/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	52		40-140
2-Fluorobiphenyl	53		40-140
2-Bromonaphthalene	56		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-07 D  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 23:33  
 Analyst: JM

Date Collected: 01/05/17 14:20  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	93		70-130
2,5-Dibromotoluene-FID	97		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**SAMPLE RESULTS**

Lab ID: L1700387-08  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/10/17 18:14  
 Analyst: JM

Date Collected: 01/05/17 14:30  
 Date Received: 01/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	95		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 01/08/17 18:08  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/07/17 03:41  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 01/08/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-07 Batch: WG967737-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	64		40-140
2-Bromonaphthalene	66		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 01/10/17 10:16  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-08 Batch: WG968737-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	95		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG967737-2 WG967737-3								
C9-C18 Aliphatics	67		66		40-140	2		25
C19-C36 Aliphatics	77		76		40-140	1		25
C11-C22 Aromatics	80		52		40-140	42	Q	25
Naphthalene	60		39	Q	40-140	42	Q	25
2-Methylnaphthalene	62		40		40-140	43	Q	25
Acenaphthylene	65		42		40-140	43	Q	25
Acenaphthene	69		45		40-140	42	Q	25
Fluorene	73		47		40-140	43	Q	25
Phenanthrene	70		45		40-140	43	Q	25
Anthracene	70		45		40-140	43	Q	25
Fluoranthene	74		48		40-140	43	Q	25
Pyrene	76		49		40-140	43	Q	25
Benzo(a)anthracene	80		51		40-140	44	Q	25
Chrysene	85		54		40-140	45	Q	25
Benzo(b)fluoranthene	82		52		40-140	45	Q	25
Benzo(k)fluoranthene	83		53		40-140	44	Q	25
Benzo(a)pyrene	77		49		40-140	44	Q	25
Indeno(1,2,3-cd)Pyrene	83		53		40-140	44	Q	25
Dibenzo(a,h)anthracene	96		61		40-140	45	Q	25
Benzo(ghi)perylene	79		50		40-140	45	Q	25
Nonane (C9)	51		50		30-140	2		25

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG967737-2 WG967737-3								
Decane (C10)	58		58		40-140	0		25
Dodecane (C12)	63		63		40-140	0		25
Tetradecane (C14)	67		66		40-140	2		25
Hexadecane (C16)	70		69		40-140	1		25
Octadecane (C18)	73		73		40-140	0		25
Nonadecane (C19)	73		71		40-140	3		25
Eicosane (C20)	74		73		40-140	1		25
Docosane (C22)	74		73		40-140	1		25
Tetracosane (C24)	75		74		40-140	1		25
Hexacosane (C26)	75		74		40-140	1		25
Octacosane (C28)	75		74		40-140	1		25
Triacontane (C30)	76		74		40-140	3		25
Hexatriacontane (C36)	77		74		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	62		58		40-140
o-Terphenyl	70		44		40-140
2-Fluorobiphenyl	63		41		40-140
2-Bromonaphthalene	66		43		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08 Batch: WG968737-1 WG968737-2								
C5-C8 Aliphatics	91		97		70-130	6		25
C9-C12 Aliphatics	98		103		70-130	5		25
C9-C10 Aromatics	92		96		70-130	4		25
Benzene	89		93		70-130	5		25
Toluene	90		94		70-130	5		25
Ethylbenzene	90		95		70-130	5		25
p/m-Xylene	90		95		70-130	5		25
o-Xylene	90		94		70-130	5		25
Methyl tert butyl ether	87		88		70-130	2		25
Naphthalene	90		90		70-130	0		25
1,2,4-Trimethylbenzene	92		96		70-130	4		25
Pentane	85		90		70-130	6		25
2-Methylpentane	90		96		70-130	6		25
2,2,4-Trimethylpentane	96		101		70-130	6		25
n-Nonane	97		102		30-130	5		25
n-Decane	98		102		70-130	4		25
n-Butylcyclohexane	99		104		70-130	5		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08 Batch: WG968737-1 WG968737-2

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	86		85		70-130
2,5-Dibromotoluene-FID	86		86		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700387-01A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-01B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-01C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-01D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-01E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-02A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-02B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-02C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-02D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-02E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-03A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-03B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-03C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-03D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-03E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-04A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-04B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-04C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-04D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-04E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-05A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-05B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-05C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-05D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-05E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-06A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-06B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-06C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-06D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700387-06E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-07A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-07B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-07C	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-07D	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-07E	Amber 1000ml HCl preserved	A	<2	4.0	Y	Absent	EPH-DELUX-10(14)
L1700387-08A	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)
L1700387-08B	Vial HCl preserved	A	N/A	4.0	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700387  
**Report Date:** 01/12/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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





## ANALYTICAL REPORT

Lab Number:	L1700574
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	01/13/17

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1700574-01	MW-406	WATER	WEYMOUTH, MA	01/05/17 16:00	01/06/17
L1700574-02	DUP-2	WATER	WEYMOUTH, MA	01/05/17 00:00	01/06/17
L1700574-03	MW-407	WATER	WEYMOUTH, MA	01/05/17 16:10	01/06/17
L1700574-04	MW-201	WATER	WEYMOUTH, MA	01/06/17 10:25	01/06/17
L1700574-05	MW-410	WATER	WEYMOUTH, MA	01/06/17 12:30	01/06/17
L1700574-06	MW-414	WATER	WEYMOUTH, MA	01/06/17 13:20	01/06/17
L1700574-07	TRIP BLANK	WATER	WEYMOUTH, MA	01/06/17 14:30	01/06/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### Case Narrative (continued)

#### MCP Related Narratives

##### VPH

In reference to question G:

L1700574-01 through -06: The sample has elevated detection limits due to the dilution required by the sample matrix (foam). One or more of the target analytes did not achieve the requested CAM reporting limits.

##### EPH

In reference to question G:

L1700574-01 through -06: One or more of the target analytes did not achieve the requested CAM reporting limits.

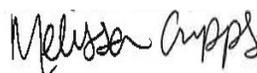
In reference to question H:

The WG967737-3 LCSD recovery, associated with L1700574-01 through -06, is outside the acceptance criteria for an individual target compound, but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for naphthalene (39%)

The WG967737-2/-3 LCS/LCSD RPDs, associated with L1700574-01 through -06, are above the acceptance criteria for c11-c22 aromatics (42%), naphthalene (42%), 2-methylnaphthalene (43%), acenaphthylene (43%), acenaphthene (42%), fluorene (43%), phenanthrene (43%), anthracene (43%), fluoranthene (43%), pyrene (43%), benzo(a)anthracene (44%), chrysene (45%), benzo(b)fluoranthene (45%), benzo(k)fluoranthene (44%), benzo(a)pyrene (44%), indeno(1,2,3-cd)pyrene (44%), dibenzo(a,h)anthracene (45%) and benzo(ghi)perylene (45%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 01/13/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-01  
 Client ID: MW-406  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/11/17 19:03  
 Analyst: NS

Date Collected: 01/05/17 16:00  
 Date Received: 01/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:40  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-01  
 Client ID: MW-406  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 16:00  
 Date Received: 01/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	68		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-01 D  
 Client ID: MW-406  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/12/17 19:57  
 Analyst: JM

Date Collected: 01/05/17 16:00  
 Date Received: 01/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	86		70-130
2,5-Dibromotoluene-FID	88		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### SAMPLE RESULTS

Lab ID: L1700574-02  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/11/17 19:48  
 Analyst: NS

Date Collected: 01/05/17 00:00  
 Date Received: 01/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:41  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-02  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 00:00  
 Date Received: 01/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	60		40-140
2-Fluorobiphenyl	57		40-140
2-Bromonaphthalene	59		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-02 D  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/12/17 20:37  
 Analyst: JM

Date Collected: 01/05/17 00:00  
 Date Received: 01/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	87		70-130
2,5-Dibromotoluene-FID	89		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-03  
 Client ID: MW-407  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/11/17 20:33  
 Analyst: NS

Date Collected: 01/05/17 16:10  
 Date Received: 01/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:41  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-03  
 Client ID: MW-407  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/05/17 16:10  
 Date Received: 01/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	42		40-140
o-Terphenyl	41		40-140
2-Fluorobiphenyl	62		40-140
2-Bromonaphthalene	63		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-03 D  
 Client ID: MW-407  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/12/17 21:17  
 Analyst: JM

Date Collected: 01/05/17 16:10  
 Date Received: 01/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	84		70-130
2,5-Dibromotoluene-FID	85		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-04  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/11/17 21:19  
 Analyst: NS

Date Collected: 01/06/17 10:25  
 Date Received: 01/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:41  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-04  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/06/17 10:25  
 Date Received: 01/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### SAMPLE RESULTS

Lab ID: L1700574-04 D  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/12/17 21:57  
 Analyst: JM

Date Collected: 01/06/17 10:25  
 Date Received: 01/06/17  
 Field Prep: Not Specified

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	82		70-130
2,5-Dibromotoluene-FID	85		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### SAMPLE RESULTS

Lab ID: L1700574-05  
 Client ID: MW-410  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/11/17 22:04  
 Analyst: NS

Date Collected: 01/06/17 12:30  
 Date Received: 01/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:41  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-05  
 Client ID: MW-410  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/06/17 12:30  
 Date Received: 01/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	67		40-140
2-Bromonaphthalene	69		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-05 D  
 Client ID: MW-410  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/12/17 22:36  
 Analyst: JM

Date Collected: 01/06/17 12:30  
 Date Received: 01/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	82		70-130
2,5-Dibromotoluene-FID	85		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### SAMPLE RESULTS

Lab ID: L1700574-06  
 Client ID: MW-414  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 01/11/17 22:50  
 Analyst: NS

Date Collected: 01/06/17 13:20  
 Date Received: 01/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/07/17 03:41  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 01/09/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	188		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	188		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-06  
 Client ID: MW-414  
 Sample Location: WEYMOUTH, MA

Date Collected: 01/06/17 13:20  
 Date Received: 01/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-06 D  
 Client ID: MW-414  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/13/17 02:36  
 Analyst: JM

Date Collected: 01/06/17 13:20  
 Date Received: 01/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5
Benzene	ND		ug/l	10.0	--	5
Toluene	ND		ug/l	10.0	--	5
Ethylbenzene	ND		ug/l	10.0	--	5
p/m-Xylene	ND		ug/l	10.0	--	5
o-Xylene	ND		ug/l	10.0	--	5
Methyl tert butyl ether	ND		ug/l	15.0	--	5
Naphthalene	ND		ug/l	20.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	85		70-130
2,5-Dibromotoluene-FID	85		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**SAMPLE RESULTS**

Lab ID: L1700574-07  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 01/12/17 16:38  
 Analyst: JM

Date Collected: 01/06/17 14:30  
 Date Received: 01/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	81		70-130
2,5-Dibromotoluene-FID	85		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 01/08/17 18:08  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/07/17 03:41  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 01/08/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-06 Batch: WG967737-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	64		40-140
2-Bromonaphthalene	66		40-140



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 01/12/17 10:32  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-07 Batch: WG969482-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	84		70-130
2,5-Dibromotoluene-FID	86		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-06 Batch: WG967737-2 WG967737-3								
C9-C18 Aliphatics	67		66		40-140	2		25
C19-C36 Aliphatics	77		76		40-140	1		25
C11-C22 Aromatics	80		52		40-140	42	Q	25
Naphthalene	60		39	Q	40-140	42	Q	25
2-Methylnaphthalene	62		40		40-140	43	Q	25
Acenaphthylene	65		42		40-140	43	Q	25
Acenaphthene	69		45		40-140	42	Q	25
Fluorene	73		47		40-140	43	Q	25
Phenanthrene	70		45		40-140	43	Q	25
Anthracene	70		45		40-140	43	Q	25
Fluoranthene	74		48		40-140	43	Q	25
Pyrene	76		49		40-140	43	Q	25
Benzo(a)anthracene	80		51		40-140	44	Q	25
Chrysene	85		54		40-140	45	Q	25
Benzo(b)fluoranthene	82		52		40-140	45	Q	25
Benzo(k)fluoranthene	83		53		40-140	44	Q	25
Benzo(a)pyrene	77		49		40-140	44	Q	25
Indeno(1,2,3-cd)Pyrene	83		53		40-140	44	Q	25
Dibenzo(a,h)anthracene	96		61		40-140	45	Q	25
Benzo(ghi)perylene	79		50		40-140	45	Q	25
Nonane (C9)	51		50		30-140	2		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-06 Batch: WG967737-2 WG967737-3								
Decane (C10)	58		58		40-140	0		25
Dodecane (C12)	63		63		40-140	0		25
Tetradecane (C14)	67		66		40-140	2		25
Hexadecane (C16)	70		69		40-140	1		25
Octadecane (C18)	73		73		40-140	0		25
Nonadecane (C19)	73		71		40-140	3		25
Eicosane (C20)	74		73		40-140	1		25
Docosane (C22)	74		73		40-140	1		25
Tetracosane (C24)	75		74		40-140	1		25
Hexacosane (C26)	75		74		40-140	1		25
Octacosane (C28)	75		74		40-140	1		25
Triacontane (C30)	76		74		40-140	3		25
Hexatriacontane (C36)	77		74		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	62		58		40-140
o-Terphenyl	70		44		40-140
2-Fluorobiphenyl	63		41		40-140
2-Bromonaphthalene	66		43		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG969482-1 WG969482-2								
C5-C8 Aliphatics	103		99		70-130	4		25
C9-C12 Aliphatics	102		93		70-130	10		25
C9-C10 Aromatics	106		99		70-130	7		25
Benzene	102		100		70-130	2		25
Toluene	103		100		70-130	3		25
Ethylbenzene	104		100		70-130	4		25
p/m-Xylene	105		99		70-130	6		25
o-Xylene	104		98		70-130	6		25
Methyl tert butyl ether	95		93		70-130	2		25
Naphthalene	92		92		70-130	0		25
1,2,4-Trimethylbenzene	106		99		70-130	7		25
Pentane	101		98		70-130	3		25
2-Methylpentane	103		99		70-130	4		25
2,2,4-Trimethylpentane	104		100		70-130	4		25
n-Nonane	104		94		30-130	10		25
n-Decane	93		86		70-130	7		25
n-Butylcyclohexane	106		97		70-130	9		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
-----------	-------------------------	-------------	--------------------------	-------------	----------------------------	------------	-------------	----------------------

Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG969482-1 WG969482-2

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	97		93		70-130
2,5-Dibromotoluene-FID	97		94		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700574-01A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-01B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-01C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-01D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-01E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-02A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-02B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-02C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-02D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-02E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-03A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-03B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-03C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-03D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-03E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-04A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-04B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-04C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-04D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-04E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-05A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-05B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-05C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-05D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-05E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-06A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-06B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-06C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-06D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1700574-06E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1700574-07A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1700574-07B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1700574  
**Report Date:** 01/13/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT.**

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE 1 OF 1

Serial No: 01131714-59

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193  
 MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

ALPHA Job #: L1700574**Project Information**

Project Name: Weymouth CS  
 Project Location: Weymouth, MA  
 Project #: 120 MB. 000. 9953  
 Project Manager: Ricci Paquette  
 ALPHA Quote #: 1907

**Report Information - Data Deliverables**

Date Rec'd in Lab: 1/6/17  
 FAX  EMAIL  
 ADEX  Add'l Deliverables

**Billing Information**

Same as Client info PO #: 103294

**Client Information**

Client: TRC  
 Address: 2 Liberty Square Boston, MA  
 Phone: 617-385-6033  
 Fax: 617-380-3443  
 Email: RN118@TRCSolutions.com

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

**Regulatory Requirements/Report Limits**

State / Fed Program MCP Criteria RC64-2

**MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO**

Yes  No Are MCP Analytical Methods Required?  
 Yes  No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

**Other Project Specific Requirements/Comments/Detection Limits:**

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
 (Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS	VPH DELIVER	EPH DELIVER	<b>SAMPLE HANDLING</b>		TOTAL # BOTTLES
			Filtration _____		
			<input type="checkbox"/> Done		
			<input type="checkbox"/> Not needed		
			<input type="checkbox"/> Lab to do		
			<input type="checkbox"/> Preservation		
			<input type="checkbox"/> Lab to do		
			(Please specify below)		
			Sample Specific Comments		

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials																
		Date	Time																		
00574-01	MW-406	1/5/17	1600	GLW	BA	x	1													5	
02	DUP-2				BA																5
03	MW-407		1610		KS																5
04	MW-209	1/6/17	1025		KS																5
05	MW-410		1230		KS																5
06	MW-414		1320		BA																5
07	TRIP Blank		1430		DA																2

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type		V	A																
Preservative		B	B																
Relinquished By:		Date/Time		Received By:		Date/Time													
<u>[Signature]</u>		<u>1/6/17 1440</u>		<u>[Signature]</u>		<u>1/6/17 15:00</u>													
<u>[Signature]</u>		<u>1/6/17 17:00</u>		<u>[Signature]</u>		<u>1/6/17 17:00</u>													

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L1708332
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	03/27/17

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1708332-01	MW-401	WATER	WEYMOUTH, MA	03/20/17 11:20	03/20/17
L1708332-02	MW-205	WATER	WEYMOUTH, MA	03/20/17 12:40	03/20/17
L1708332-03	MW-203	WATER	WEYMOUTH, MA	03/20/17 12:33	03/20/17
L1708332-04	MW-204	WATER	WEYMOUTH, MA	03/20/17 12:45	03/20/17
L1708332-05	MW-402	WATER	WEYMOUTH, MA	03/20/17 13:45	03/20/17
L1708332-06	MW-400	WATER	WEYMOUTH, MA	03/20/17 14:15	03/20/17
L1708332-07	MW-202	WATER	WEYMOUTH, MA	03/20/17 14:06	03/20/17
L1708332-08	TB032017	WATER	WEYMOUTH, MA	03/20/17 14:00	03/20/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

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**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

### Case Narrative (continued)

MCP Related Narratives

EPH

In reference to question G:

L1708332-01 through -07: One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 03/27/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-01  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 16:32  
 Analyst: JM

Date Collected: 03/20/17 11:20  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	102		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-01  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/22/17 20:43  
 Analyst: EK

Date Collected: 03/20/17 11:20  
 Date Received: 03/20/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/21/17 09:02  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/21/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-01  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 11:20  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	88		40-140
o-Terphenyl	108		40-140
2-Fluorobiphenyl	112		40-140
2-Bromonaphthalene	114		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-02  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 17:12  
 Analyst: JM

Date Collected: 03/20/17 12:40  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-02  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/22/17 21:25  
 Analyst: EK

Date Collected: 03/20/17 12:40  
 Date Received: 03/20/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/21/17 09:02  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/21/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-02  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 12:40  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	95		40-140
o-Terphenyl	103		40-140
2-Fluorobiphenyl	119		40-140
2-Bromonaphthalene	121		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-03  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 17:52  
 Analyst: JM

Date Collected: 03/20/17 12:33  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

### SAMPLE RESULTS

**Lab ID:** L1708332-03  
**Client ID:** MW-203  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/22/17 22:07  
**Analyst:** EK

**Date Collected:** 03/20/17 12:33  
**Date Received:** 03/20/17  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/21/17 09:02  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 03/21/17

### Quality Control Information

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice  
**Sample Extraction method:** Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-03  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 12:33  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	76		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	84		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-04  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 18:32  
 Analyst: JM

Date Collected: 03/20/17 12:45  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-04  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/22/17 22:48  
 Analyst: EK

Date Collected: 03/20/17 12:45  
 Date Received: 03/20/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/21/17 09:02  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/21/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-04  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 12:45  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	86		40-140
o-Terphenyl	103		40-140
2-Fluorobiphenyl	112		40-140
2-Bromonaphthalene	114		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-05  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 19:12  
 Analyst: JM

Date Collected: 03/20/17 13:45  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	100		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-05  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/22/17 23:30  
 Analyst: EK

Date Collected: 03/20/17 13:45  
 Date Received: 03/20/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/21/17 09:02  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/21/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-05  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 13:45  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	95		40-140
o-Terphenyl	102		40-140
2-Fluorobiphenyl	112		40-140
2-Bromonaphthalene	115		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-06  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 19:51  
 Analyst: JM

Date Collected: 03/20/17 14:15  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	97		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

### SAMPLE RESULTS

Lab ID: L1708332-06  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/23/17 00:12  
 Analyst: EK

Date Collected: 03/20/17 14:15  
 Date Received: 03/20/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/21/17 09:02  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/21/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-06  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 14:15  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	76		40-140
o-Terphenyl	94		40-140
2-Fluorobiphenyl	105		40-140
2-Bromonaphthalene	107		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-07  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 20:31  
 Analyst: JM

Date Collected: 03/20/17 14:06  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	92		70-130
2,5-Dibromotoluene-FID	93		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-07  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/23/17 00:54  
 Analyst: EK

Date Collected: 03/20/17 14:06  
 Date Received: 03/20/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/21/17 09:02  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/21/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-07  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/20/17 14:06  
 Date Received: 03/20/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	89		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	90		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**SAMPLE RESULTS**

Lab ID: L1708332-08  
 Client ID: TB032017  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/22/17 15:12  
 Analyst: JM

Date Collected: 03/20/17 14:00  
 Date Received: 03/20/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/22/17 18:38  
**Analyst:** EK

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/21/17 09:02  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/21/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-07 Batch: WG986870-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	79		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	94		40-140
2-Bromonaphthalene	97		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 03/22/17 08:49  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-08 Batch: WG987519-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	93		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG986870-2 WG986870-3								
C9-C18 Aliphatics	68		69		40-140	1		25
C19-C36 Aliphatics	102		98		40-140	4		25
C11-C22 Aromatics	114		103		40-140	10		25
Naphthalene	86		83		40-140	4		25
2-Methylnaphthalene	90		86		40-140	5		25
Acenaphthylene	91		87		40-140	4		25
Acenaphthene	94		88		40-140	7		25
Fluorene	105		96		40-140	9		25
Phenanthrene	112		101		40-140	10		25
Anthracene	107		96		40-140	11		25
Fluoranthene	114		102		40-140	11		25
Pyrene	112		102		40-140	9		25
Benzo(a)anthracene	106		96		40-140	10		25
Chrysene	112		100		40-140	11		25
Benzo(b)fluoranthene	120		107		40-140	11		25
Benzo(k)fluoranthene	111		100		40-140	10		25
Benzo(a)pyrene	101		91		40-140	10		25
Indeno(1,2,3-cd)Pyrene	104		95		40-140	9		25
Dibenzo(a,h)anthracene	106		96		40-140	10		25
Benzo(ghi)perylene	101		92		40-140	9		25
Nonane (C9)	53		51		30-140	4		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG986870-2 WG986870-3								
Decane (C10)	64		63		40-140	2		25
Dodecane (C12)	74		76		40-140	3		25
Tetradecane (C14)	79		82		40-140	4		25
Hexadecane (C16)	87		88		40-140	1		25
Octadecane (C18)	93		91		40-140	2		25
Nonadecane (C19)	92		92		40-140	0		25
Eicosane (C20)	92		91		40-140	1		25
Docosane (C22)	91		90		40-140	1		25
Tetracosane (C24)	93		91		40-140	2		25
Hexacosane (C26)	91		90		40-140	1		25
Octacosane (C28)	91		91		40-140	0		25
Triacontane (C30)	92		93		40-140	1		25
Hexatriacontane (C36)	91		93		40-140	2		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	83		86		40-140
o-Terphenyl	111		99		40-140
2-Fluorobiphenyl	108		103		40-140
2-Bromonaphthalene	112		107		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08 Batch: WG987519-1 WG987519-2								
C5-C8 Aliphatics	98		101		70-130	4		25
C9-C12 Aliphatics	101		104		70-130	3		25
C9-C10 Aromatics	98		103		70-130	5		25
Benzene	97		103		70-130	7		25
Toluene	98		104		70-130	6		25
Ethylbenzene	99		104		70-130	5		25
p/m-Xylene	99		103		70-130	4		25
o-Xylene	98		103		70-130	5		25
Methyl tert butyl ether	90		102		70-130	13		25
Naphthalene	89		97		70-130	9		25
1,2,4-Trimethylbenzene	98		103		70-130	5		25
Pentane	95		98		70-130	3		25
2-Methylpentane	98		102		70-130	4		25
2,2,4-Trimethylpentane	100		103		70-130	3		25
n-Nonane	102		104		30-130	2		25
n-Decane	102		105		70-130	3		25
n-Butylcyclohexane	99		104		70-130	5		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08 Batch: WG987519-1 WG987519-2								

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	93		97		70-130
2,5-Dibromotoluene-FID	92		98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent  
 B Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708332-01A	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-01B	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-01C	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-01D	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-01E	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-02A	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-02B	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-02C	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-02D	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-02E	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-03A	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-03B	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-03C	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-03D	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-03E	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-04A	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-04B	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-04C	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-04D	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-04E	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-05A	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-05B	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-05C	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-05D	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-05E	Amber 1000ml HCl preserved	B	<2	5.9	Y	Absent	EPH-DELUX-10(14)
L1708332-06A	Vial HCl preserved	A	N/A	4.2	Y	Absent	VPH-DELUX-10(14)
L1708332-06B	Vial HCl preserved	A	N/A	4.2	Y	Absent	VPH-DELUX-10(14)
L1708332-06C	Vial HCl preserved	A	N/A	4.2	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708332-06D	Amber 1000ml HCl preserved	A	<2	4.2	Y	Absent	EPH-DELUX-10(14)
L1708332-06E	Amber 1000ml HCl preserved	A	<2	4.2	Y	Absent	EPH-DELUX-10(14)
L1708332-07A	Vial HCl preserved	A	N/A	4.2	Y	Absent	VPH-DELUX-10(14)
L1708332-07B	Vial HCl preserved	A	N/A	4.2	Y	Absent	VPH-DELUX-10(14)
L1708332-07C	Vial HCl preserved	A	N/A	4.2	Y	Absent	VPH-DELUX-10(14)
L1708332-07D	Amber 1000ml HCl preserved	A	<2	4.2	Y	Absent	EPH-DELUX-10(14)
L1708332-07E	Amber 1000ml HCl preserved	A	<2	4.2	Y	Absent	EPH-DELUX-10(14)
L1708332-08A	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)
L1708332-08B	Vial HCl preserved	B	N/A	5.9	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708332  
**Report Date:** 03/27/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

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

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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





## ANALYTICAL REPORT

Lab Number:	L1708464
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	03/28/17

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1708464-01	MW-406	WATER	WEYMOUTH, MA	03/21/17 11:00	03/21/17
L1708464-02	DUP-1	WATER	WEYMOUTH, MA	03/21/17 00:00	03/21/17
L1708464-03	MW-410	WATER	WEYMOUTH, MA	03/21/17 11:36	03/21/17
L1708464-04	MW-201	WATER	WEYMOUTH, MA	03/21/17 11:55	03/21/17
L1708464-05	MW-407	WATER	WEYMOUTH, MA	03/21/17 13:30	03/21/17
L1708464-06	TRIP BLANK	WATER	WEYMOUTH, MA	03/21/17 14:15	03/21/17
L1708464-07	MW-414	WATER	WEYMOUTH, MA	03/21/17 14:25	03/21/17
L1708464-08	MW-408	WATER	WEYMOUTH, MA	03/21/17 14:48	03/21/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**Case Narrative (continued)**

MCP Related Narratives

EPH

In reference to question G:

L1708464-01 through -05, -07 and -08: One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 03/28/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-01  
 Client ID: MW-406  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 14:40  
 Analyst: JM

Date Collected: 03/21/17 11:00  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	3.22		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	6.66		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	100		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-01  
 Client ID: MW-406  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 20:37  
 Analyst: SR

Date Collected: 03/21/17 11:00  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	102		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	102		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-01  
 Client ID: MW-406  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 11:00  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	69		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-02  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 15:19  
 Analyst: JM

Date Collected: 03/21/17 00:00  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	3.11		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	6.72		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	102		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-02  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 21:08  
 Analyst: SR

Date Collected: 03/21/17 00:00  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-02  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 00:00  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	65		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-03  
 Client ID: MW-410  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 15:58  
 Analyst: JM

Date Collected: 03/21/17 11:36  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	105		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-03  
 Client ID: MW-410  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 21:40  
 Analyst: SR

Date Collected: 03/21/17 11:36  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	125		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	125		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-03  
 Client ID: MW-410  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 11:36  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	74		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-04  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 16:37  
 Analyst: JM

Date Collected: 03/21/17 11:55  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

### SAMPLE RESULTS

Lab ID: L1708464-04  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 22:11  
 Analyst: SR

Date Collected: 03/21/17 11:55  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-04  
 Client ID: MW-201  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 11:55  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	74		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-05  
 Client ID: MW-407  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 17:16  
 Analyst: JM

Date Collected: 03/21/17 13:30  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	104		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-05  
 Client ID: MW-407  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 22:43  
 Analyst: SR

Date Collected: 03/21/17 13:30  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-05  
 Client ID: MW-407  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 13:30  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	74		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-06  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 13:22  
 Analyst: JM

Date Collected: 03/21/17 14:15  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-07  
 Client ID: MW-414  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 17:55  
 Analyst: JM

Date Collected: 03/21/17 14:25  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	102		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-07  
 Client ID: MW-414  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 23:14  
 Analyst: SR

Date Collected: 03/21/17 14:25  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	105		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	105		ug/l	100	--	1
Naphthalene	ND		ug/l	10.6	--	1
2-Methylnaphthalene	ND		ug/l	10.6	--	1
Acenaphthylene	ND		ug/l	10.6	--	1
Acenaphthene	ND		ug/l	10.6	--	1
Fluorene	ND		ug/l	10.6	--	1
Phenanthrene	ND		ug/l	10.6	--	1
Anthracene	ND		ug/l	10.6	--	1
Fluoranthene	ND		ug/l	10.6	--	1
Pyrene	ND		ug/l	10.6	--	1
Benzo(a)anthracene	ND		ug/l	10.6	--	1
Chrysene	ND		ug/l	10.6	--	1
Benzo(b)fluoranthene	ND		ug/l	10.6	--	1
Benzo(k)fluoranthene	ND		ug/l	10.6	--	1
Benzo(a)pyrene	ND		ug/l	10.6	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.6	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.6	--	1
Benzo(ghi)perylene	ND		ug/l	10.6	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-07  
 Client ID: MW-414  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 14:25  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	69		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-08  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/24/17 18:34  
 Analyst: JM

Date Collected: 03/21/17 14:48  
 Date Received: 03/21/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-08  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/24/17 23:46  
 Analyst: SR

Date Collected: 03/21/17 14:48  
 Date Received: 03/21/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/22/17 07:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/22/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**SAMPLE RESULTS**

Lab ID: L1708464-08  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/21/17 14:48  
 Date Received: 03/21/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	73		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	77		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/24/17 16:26  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/22/17 07:48  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/22/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-05,07-08 Batch: WG987189-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**Method Blank Analysis  
 Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/24/17 16:26  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/22/17 07:48  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/22/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-05,07-08 Batch: WG987189-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	73		40-140
2-Fluorobiphenyl	72		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 03/24/17 09:57  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-08 Batch: WG988282-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05,07-08 Batch: WG987189-2 WG987189-3								
C9-C18 Aliphatics	73		66		40-140	10		25
C19-C36 Aliphatics	85		75		40-140	13		25
C11-C22 Aromatics	82		82		40-140	0		25
Naphthalene	71		72		40-140	1		25
2-Methylnaphthalene	71		72		40-140	1		25
Acenaphthylene	75		76		40-140	1		25
Acenaphthene	74		75		40-140	1		25
Fluorene	76		76		40-140	0		25
Phenanthrene	80		79		40-140	1		25
Anthracene	81		80		40-140	1		25
Fluoranthene	82		81		40-140	1		25
Pyrene	84		82		40-140	2		25
Benzo(a)anthracene	81		80		40-140	1		25
Chrysene	83		83		40-140	0		25
Benzo(b)fluoranthene	82		81		40-140	1		25
Benzo(k)fluoranthene	81		82		40-140	1		25
Benzo(a)pyrene	77		76		40-140	1		25
Indeno(1,2,3-cd)Pyrene	78		78		40-140	0		25
Dibenzo(a,h)anthracene	80		79		40-140	1		25
Benzo(ghi)perylene	75		75		40-140	0		25
Nonane (C9)	55		53		30-140	4		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05,07-08 Batch: WG987189-2 WG987189-3								
Decane (C10)	63		60		40-140	5		25
Dodecane (C12)	65		62		40-140	5		25
Tetradecane (C14)	68		64		40-140	6		25
Hexadecane (C16)	72		66		40-140	9		25
Octadecane (C18)	79		71		40-140	11		25
Nonadecane (C19)	79		71		40-140	11		25
Eicosane (C20)	80		72		40-140	11		25
Docosane (C22)	81		72		40-140	12		25
Tetracosane (C24)	81		72		40-140	12		25
Hexacosane (C26)	80		72		40-140	11		25
Octacosane (C28)	81		72		40-140	12		25
Triacontane (C30)	81		72		40-140	12		25
Hexatriacontane (C36)	84		76		40-140	10		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	71		64		40-140
o-Terphenyl	78		76		40-140
2-Fluorobiphenyl	77		71		40-140
2-Bromonaphthalene	80		73		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08 Batch: WG988282-1 WG988282-2								
C5-C8 Aliphatics	87		88		70-130	1		25
C9-C12 Aliphatics	98		99		70-130	1		25
C9-C10 Aromatics	94		95		70-130	2		25
Benzene	88		89		70-130	1		25
Toluene	90		92		70-130	2		25
Ethylbenzene	92		93		70-130	1		25
p/m-Xylene	93		94		70-130	1		25
o-Xylene	90		92		70-130	2		25
Methyl tert butyl ether	91		92		70-130	1		25
Naphthalene	95		99		70-130	4		25
1,2,4-Trimethylbenzene	94		95		70-130	2		25
Pentane	78		79		70-130	2		25
2-Methylpentane	87		88		70-130	1		25
2,2,4-Trimethylpentane	93		95		70-130	1		25
n-Nonane	98		99		30-130	1		25
n-Decane	100		101		70-130	1		25
n-Butylcyclohexane	99		99		70-130	1		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08 Batch: WG988282-1 WG988282-2

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	96		98		70-130
2,5-Dibromotoluene-FID	98		100		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708464-01A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-01B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-01C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-01D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-01E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-02A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-02B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-02C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-02D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-02E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-03A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-03B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-03C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-03D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-03E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-04A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-04B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-04C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-04D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-04E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-05A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-05B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-05C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-05D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-05E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-06A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-06B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-07A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-07B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708464-07C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-07D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-07E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-08A	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-08B	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-08C	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708464-08D	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708464-08E	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708464  
**Report Date:** 03/28/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

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

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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





## ANALYTICAL REPORT

Lab Number:	L1708593
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	03/29/17

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1708593-01	MW-411	WATER	WEYMOUTH, MA	03/22/17 09:30	03/22/17
L1708593-02	MW-409	WATER	WEYMOUTH, MA	03/22/17 09:35	03/22/17
L1708593-03	MW-413	WATER	WEYMOUTH, MA	03/22/17 10:15	03/22/17
L1708593-04	MW-412	WATER	WEYMOUTH, MA	03/22/17 11:20	03/22/17
L1708593-05	TRIP BLANK	WATER	WEYMOUTH, MA	03/22/17 11:15	03/22/17
L1708593-06	MW-206	WATER	WEYMOUTH, MA	03/22/17 11:23	03/22/17
L1708593-07	MW-403	WATER	WEYMOUTH, MA	03/22/17 12:15	03/22/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

---

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

### Case Narrative (continued)

#### MCP Related Narratives

#### EPH

In reference to question G:

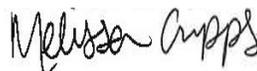
L1708593-01, -02, -03, -04, -06, and -07: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG987561-2/-3 LCS/LCSD RPDs, associated with L1708593-01, -02, -03, -04, -06, and -07, are above the acceptance criteria for naphthalene (31%), 2-methylnaphthalene (27%), acenaphthylene (27%), acenaphthene (27%), anthracene (28%), pyrene (28%), benzo(a)anthracene (28%), chrysene (27%), benzo(b)fluoranthene (27%), benzo(k)fluoranthene (29%), benzo(a)pyrene (28%), indeno(1,2,3-cd)pyrene (27%), dibenzo(a,h)anthracene (27%) and benzo(ghi)perylene (28%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 03/29/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-01  
 Client ID: MW-411  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 15:43  
 Analyst: JM

Date Collected: 03/22/17 09:30  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	107		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

### SAMPLE RESULTS

Lab ID: L1708593-01  
 Client ID: MW-411  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/25/17 02:06  
 Analyst: DV

Date Collected: 03/22/17 09:30  
 Date Received: 03/22/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/23/17 15:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/24/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-01  
 Client ID: MW-411  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/22/17 09:30  
 Date Received: 03/22/17  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-02  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 16:22  
 Analyst: JM

Date Collected: 03/22/17 09:35  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	105		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-02  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/25/17 02:44  
 Analyst: DV

Date Collected: 03/22/17 09:35  
 Date Received: 03/22/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/23/17 15:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/24/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-02  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/22/17 09:35  
 Date Received: 03/22/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	83		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-03  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 17:01  
 Analyst: JM

Date Collected: 03/22/17 10:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	102		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-03  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/25/17 03:22  
 Analyst: DV

Date Collected: 03/22/17 10:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/23/17 15:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/24/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-03  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/22/17 10:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	71		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-04  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 17:40  
 Analyst: JM

Date Collected: 03/22/17 11:20  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	106		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-04  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/25/17 04:00  
 Analyst: DV

Date Collected: 03/22/17 11:20  
 Date Received: 03/22/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/23/17 15:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/24/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-04  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/22/17 11:20  
 Date Received: 03/22/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	68		40-140
2-Bromonaphthalene	71		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-05  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 15:04  
 Analyst: JM

Date Collected: 03/22/17 11:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	93		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-06  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 18:19  
 Analyst: JM

Date Collected: 03/22/17 11:23  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	102		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-06  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/25/17 04:38  
 Analyst: DV

Date Collected: 03/22/17 11:23  
 Date Received: 03/22/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/23/17 15:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/24/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-06  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/22/17 11:23  
 Date Received: 03/22/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	87		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-07  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/25/17 18:58  
 Analyst: JM

Date Collected: 03/22/17 12:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	106		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-07  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/25/17 05:16  
 Analyst: DV

Date Collected: 03/22/17 12:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/23/17 15:48  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/24/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**SAMPLE RESULTS**

Lab ID: L1708593-07  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/22/17 12:15  
 Date Received: 03/22/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/25/17 00:13  
**Analyst:** DV

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/23/17 15:48  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/24/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-04,06-07 Batch: WG987561-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/25/17 00:13  
**Analyst:** DV

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/23/17 15:48  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/24/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-04,06-07 Batch: WG987561-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	91		40-140
2-Fluorobiphenyl	95		40-140
2-Bromonaphthalene	98		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 03/25/17 10:02  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-07 Batch: WG988287-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	99		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,06-07 Batch: WG987561-2 WG987561-3								
C9-C18 Aliphatics	67		65		40-140	3		25
C19-C36 Aliphatics	84		92		40-140	9		25
C11-C22 Aromatics	75		95		40-140	24		25
Naphthalene	59		81		40-140	31	Q	25
2-Methylnaphthalene	63		83		40-140	27	Q	25
Acenaphthylene	63		83		40-140	27	Q	25
Acenaphthene	68		89		40-140	27	Q	25
Fluorene	75		95		40-140	24		25
Phenanthrene	77		98		40-140	24		25
Anthracene	70		93		40-140	28	Q	25
Fluoranthene	78		99		40-140	24		25
Pyrene	74		98		40-140	28	Q	25
Benzo(a)anthracene	72		95		40-140	28	Q	25
Chrysene	76		100		40-140	27	Q	25
Benzo(b)fluoranthene	73		96		40-140	27	Q	25
Benzo(k)fluoranthene	72		96		40-140	29	Q	25
Benzo(a)pyrene	65		86		40-140	28	Q	25
Indeno(1,2,3-cd)Pyrene	66		87		40-140	27	Q	25
Dibenzo(a,h)anthracene	65		85		40-140	27	Q	25
Benzo(ghi)perylene	65		86		40-140	28	Q	25
Nonane (C9)	51		58		30-140	13		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,06-07 Batch: WG987561-2 WG987561-3								
Decane (C10)	60		68		40-140	13		25
Dodecane (C12)	67		74		40-140	10		25
Tetradecane (C14)	72		78		40-140	8		25
Hexadecane (C16)	76		82		40-140	8		25
Octadecane (C18)	78		84		40-140	7		25
Nonadecane (C19)	77		84		40-140	9		25
Eicosane (C20)	77		85		40-140	10		25
Docosane (C22)	78		85		40-140	9		25
Tetracosane (C24)	76		84		40-140	10		25
Hexacosane (C26)	76		84		40-140	10		25
Octacosane (C28)	76		84		40-140	10		25
Triacontane (C30)	76		84		40-140	10		25
Hexatriacontane (C36)	74		82		40-140	10		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	64		79		40-140
o-Terphenyl	65		85		40-140
2-Fluorobiphenyl	70		88		40-140
2-Bromonaphthalene	74		92		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG988287-1 WG988287-2								
C5-C8 Aliphatics	92		100		70-130	9		25
C9-C12 Aliphatics	98		104		70-130	6		25
C9-C10 Aromatics	92		97		70-130	6		25
Benzene	87		93		70-130	6		25
Toluene	89		95		70-130	6		25
Ethylbenzene	89		96		70-130	7		25
p/m-Xylene	92		97		70-130	5		25
o-Xylene	89		94		70-130	6		25
Methyl tert butyl ether	86		93		70-130	8		25
Naphthalene	90		98		70-130	9		25
1,2,4-Trimethylbenzene	92		97		70-130	6		25
Pentane	91		99		70-130	8		25
2-Methylpentane	92		99		70-130	8		25
2,2,4-Trimethylpentane	92		101		70-130	10		25
n-Nonane	97		104		30-130	7		25
n-Decane	100		106		70-130	6		25
n-Butylcyclohexane	97		104		70-130	7		25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07 Batch: WG988287-1 WG988287-2

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	92		100		70-130
2,5-Dibromotoluene-FID	95		105		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708593-01A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-01B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-01C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-01D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-01E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-02A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-02B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-02C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-02D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-02E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-03A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-03B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-03C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-03D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-03E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-04A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-04B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-04C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-04D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-04E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-05A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-05B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-06A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-06B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-06C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-06D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-06E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-07A	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-07B	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1708593-07C	Vial HCl preserved	A	N/A	2.2	Y	Absent	VPH-DELUX-10(14)
L1708593-07D	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)
L1708593-07E	Amber 1000ml HCl preserved	A	<2	2.2	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708593  
**Report Date:** 03/29/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

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

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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

# CHAIN OF CUSTODY

PAGE 1 OF 1



WESTBORO, MA  
 TEL: 508-898-9220  
 FAX: 508-898-9193

MANSFIELD, MA  
 TEL: 508-822-9300  
 FAX: 508-822-3288

### Project Information

Project Name: Weymouth C/S  
 Project Location: Weymouth, MA  
 Project #: 140143.0000.4903  
 Project Manager: RICK Paquette  
 ALPHA Quote #: 1907

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
 Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

### Client Information

Client: TRC Environmental  
 Address: 2 Liberty Square  
Boston, MA  
 Phone: (617) 385-6033  
 Fax: (617) 350-3443  
 Email: R.Niles@TRCSolutions.com

These samples have been previously analyzed by Alpha

### Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
 (Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

Date Rec'd in Lab: 3/22/17  
 ALPHA Job #: L1708593

### Billing Information

Same as Client info PO #: 106826  
3/21/17 BA 103297

### Regulatory Requirements/Report Limits

State /Fed Program MCP Criteria RCGW-2

### MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes  No Are MCP Analytical Methods Required?  
 Yes  No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS	VPH Deluxe	EPH Deluxe	SAMPLE HANDLING		TOTAL # BOTTLES
			Filtration	Preservation	
			<input type="checkbox"/> Done	<input checked="" type="checkbox"/> Not needed	
			<input type="checkbox"/> Lab to do	<input type="checkbox"/> Lab to do	
			(Please specify below)		
			Sample Specific Comments		

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials			Sample Specific Comments	TOTAL # BOTTLES
		Date	Time						
<u>08593-01</u>	<u>MW-411</u>	<u>3/22/17</u>	<u>0930</u>	<u>GW</u>	<u>BA</u>	<u>x</u>	<u>x</u>		<u>5</u>
<u>02</u>	<u>MW-409</u>		<u>0935</u>		<u>LH</u>				<u>5</u>
<u>03</u>	<u>MW-413</u>		<u>1015</u>		<u>AC</u>				<u>5</u>
<u>04</u>	<u>MW-412</u>		<u>1120</u>		<u>AC</u>				<u>5</u>
<u>05</u>	<u>TRIP BLANK</u>		<u>1115</u>						<u>2</u>
<u>06</u>	<u>MW-206</u>		<u>1123</u>		<u>LH</u>		<u>x</u>		<u>5</u>
<u>07</u>	<u>MW-403</u>		<u>1215</u>		<u>BA</u>		<u>x</u>		<u>5</u>

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
 MA MCP or CT RCP?

Container Type  
 Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>3/22/17</u>	<u>[Signature]</u>	<u>3/22/17 12:46</u>
<u>[Signature]</u>	<u>3/22/17</u>	<u>[Signature]</u>	<u>3/22/17</u>
			<u>16:00</u>

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L1708787
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	03/30/17

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1708787-01	MW-417	WATER	WEYMOUTH, MA	03/23/17 10:40	03/23/17
L1708787-02	DUP-2	WATER	WEYMOUTH, MA	03/23/17 00:00	03/23/17
L1708787-03	MW-404	WATER	WEYMOUTH, MA	03/23/17 11:00	03/23/17
L1708787-04	TRIP BLANK	WATER	WEYMOUTH, MA	03/23/17 11:25	03/23/17
L1708787-05	MW-405	WATER	WEYMOUTH, MA	03/23/17 12:05	03/23/17
L1708787-06	MW-416	WATER	WEYMOUTH, MA	03/23/17 12:20	03/23/17
L1708787-07	MW-415	WATER	WEYMOUTH, MA	03/23/17 12:40	03/23/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

---

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### Case Narrative (continued)

MCP Related Narratives

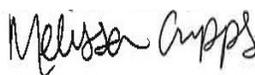
EPH

In reference to question G:

L1708787-01, -02, -03, -05, -06 and -07: One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 03/30/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-01  
 Client ID: MW-417  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/28/17 19:07  
 Analyst: JM

Date Collected: 03/23/17 10:40  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	78		70-130
2,5-Dibromotoluene-FID	79		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-01  
 Client ID: MW-417  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/26/17 11:15  
 Analyst: SR

Date Collected: 03/23/17 10:40  
 Date Received: 03/23/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/24/17 16:37  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/25/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-01  
 Client ID: MW-417  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/23/17 10:40  
 Date Received: 03/23/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	97		40-140
2-Fluorobiphenyl	93		40-140
2-Bromonaphthalene	93		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-02  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/28/17 19:47  
 Analyst: JM

Date Collected: 03/23/17 00:00  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	76		70-130
2,5-Dibromotoluene-FID	78		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### SAMPLE RESULTS

**Lab ID:** L1708787-02  
**Client ID:** DUP-2  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/26/17 11:46  
**Analyst:** SR

**Date Collected:** 03/23/17 00:00  
**Date Received:** 03/23/17  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/24/17 16:37  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 03/25/17

### Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-02  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/23/17 00:00  
 Date Received: 03/23/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-03  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/28/17 20:27  
 Analyst: JM

Date Collected: 03/23/17 11:00  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	71		70-130
2,5-Dibromotoluene-FID	73		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-03  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/26/17 12:18  
 Analyst: SR

Date Collected: 03/23/17 11:00  
 Date Received: 03/23/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/24/17 16:37  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/25/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	223		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-03  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/23/17 11:00  
 Date Received: 03/23/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	80		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	85		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-04  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/28/17 14:28  
 Analyst: JM

Date Collected: 03/23/17 11:25  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	88		70-130
2,5-Dibromotoluene-FID	90		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-05  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/28/17 21:07  
 Analyst: JM

Date Collected: 03/23/17 12:05  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	73		70-130
2,5-Dibromotoluene-FID	76		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### SAMPLE RESULTS

**Lab ID:** L1708787-05  
**Client ID:** MW-405  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/26/17 12:49  
**Analyst:** SR

**Date Collected:** 03/23/17 12:05  
**Date Received:** 03/23/17  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/24/17 16:37  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 03/25/17

### Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-05  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/23/17 12:05  
 Date Received: 03/23/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	90		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	84		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-06  
 Client ID: MW-416  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/28/17 21:46  
 Analyst: JM

Date Collected: 03/23/17 12:20  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	71		70-130
2,5-Dibromotoluene-FID	74		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### SAMPLE RESULTS

Lab ID: L1708787-06  
 Client ID: MW-416  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/26/17 13:21  
 Analyst: SR

Date Collected: 03/23/17 12:20  
 Date Received: 03/23/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/24/17 16:37  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/25/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-06  
 Client ID: MW-416  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/23/17 12:20  
 Date Received: 03/23/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-07  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 03/29/17 14:34  
 Analyst: KD

Date Collected: 03/23/17 12:40  
 Date Received: 03/23/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	100		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-07  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 03/26/17 13:52  
 Analyst: SR

Date Collected: 03/23/17 12:40  
 Date Received: 03/23/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 03/24/17 16:37  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 03/25/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**SAMPLE RESULTS**

Lab ID: L1708787-07  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA

Date Collected: 03/23/17 12:40  
 Date Received: 03/23/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	79		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/26/17 09:41  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/24/17 16:37  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/25/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03,05-07 Batch: WG988112-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 03/26/17 09:41  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 03/24/17 16:37  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 03/25/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03,05-07 Batch: WG988112-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	71		40-140
2-Bromonaphthalene	72		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 03/28/17 09:45  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-06 Batch: WG989170-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	88		70-130
2,5-Dibromotoluene-FID	90		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 03/29/17 11:30  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 07 Batch: WG989543-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	90		70-130
2,5-Dibromotoluene-FID	89		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG988112-2 WG988112-3								
C9-C18 Aliphatics	84		85		40-140	1		25
C19-C36 Aliphatics	106		106		40-140	0		25
C11-C22 Aromatics	89		99		40-140	11		25
Naphthalene	67		79		40-140	16		25
2-Methylnaphthalene	71		83		40-140	16		25
Acenaphthylene	76		88		40-140	15		25
Acenaphthene	79		90		40-140	13		25
Fluorene	82		94		40-140	14		25
Phenanthrene	86		98		40-140	13		25
Anthracene	86		98		40-140	13		25
Fluoranthene	89		101		40-140	13		25
Pyrene	89		104		40-140	16		25
Benzo(a)anthracene	87		100		40-140	14		25
Chrysene	92		105		40-140	13		25
Benzo(b)fluoranthene	89		100		40-140	12		25
Benzo(k)fluoranthene	90		102		40-140	13		25
Benzo(a)pyrene	81		93		40-140	14		25
Indeno(1,2,3-cd)Pyrene	83		93		40-140	11		25
Dibenzo(a,h)anthracene	89		101		40-140	13		25
Benzo(ghi)perylene	80		90		40-140	12		25
Nonane (C9)	59		63		30-140	7		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG988112-2 WG988112-3								
Decane (C10)	71		74		40-140	4		25
Dodecane (C12)	80		83		40-140	4		25
Tetradecane (C14)	88		90		40-140	2		25
Hexadecane (C16)	92		95		40-140	3		25
Octadecane (C18)	98		101		40-140	3		25
Nonadecane (C19)	98		101		40-140	3		25
Eicosane (C20)	99		103		40-140	4		25
Docosane (C22)	100		104		40-140	4		25
Tetracosane (C24)	99		104		40-140	5		25
Hexacosane (C26)	99		103		40-140	4		25
Octacosane (C28)	99		104		40-140	5		25
Triacontane (C30)	99		104		40-140	5		25
Hexatriacontane (C36)	98		106		40-140	8		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	85		89		40-140
o-Terphenyl	83		91		40-140
2-Fluorobiphenyl	75		83		40-140
2-Bromonaphthalene	78		86		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-06 Batch: WG989170-1 WG989170-2								
C5-C8 Aliphatics	108		107		70-130	1		25
C9-C12 Aliphatics	104		103		70-130	1		25
C9-C10 Aromatics	101		101		70-130	0		25
Benzene	102		103		70-130	1		25
Toluene	103		103		70-130	0		25
Ethylbenzene	103		103		70-130	0		25
p/m-Xylene	101		101		70-130	0		25
o-Xylene	101		101		70-130	0		25
Methyl tert butyl ether	102		103		70-130	1		25
Naphthalene	97		97		70-130	1		25
1,2,4-Trimethylbenzene	101		101		70-130	0		25
Pentane	111		110		70-130	1		25
2-Methylpentane	109		108		70-130	1		25
2,2,4-Trimethylpentane	105		105		70-130	0		25
n-Nonane	105		104		30-130	1		25
n-Decane	105		103		70-130	2		25
n-Butylcyclohexane	104		102		70-130	2		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-06 Batch: WG989170-1 WG989170-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2,5-Dibromotoluene-PID	96		95		70-130
2,5-Dibromotoluene-FID	98		97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 07 Batch: WG989543-1 WG989543-2								
C5-C8 Aliphatics	105		105		70-130	0		25
C9-C12 Aliphatics	99		101		70-130	2		25
C9-C10 Aromatics	100		100		70-130	0		25
Benzene	103		102		70-130	1		25
Toluene	103		102		70-130	1		25
Ethylbenzene	102		100		70-130	2		25
p/m-Xylene	102		100		70-130	2		25
o-Xylene	100		99		70-130	2		25
Methyl tert butyl ether	91		92		70-130	0		25
Naphthalene	81		83		70-130	3		25
1,2,4-Trimethylbenzene	100		100		70-130	0		25
Pentane	101		101		70-130	0		25
2-Methylpentane	105		106		70-130	1		25
2,2,4-Trimethylpentane	107		108		70-130	1		25
n-Nonane	103		104		30-130	1		25
n-Decane	92		94		70-130	2		25
n-Butylcyclohexane	103		103		70-130	0		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 07 Batch: WG989543-1 WG989543-2								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2,5-Dibromotoluene-PID	82		86		70-130
2,5-Dibromotoluene-FID	81		86		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent  
 B Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708787-01A	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-01B	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-01C	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-01D	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-01E	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-02A	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-02B	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-02C	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-02D	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-02E	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-03A	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-03B	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-03C	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-03D	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-03E	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-04A	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-04B	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-05A	Vial HCl preserved	A	N/A	2.0	Y	Absent	VPH-DELUX-10(14)
L1708787-05B	Vial HCl preserved	A	N/A	2.0	Y	Absent	VPH-DELUX-10(14)
L1708787-05C	Vial HCl preserved	A	N/A	2.0	Y	Absent	VPH-DELUX-10(14)
L1708787-05D	Amber 1000ml HCl preserved	A	<2	2.0	Y	Absent	EPH-DELUX-10(14)
L1708787-05E	Amber 1000ml HCl preserved	A	<2	2.0	Y	Absent	EPH-DELUX-10(14)
L1708787-06A	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-06B	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-06C	Vial HCl preserved	B	N/A	2.1	Y	Absent	VPH-DELUX-10(14)
L1708787-06D	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-06E	Amber 1000ml HCl preserved	B	<2	2.1	Y	Absent	EPH-DELUX-10(14)
L1708787-07A	Vial HCl preserved	A	N/A	2.0	Y	Absent	VPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1708787-07B	Vial HCl preserved	A	N/A	2.0	Y	Absent	VPH-DELUX-10(14)
L1708787-07C	Vial HCl preserved	A	N/A	2.0	Y	Absent	VPH-DELUX-10(14)
L1708787-07D	Amber 1000ml HCl preserved	A	<2	2.0	Y	Absent	EPH-DELUX-10(14)
L1708787-07E	Amber 1000ml HCl preserved	A	<2	2.0	Y	Absent	EPH-DELUX-10(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1708787  
**Report Date:** 03/30/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

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

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

### Client Information

Client: TRC Environmental  
Address: 2 Liberty Square  
Boston, MA  
Phone: (617) 385-6033  
Fax: (617) 350-3443  
Email: R.Niles@TRCSolutions.com

### Project Information

Project Name: Weymouth C/S  
Project Location: Weymouth, MA  
Project #: 140143.0000.4903  
Project Manager: RICK Paquette  
ALPHA Quote #: 1907

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

### ALPHA Job #:

1708787  
103294

### Billing Information

Same as Client info PO #: 106826  
BA 3/23/17 103294

### Regulatory Requirements/Report Limits

State /Fed Program MCP | Criteria REGW-2

### MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes  No Are MCP Analytical Methods Required?  
 Yes  No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
 Yes  No Are CT RCP (Reasonable Confidence Protocols) Required?

### Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS VPH Deluxe EPH Deluxe											TOTAL # BOTTLES
	<p><b>SAMPLE HANDLING</b></p> <p>Filtration _____</p> <p><input type="checkbox"/> Done</p> <p><input checked="" type="checkbox"/> Not needed</p> <p><input type="checkbox"/> Lab to do Preservation</p> <p><input type="checkbox"/> Lab to do</p> <p>(Please specify below)</p>										

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials											Sample Specific Comments			
		Date	Time																
08787-a	MW-417	3/23/17	1640	GW	BA	x	x												
-02	DUP-2						x												
-03	MW-404		1100		AC		x												
-04	TRIP BLANK		1125																
-05	MW-405		1205		AC		x												
-06	MW-416		1220		BA		x												
-07	MW-415		1240		CH		x												

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type V A  
Preservative # H

Relinquished By: <u>Bryan Ross</u> 3/23/17 1610	Date/Time <u>(3/23/17)</u> <u>(1331)</u>	Received By: <u>W. Paquette</u>	Date/Time <u>3/23/17 1331</u> <u>3/23/17 1610</u>
---	--	------------------------------------	---

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L1718423
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	06/12/17

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1718423-01	MW-202	WATER	WEYMOUTH, MA	06/05/17 09:15	06/05/17
L1718423-02	MW-203	WATER	WEYMOUTH, MA	06/05/17 09:55	06/05/17
L1718423-03	MW-204	WATER	WEYMOUTH, MA	06/05/17 10:50	06/05/17
L1718423-04	MW-205	WATER	WEYMOUTH, MA	06/05/17 11:10	06/05/17
L1718423-05	MW-400	WATER	WEYMOUTH, MA	06/05/17 10:15	06/05/17
L1718423-06	MW-401	WATER	WEYMOUTH, MA	06/05/17 12:30	06/05/17
L1718423-07	MW-402	WATER	WEYMOUTH, MA	06/05/17 14:15	06/05/17
L1718423-08	MW-403	WATER	WEYMOUTH, MA	06/05/17 13:00	06/05/17
L1718423-09	DUP-1	WATER	WEYMOUTH, MA	06/05/17 00:00	06/05/17
L1718423-10	FIELD BLANK	WATER	WEYMOUTH, MA	06/05/17 13:30	06/05/17
L1718423-11	TRIP BLANK	WATER	WEYMOUTH, MA	06/05/17 00:00	06/05/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

---

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### Case Narrative (continued)

#### MCP Related Narratives

##### EPH

In reference to question G:

L1718423-01 through -09: One or more of the target analytes did not achieve the requested CAM reporting limits.

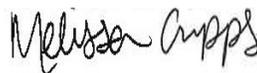
##### VPH

In reference to question H:

L1718423-01: The surrogate recoveries are above the acceptance criteria for 2,5-dibromotoluene-pid (144%) and 2,5-dibromotoluene-fid (142%). Since the sample was non-detect for all target analytes, re-analysis was not required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 06/12/17

# ORGANICS

# **PETROLEUM HYDROCARBONS**

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-01  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 17:41  
 Analyst: JM

Date Collected: 06/05/17 09:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	144	Q	70-130
2,5-Dibromotoluene-FID	142	Q	70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### SAMPLE RESULTS

Lab ID: L1718423-01  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 18:13  
 Analyst: DG

Date Collected: 06/05/17 09:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 19:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-01  
 Client ID: MW-202  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 09:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	101		40-140
2-Fluorobiphenyl	102		40-140
2-Bromonaphthalene	104		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-02  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 18:20  
 Analyst: JM

Date Collected: 06/05/17 09:55  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	123		70-130
2,5-Dibromotoluene-FID	123		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### SAMPLE RESULTS

Lab ID: L1718423-02  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 18:55  
 Analyst: DG

Date Collected: 06/05/17 09:55  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 19:19  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-02  
 Client ID: MW-203  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 09:55  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	114		40-140
2-Fluorobiphenyl	113		40-140
2-Bromonaphthalene	116		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-03  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 18:59  
 Analyst: JM

Date Collected: 06/05/17 10:50  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	126		70-130
2,5-Dibromotoluene-FID	126		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-03  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 19:37  
 Analyst: DG

Date Collected: 06/05/17 10:50  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 20:46  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-03  
 Client ID: MW-204  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 10:50  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	106		40-140
2-Fluorobiphenyl	109		40-140
2-Bromonaphthalene	111		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-04  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 19:38  
 Analyst: JM

Date Collected: 06/05/17 11:10  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	108		70-130
2,5-Dibromotoluene-FID	106		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-04  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/12/17 12:59  
 Analyst: DG

Date Collected: 06/05/17 11:10  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 20:46  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-04  
 Client ID: MW-205  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 11:10  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	49		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	70		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-05  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 20:17  
 Analyst: JM

Date Collected: 06/05/17 10:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	113		70-130
2,5-Dibromotoluene-FID	111		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-05  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 21:01  
 Analyst: DG

Date Collected: 06/05/17 10:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 20:46  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-05  
 Client ID: MW-400  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 10:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	73		40-140
o-Terphenyl	105		40-140
2-Fluorobiphenyl	109		40-140
2-Bromonaphthalene	112		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-06  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 20:55  
 Analyst: JM

Date Collected: 06/05/17 12:30  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	111		70-130
2,5-Dibromotoluene-FID	110		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-06  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 21:43  
 Analyst: DG

Date Collected: 06/05/17 12:30  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 20:46  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-06  
 Client ID: MW-401  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 12:30  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	118		40-140
2-Fluorobiphenyl	119		40-140
2-Bromonaphthalene	120		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-07  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 21:34  
 Analyst: JM

Date Collected: 06/05/17 14:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	112		70-130
2,5-Dibromotoluene-FID	111		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### SAMPLE RESULTS

Lab ID: L1718423-07  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 22:25  
 Analyst: DG

Date Collected: 06/05/17 14:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 20:46  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-07  
 Client ID: MW-402  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 14:15  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	73		40-140
o-Terphenyl	108		40-140
2-Fluorobiphenyl	108		40-140
2-Bromonaphthalene	110		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-08  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 22:13  
 Analyst: JM

Date Collected: 06/05/17 13:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	111		70-130
2,5-Dibromotoluene-FID	109		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-08  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 23:11  
 Analyst: EK

Date Collected: 06/05/17 13:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-08  
 Client ID: MW-403  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 13:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	59		40-140
o-Terphenyl	93		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	85		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-09  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 22:52  
 Analyst: JM

Date Collected: 06/05/17 00:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### SAMPLE RESULTS

Lab ID: L1718423-09  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/10/17 23:07  
 Analyst: DG

Date Collected: 06/05/17 00:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/06/17 20:46  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/07/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-09  
 Client ID: DUP-1  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/05/17 00:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	88		40-140
o-Terphenyl	128		40-140
2-Fluorobiphenyl	125		40-140
2-Bromonaphthalene	127		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**SAMPLE RESULTS**

Lab ID: L1718423-11  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/08/17 15:05  
 Analyst: JM

Date Collected: 06/05/17 00:00  
 Date Received: 06/05/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	99		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/09/17 05:32  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/06/17 19:19  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 06/07/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-07,09 Batch: WG1010462-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

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

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 06/09/17 05:32  
Analyst: SR

Extraction Method: EPA 3510C  
Extraction Date: 06/06/17 19:19  
Cleanup Method: EPH-04-1  
Cleanup Date: 06/07/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): WG1010462-1				01-07,09	Batch:

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	50		40-140
o-Terphenyl	95		40-140
2-Fluorobiphenyl	101		40-140
2-Bromonaphthalene	105		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/09/17 00:17  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/07/17 23:54  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 06/08/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 08 Batch: WG1010927-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	81		40-140



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 06/08/17 09:58  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-09,11 Batch: WG1011156-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	102		70-130
2,5-Dibromotoluene-FID	100		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07,09 Batch: WG1010462-2 WG1010462-3								
C9-C18 Aliphatics	61		63		40-140	3		25
C19-C36 Aliphatics	84		85		40-140	1		25
C11-C22 Aromatics	88		107		40-140	19		25
Naphthalene	72		91		40-140	23		25
2-Methylnaphthalene	76		93		40-140	20		25
Acenaphthylene	80		97		40-140	19		25
Acenaphthene	81		98		40-140	19		25
Fluorene	90		109		40-140	19		25
Phenanthrene	91		110		40-140	19		25
Anthracene	84		100		40-140	17		25
Fluoranthene	84		101		40-140	18		25
Pyrene	86		103		40-140	18		25
Benzo(a)anthracene	84		101		40-140	18		25
Chrysene	86		103		40-140	18		25
Benzo(b)fluoranthene	84		102		40-140	19		25
Benzo(k)fluoranthene	83		100		40-140	19		25
Benzo(a)pyrene	80		96		40-140	18		25
Indeno(1,2,3-cd)Pyrene	77		93		40-140	19		25
Dibenzo(a,h)anthracene	82		99		40-140	19		25
Benzo(ghi)perylene	76		93		40-140	20		25
Nonane (C9)	53		55		30-140	4		25
Decane (C10)	62		64		40-140	3		25
Dodecane (C12)	68		71		40-140	4		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-07,09 Batch: WG1010462-2 WG1010462-3								
Tetradecane (C14)	74		77		40-140	4		25
Hexadecane (C16)	78		81		40-140	4		25
Octadecane (C18)	80		82		40-140	2		25
Nonadecane (C19)	80		83		40-140	4		25
Eicosane (C20)	81		83		40-140	2		25
Docosane (C22)	81		83		40-140	2		25
Tetracosane (C24)	81		82		40-140	1		25
Hexacosane (C26)	81		82		40-140	1		25
Octacosane (C28)	80		82		40-140	2		25
Triacontane (C30)	79		81		40-140	3		25
Hexatriacontane (C36)	78		80		40-140	3		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	45		43		40-140
o-Terphenyl	80		95		40-140
2-Fluorobiphenyl	85		101		40-140
2-Bromonaphthalene	88		104		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 08 Batch: WG1010927-2 WG1010927-3								
C9-C18 Aliphatics	52		57		40-140	9		25
C19-C36 Aliphatics	80		82		40-140	2		25
C11-C22 Aromatics	82		84		40-140	2		25
Naphthalene	53		58		40-140	9		25
2-Methylnaphthalene	57		62		40-140	8		25
Acenaphthylene	65		69		40-140	6		25
Acenaphthene	64		68		40-140	6		25
Fluorene	70		75		40-140	7		25
Phenanthrene	77		82		40-140	6		25
Anthracene	79		84		40-140	6		25
Fluoranthene	85		89		40-140	5		25
Pyrene	86		91		40-140	6		25
Benzo(a)anthracene	88		93		40-140	6		25
Chrysene	89		94		40-140	5		25
Benzo(b)fluoranthene	89		94		40-140	5		25
Benzo(k)fluoranthene	87		93		40-140	7		25
Benzo(a)pyrene	85		90		40-140	6		25
Indeno(1,2,3-cd)Pyrene	87		92		40-140	6		25
Dibenzo(a,h)anthracene	87		92		40-140	6		25
Benzo(ghi)perylene	85		90		40-140	6		25
Nonane (C9)	32		39		30-140	20		25
Decane (C10)	40		47		40-140	16		25
Dodecane (C12)	48		53		40-140	10		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 08 Batch: WG1010927-2 WG1010927-3								
Tetradecane (C14)	53		57		40-140	7		25
Hexadecane (C16)	61		65		40-140	6		25
Octadecane (C18)	70		74		40-140	6		25
Nonadecane (C19)	73		76		40-140	4		25
Eicosane (C20)	76		79		40-140	4		25
Docosane (C22)	77		81		40-140	5		25
Tetracosane (C24)	77		81		40-140	5		25
Hexacosane (C26)	77		81		40-140	5		25
Octacosane (C28)	77		81		40-140	5		25
Triacontane (C30)	77		80		40-140	4		25
Hexatriacontane (C36)	77		80		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	62		63		40-140
o-Terphenyl	89		93		40-140
2-Fluorobiphenyl	81		80		40-140
2-Bromonaphthalene	82		81		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-09,11 Batch: WG1011156-1 WG1011156-2								
C5-C8 Aliphatics	98		100		70-130	2		25
C9-C12 Aliphatics	105		108		70-130	3		25
C9-C10 Aromatics	107		111		70-130	4		25
Benzene	100		102		70-130	2		25
Toluene	101		104		70-130	3		25
Ethylbenzene	104		107		70-130	3		25
p/m-Xylene	105		107		70-130	2		25
o-Xylene	103		105		70-130	2		25
Methyl tert butyl ether	97		102		70-130	5		25
Naphthalene	105		111		70-130	6		25
1,2,4-Trimethylbenzene	107		110		70-130	3		25
Pentane	96		98		70-130	2		25
2-Methylpentane	99		100		70-130	1		25
2,2,4-Trimethylpentane	101		103		70-130	2		25
n-Nonane	105		107		30-130	2		25
n-Decane	106		108		70-130	2		25
n-Butylcyclohexane	105		108		70-130	3		25

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	103		106		70-130
2,5-Dibromotoluene-FID	104		104		70-130



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

### Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

#### Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

#### Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1718423-01A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-01B	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-01C	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-01D	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-01E	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-02A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-02B	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-02C	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-02D	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-02E	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-03A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-03B	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-03C	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-03D	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-03E	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-04A	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-04B	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-04C	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-04D	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-04E	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-05A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-05B	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1718423-05C	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-05D	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-05E	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-06A	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-06B	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-06C	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-06D	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-06E	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-07A	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-07B	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-07C	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-07D	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-07E	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-08A	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-08B	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-08C	Vial HCl preserved	A	N/A	N/A	3.3	Y	Absent		VPH-DELUX-10(14)
L1718423-08D	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-08E	Amber 1000ml HCl preserved	A	<2	<2	3.3	Y	Absent		EPH-DELUX-10(14)
L1718423-09A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-09B	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-09C	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)
L1718423-09D	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-09E	Amber 1000ml HCl preserved	B	<2	<2	4.7	Y	Absent		EPH-DELUX-10(14)
L1718423-10A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		HOLD-VPH(14)
L1718423-10B	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		HOLD-VPH(14)
L1718423-10C	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		HOLD-VPH(14)
L1718423-11A	Vial HCl preserved	B	N/A	N/A	4.7	Y	Absent		VPH-DELUX-10(14)

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

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

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

#### Data Qualifiers

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

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718423  
**Report Date:** 06/12/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

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

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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





# CHAIN OF CUSTODY

PAGE 1 OF 1

## Project Information

Project Name: Weymouth C/S

Project Location: Weymouth, MA

Project #: 140143.0000.4903

Project Manager: Rick Paquette

ALPHA Quote #: 1907

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA    Mansfield, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

## Client Information

Client: TRC Environmental

Address: 2 Liberty Square, 6<sup>th</sup> Floor

Boston, MA

Phone: (617)385-6033

Fax: (617)350-3443

Email: RNiles@TRCSolutions.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 6/5/17

ALPHA Job #: L1718423

## Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info    PO #: 103959-RW  
L103294

## Regulatory Requirements/Report Limits

State/Fed Program: MCP    Criteria: RCGW-2

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes  No    Are MCP Analytical Methods Required?  
 Yes  No    Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

Sample ID	VPH Deluxe	EPH Deluxe																	
18423-01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-03	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-05	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-06	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-07	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-09	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
-10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	

**TOTAL # BOTTLES**

**SAMPLE HANDLING**

**Filtration**

Done  
 Not Needed

**Preservation**

Lab to do  
 Lab to do  
*(Please specify below)*

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	VPH Deluxe	EPH Deluxe																
		Date	Time																				
18423-01	MW-202	6/5	915	GW	AHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-02	MW-203		955	GW	BA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-03	MW-204		1050	GW	BA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-04	MW-205		1110	GW	AHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-05	MW-400		1015	GW	AHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-06	MW-401		1230	GW	AHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-07	MW-402		1415	GW	BA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-08	MW-403		1300	GW	BA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-09	DUP-1		-	GW	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
-10	Field Blank	↓	1330	di	AHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																

PLEASE ANSWER QUESTIONS ABOVE! Trip Blank

**IS YOUR PROJECT MA MCP or CT RCP?**

FORM NO. 01-01(1)  
(REV. 5-JAN-12)

Container Type	V <sup>n</sup>	A <sup>n</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	H	H	-	-	-	-	-	-	-	-	-	-	-	-

Relinquished By: *[Signature]* Date/Time: 6/5/17 149  
 Received By: *[Signature]* Date/Time: 6/5/17 3740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## ANALYTICAL REPORT

Lab Number:	L1718636
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	06/13/17

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1718636-01	MW-206	WATER	WEYMOUTH, MA	06/06/17 09:55	06/06/17
L1718636-02	MW-404	WATER	WEYMOUTH, MA	06/06/17 09:55	06/06/17
L1718636-03	MW-405	WATER	WEYMOUTH, MA	06/06/17 10:50	06/06/17
L1718636-04	MW-408	WATER	WEYMOUTH, MA	06/06/17 12:45	06/06/17
L1718636-05	MW-409	WATER	WEYMOUTH, MA	06/06/17 11:20	06/06/17
L1718636-06	MW-412	WATER	WEYMOUTH, MA	06/06/17 13:55	06/06/17
L1718636-07	MW-413	WATER	WEYMOUTH, MA	06/06/17 13:15	06/06/17
L1718636-08	MW-415	WATER	WEYMOUTH, MA	06/06/17 12:10	06/06/17
L1718636-09	FIELD BLANK	WATER	WEYMOUTH, MA	06/06/17 13:40	06/06/17
L1718636-10	TRIP BLANK	WATER	WEYMOUTH, MA	06/06/17 00:00	06/06/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**Case Narrative (continued)**

MCP Related Narratives

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 06/13/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-01  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 19:37  
 Analyst: JM

Date Collected: 06/06/17 09:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-01  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 20:00  
 Analyst: NS

Date Collected: 06/06/17 09:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-01  
 Client ID: MW-206  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 09:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	94		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	87		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-02  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 20:17  
 Analyst: JM

Date Collected: 06/06/17 09:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-02  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 19:29  
 Analyst: NS

Date Collected: 06/06/17 09:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-02  
 Client ID: MW-404  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 09:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-03  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 20:57  
 Analyst: JM

Date Collected: 06/06/17 10:50  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	105		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-03  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 18:57  
 Analyst: NS

Date Collected: 06/06/17 10:50  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-03  
 Client ID: MW-405  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 10:50  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-04  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 21:38  
 Analyst: JM

Date Collected: 06/06/17 12:45  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	102		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-04  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/13/17 14:25  
 Analyst: SR

Date Collected: 06/06/17 12:45  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/12/17 17:04  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/13/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-04  
 Client ID: MW-408  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 12:45  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-05  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 22:18  
 Analyst: JM

Date Collected: 06/06/17 11:20  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	99		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-05  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/11/17 18:13  
 Analyst: SR

Date Collected: 06/06/17 11:20  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-05  
 Client ID: MW-409  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 11:20  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	81		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-06  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 22:58  
 Analyst: JM

Date Collected: 06/06/17 13:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-06  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 17:21  
 Analyst: NS

Date Collected: 06/06/17 13:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-06  
 Client ID: MW-412  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 13:55  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	41		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-07  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 23:38  
 Analyst: JM

Date Collected: 06/06/17 13:15  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	93		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-07  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 16:49  
 Analyst: NS

Date Collected: 06/06/17 13:15  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-07  
 Client ID: MW-413  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 13:15  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	45		40-140
o-Terphenyl	67		40-140
2-Fluorobiphenyl	67		40-140
2-Bromonaphthalene	67		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-08  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/10/17 00:18  
 Analyst: JM

Date Collected: 06/06/17 12:10  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	95		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-08  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/09/17 16:17  
 Analyst: NS

Date Collected: 06/06/17 12:10  
 Date Received: 06/06/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/07/17 23:54  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/08/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-08  
 Client ID: MW-415  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/06/17 12:10  
 Date Received: 06/06/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	75		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**SAMPLE RESULTS**

Lab ID: L1718636-10  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/09/17 16:16  
 Analyst: JM

Date Collected: 06/06/17 00:00  
 Date Received: 06/06/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	106		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/09/17 00:17  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/07/17 23:54  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 06/08/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03,05-08 Batch: WG1010927-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

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

Analytical Method: 98,EPH-04-1.1  
Analytical Date: 06/09/17 00:17  
Analyst: SR

Extraction Method: EPA 3510C  
Extraction Date: 06/07/17 23:54  
Cleanup Method: EPH-04-1  
Cleanup Date: 06/08/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03,05-08 Batch: WG1010927-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	81		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

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

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 06/09/17 10:21  
**Analyst:** JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-08,10 Batch: WG1011911-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	104		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/13/17 12:48  
**Analyst:** SR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/12/17 17:04  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 06/13/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 04 Batch: WG1012320-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	67		40-140
2-Fluorobiphenyl	62		40-140
2-Bromonaphthalene	61		40-140



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03,05-08 Batch: WG1010927-2 WG1010927-3								
C9-C18 Aliphatics	52		57		40-140	9		25
C19-C36 Aliphatics	80		82		40-140	2		25
C11-C22 Aromatics	82		84		40-140	2		25
Naphthalene	53		58		40-140	9		25
2-Methylnaphthalene	57		62		40-140	8		25
Acenaphthylene	65		69		40-140	6		25
Acenaphthene	64		68		40-140	6		25
Fluorene	70		75		40-140	7		25
Phenanthrene	77		82		40-140	6		25
Anthracene	79		84		40-140	6		25
Fluoranthene	85		89		40-140	5		25
Pyrene	86		91		40-140	6		25
Benzo(a)anthracene	88		93		40-140	6		25
Chrysene	89		94		40-140	5		25
Benzo(b)fluoranthene	89		94		40-140	5		25
Benzo(k)fluoranthene	87		93		40-140	7		25
Benzo(a)pyrene	85		90		40-140	6		25
Indeno(1,2,3-cd)Pyrene	87		92		40-140	6		25
Dibenzo(a,h)anthracene	87		92		40-140	6		25
Benzo(ghi)perylene	85		90		40-140	6		25
Nonane (C9)	32		39		30-140	20		25
Decane (C10)	40		47		40-140	16		25
Dodecane (C12)	48		53		40-140	10		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03,05-08 Batch: WG1010927-2 WG1010927-3								
Tetradecane (C14)	53		57		40-140	7		25
Hexadecane (C16)	61		65		40-140	6		25
Octadecane (C18)	70		74		40-140	6		25
Nonadecane (C19)	73		76		40-140	4		25
Eicosane (C20)	76		79		40-140	4		25
Docosane (C22)	77		81		40-140	5		25
Tetracosane (C24)	77		81		40-140	5		25
Hexacosane (C26)	77		81		40-140	5		25
Octacosane (C28)	77		81		40-140	5		25
Triacontane (C30)	77		80		40-140	4		25
Hexatriacontane (C36)	77		80		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	62		63		40-140
o-Terphenyl	89		93		40-140
2-Fluorobiphenyl	81		80		40-140
2-Bromonaphthalene	82		81		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-08,10 Batch: WG1011911-1 WG1011911-2								
C5-C8 Aliphatics	102		107		70-130	5		25
C9-C12 Aliphatics	106		110		70-130	4		25
C9-C10 Aromatics	99		102		70-130	3		25
Benzene	97		103		70-130	6		25
Toluene	98		103		70-130	5		25
Ethylbenzene	99		104		70-130	5		25
p/m-Xylene	99		103		70-130	4		25
o-Xylene	98		103		70-130	5		25
Methyl tert butyl ether	92		102		70-130	10		25
Naphthalene	95		104		70-130	10		25
1,2,4-Trimethylbenzene	99		102		70-130	3		25
Pentane	102		108		70-130	6		25
2-Methylpentane	104		108		70-130	4		25
2,2,4-Trimethylpentane	101		105		70-130	4		25
n-Nonane	104		108		30-130	4		25
n-Decane	108		111		70-130	3		25
n-Butylcyclohexane	105		110		70-130	5		25

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	91		97		70-130
2,5-Dibromotoluene-FID	97		103		70-130



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 04 Batch: WG1012320-2 WG1012320-3								
C9-C18 Aliphatics	63		56		40-140	12		25
C19-C36 Aliphatics	76		73		40-140	4		25
C11-C22 Aromatics	81		80		40-140	1		25
Naphthalene	65		62		40-140	5		25
2-Methylnaphthalene	68		64		40-140	6		25
Acenaphthylene	74		71		40-140	4		25
Acenaphthene	72		70		40-140	3		25
Fluorene	76		74		40-140	3		25
Phenanthrene	78		78		40-140	0		25
Anthracene	80		79		40-140	1		25
Fluoranthene	82		82		40-140	0		25
Pyrene	83		83		40-140	0		25
Benzo(a)anthracene	83		83		40-140	0		25
Chrysene	83		84		40-140	1		25
Benzo(b)fluoranthene	84		84		40-140	0		25
Benzo(k)fluoranthene	82		82		40-140	0		25
Benzo(a)pyrene	81		81		40-140	0		25
Indeno(1,2,3-cd)Pyrene	82		81		40-140	1		25
Dibenzo(a,h)anthracene	78		79		40-140	1		25
Benzo(ghi)perylene	79		79		40-140	0		25
Nonane (C9)	45		39		30-140	14		25
Decane (C10)	53		47		40-140	12		25
Dodecane (C12)	63		56		40-140	12		25

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 04 Batch: WG1012320-2 WG1012320-3								
Tetradecane (C14)	67		60		40-140	11		25
Hexadecane (C16)	69		63		40-140	9		25
Octadecane (C18)	73		67		40-140	9		25
Nonadecane (C19)	73		68		40-140	7		25
Eicosane (C20)	74		70		40-140	6		25
Docosane (C22)	75		71		40-140	5		25
Tetracosane (C24)	75		71		40-140	5		25
Hexacosane (C26)	75		71		40-140	5		25
Octacosane (C28)	75		71		40-140	5		25
Triacontane (C30)	74		71		40-140	4		25
Hexatriacontane (C36)	74		70		40-140	6		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	53		50		40-140
o-Terphenyl	82		81		40-140
2-Fluorobiphenyl	77		80		40-140
2-Bromonaphthalene	78		80		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

### Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

#### Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

#### Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1718636-01A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-01B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-01C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-01D	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-01E	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-02A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-02B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-02C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-02D	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-02E	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-03A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-03B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-03C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-03D	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-03E	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-04A	Vial HCl preserved	B	N/A	N/A	2.6	Y	Absent		VPH-DELUX-10(14)
L1718636-04B	Vial HCl preserved	B	N/A	N/A	2.6	Y	Absent		VPH-DELUX-10(14)
L1718636-04C	Vial HCl preserved	B	N/A	N/A	2.6	Y	Absent		VPH-DELUX-10(14)
L1718636-04D	Amber 1000ml HCl preserved	B	<2	<2	2.6	Y	Absent		EPH-DELUX-10(14)
L1718636-04E	Amber 1000ml HCl preserved	B	<2	<2	2.6	Y	Absent		EPH-DELUX-10(14)
L1718636-05A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-05B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)

Project Name: WEYMOUTH C/S

Lab Number: L1718636

Project Number: 140143.0000.4903

Report Date: 06/13/17

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1718636-05C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-05D	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-05E	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-06A	Vial HCl preserved	B	N/A	N/A	2.6	Y	Absent		VPH-DELUX-10(14)
L1718636-06B	Vial HCl preserved	B	N/A	N/A	2.6	Y	Absent		VPH-DELUX-10(14)
L1718636-06C	Vial HCl preserved	B	N/A	N/A	2.6	Y	Absent		VPH-DELUX-10(14)
L1718636-06D	Amber 1000ml HCl preserved	B	<2	<2	2.6	Y	Absent		EPH-DELUX-10(14)
L1718636-06E	Amber 1000ml HCl preserved	B	<2	<2	2.6	Y	Absent		EPH-DELUX-10(14)
L1718636-07A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-07B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-07C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-07D	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-07E	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-08A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-08B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-08C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)
L1718636-08D	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-08E	Amber 1000ml HCl preserved	A	<2	<2	2.4	Y	Absent		EPH-DELUX-10(14)
L1718636-09A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		-
L1718636-09B	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		-
L1718636-09C	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		-
L1718636-10A	Vial HCl preserved	A	N/A	N/A	2.4	Y	Absent		VPH-DELUX-10(14)

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

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

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

#### Data Qualifiers

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

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718636  
**Report Date:** 06/13/17

## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

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

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

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

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

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

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

#### Non-Potable Water

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

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

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

### Mansfield Facility:

#### Drinking Water

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

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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







## ANALYTICAL REPORT

Lab Number:	L1718827
Client:	TRC Environmental Consultants Two Liberty Square Sixth Floor Boston, MA 02109
ATTN:	Rick Paquette
Phone:	(617) 385-6033
Project Name:	WEYMOUTH C/S
Project Number:	140143.0000.4903
Report Date:	06/14/17

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1718827-01	MW 201	WATER	WEYMOUTH, MA	06/07/17 09:30	06/07/17
L1718827-02	MW 406	WATER	WEYMOUTH, MA	06/07/17 09:45	06/07/17
L1718827-03	MW 407	WATER	WEYMOUTH, MA	06/07/17 10:50	06/07/17
L1718827-04	MW 410	WATER	WEYMOUTH, MA	06/07/17 09:50	06/07/17
L1718827-05	MW 411	WATER	WEYMOUTH, MA	06/07/17 11:55	06/07/17
L1718827-06	MW 414	WATER	WEYMOUTH, MA	06/07/17 13:00	06/07/17
L1718827-07	MW 416	WATER	WEYMOUTH, MA	06/07/17 11:25	06/07/17
L1718827-08	MW 417	WATER	WEYMOUTH, MA	06/07/17 12:30	06/07/17
L1718827-09	DUP-2	WATER	WEYMOUTH, MA	06/07/17 00:00	06/07/17
L1718827-10	FIELD BLANK	WATER	WEYMOUTH, MA	06/07/17 13:10	06/07/17
L1718827-11	TRIP BLANK	WATER	WEYMOUTH, MA	06/07/17 00:00	06/07/17

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

### Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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

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**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

### Case Narrative (continued)

MCP Related Narratives

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG1011980-2/-3 LCS/LCSD RPDs, associated with L1718827-01 through -09, are above the acceptance criteria for c19-c36 aliphatics (36%), triacontane (c30) (29%) and hexatriacontane (c36) (48%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cristin Walker

Title: Technical Director/Representative

Date: 06/14/17

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-01  
 Client ID: MW 201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/10/17 22:16  
 Analyst: KD

Date Collected: 06/07/17 09:30  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	101		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-01  
 Client ID: MW 201  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/13/17 20:31  
 Analyst: NS

Date Collected: 06/07/17 09:30  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-01  
 Client ID: MW 201  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 09:30  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	67		40-140
2-Fluorobiphenyl	66		40-140
2-Bromonaphthalene	64		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-02  
 Client ID: MW 406  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/10/17 22:56  
 Analyst: KD

Date Collected: 06/07/17 09:45  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	93		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-02  
 Client ID: MW 406  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/13/17 21:03  
 Analyst: NS

Date Collected: 06/07/17 09:45  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-02  
 Client ID: MW 406  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 09:45  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	67		40-140
2-Bromonaphthalene	64		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-03  
 Client ID: MW 407  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/10/17 23:36  
 Analyst: KD

Date Collected: 06/07/17 10:50  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	79.5		ug/l	50.0	--	1
C9-C10 Aromatics	68.3		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	7.57		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	88		70-130
2,5-Dibromotoluene-FID	92		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-03  
 Client ID: MW 407  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/13/17 21:35  
 Analyst: NS

Date Collected: 06/07/17 10:50  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	178		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	178		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-03  
 Client ID: MW 407  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 10:50  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	64		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-04  
 Client ID: MW 410  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/11/17 00:16  
 Analyst: KD

Date Collected: 06/07/17 09:50  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	86		70-130
2,5-Dibromotoluene-FID	93		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

### SAMPLE RESULTS

**Lab ID:** L1718827-04  
**Client ID:** MW 410  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/13/17 22:07  
**Analyst:** NS

**Date Collected:** 06/07/17 09:50  
**Date Received:** 06/07/17  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/11/17 03:00  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 06/12/17

### Quality Control Information

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice  
**Sample Extraction method:** Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-04  
 Client ID: MW 410  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 09:50  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	43		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	72		40-140
2-Bromonaphthalene	71		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-05  
 Client ID: MW 411  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/11/17 00:57  
 Analyst: KD

Date Collected: 06/07/17 11:55  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	90		70-130
2,5-Dibromotoluene-FID	97		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-05  
 Client ID: MW 411  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/13/17 22:39  
 Analyst: NS

Date Collected: 06/07/17 11:55  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-05  
 Client ID: MW 411  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 11:55  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	72		40-140
2-Bromonaphthalene	70		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-06  
 Client ID: MW 414  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/11/17 01:36  
 Analyst: KD

Date Collected: 06/07/17 13:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	58.3		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	58.3		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	81		70-130
2,5-Dibromotoluene-FID	82		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-06  
 Client ID: MW 414  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/13/17 23:11  
 Analyst: NS

Date Collected: 06/07/17 13:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	131		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	131		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-06  
 Client ID: MW 414  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 13:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	40		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	63		40-140
2-Bromonaphthalene	60		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-07  
 Client ID: MW 416  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/11/17 02:16  
 Analyst: KD

Date Collected: 06/07/17 11:25  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	87		70-130
2,5-Dibromotoluene-FID	96		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

**Lab ID:** L1718827-07  
**Client ID:** MW 416  
**Sample Location:** WEYMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/13/17 23:43  
**Analyst:** NS

**Date Collected:** 06/07/17 11:25  
**Date Received:** 06/07/17  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/11/17 03:00  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 06/12/17

**Quality Control Information**

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice  
**Sample Extraction method:** Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-07  
 Client ID: MW 416  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 11:25  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	43		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	68		40-140
2-Bromonaphthalene	66		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-08  
 Client ID: MW 417  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/11/17 02:56  
 Analyst: KD

Date Collected: 06/07/17 12:30  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	94		70-130
2,5-Dibromotoluene-FID	103		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

### SAMPLE RESULTS

Lab ID: L1718827-08  
 Client ID: MW 417  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/14/17 00:15  
 Analyst: NS

Date Collected: 06/07/17 12:30  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

### Quality Control Information

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-08  
 Client ID: MW 417  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 12:30  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	49		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	67		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-09  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/11/17 03:36  
 Analyst: KD

Date Collected: 06/07/17 00:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	82		70-130
2,5-Dibromotoluene-FID	87		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-09  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 98,EPH-04-1.1  
 Analytical Date: 06/14/17 00:47  
 Analyst: NS

Date Collected: 06/07/17 00:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 06/11/17 03:00  
 Cleanup Method1: EPH-04-1  
 Cleanup Date1: 06/12/17

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice  
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-09  
 Client ID: DUP-2  
 Sample Location: WEYMOUTH, MA

Date Collected: 06/07/17 00:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	68		40-140
2-Bromonaphthalene	66		40-140

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**SAMPLE RESULTS**

Lab ID: L1718827-11  
 Client ID: TRIP BLANK  
 Sample Location: WEYMOUTH, MA  
 Matrix: Water  
 Analytical Method: 100, VPH-04-1.1  
 Analytical Date: 06/10/17 15:34  
 Analyst: KD

Date Collected: 06/07/17 00:00  
 Date Received: 06/07/17  
 Field Prep: Not Specified

**Quality Control Information**

Condition of sample received: Satisfactory  
 Aqueous Preservative: Laboratory Provided Preserved Container  
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	ND		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	91		70-130
2,5-Dibromotoluene-FID	98		70-130

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

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

**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 06/13/17 18:54  
**Analyst:** NS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/11/17 03:00  
**Cleanup Method:** EPH-04-1  
**Cleanup Date:** 06/12/17

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-09 Batch: WG1011980-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	63		40-140
2-Bromonaphthalene	61		40-140



**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 06/10/17 12:25  
**Analyst:** KD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-09,11 Batch: WG1012604-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	89		70-130
2,5-Dibromotoluene-FID	96		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-09 Batch: WG1011980-2 WG1011980-3								
C9-C18 Aliphatics	60		53		40-140	12		25
C19-C36 Aliphatics	91		63		40-140	36	Q	25
C11-C22 Aromatics	72		70		40-140	3		25
Naphthalene	54		54		40-140	0		25
2-Methylnaphthalene	56		55		40-140	2		25
Acenaphthylene	63		61		40-140	3		25
Acenaphthene	62		60		40-140	3		25
Fluorene	66		63		40-140	5		25
Phenanthrene	68		66		40-140	3		25
Anthracene	70		67		40-140	4		25
Fluoranthene	73		70		40-140	4		25
Pyrene	74		71		40-140	4		25
Benzo(a)anthracene	74		73		40-140	1		25
Chrysene	75		73		40-140	3		25
Benzo(b)fluoranthene	75		73		40-140	3		25
Benzo(k)fluoranthene	74		72		40-140	3		25
Benzo(a)pyrene	72		70		40-140	3		25
Indeno(1,2,3-cd)Pyrene	74		72		40-140	3		25
Dibenzo(a,h)anthracene	75		73		40-140	3		25
Benzo(ghi)perylene	73		70		40-140	4		25
Nonane (C9)	41		36		30-140	13		25
Decane (C10)	49		44		40-140	11		25
Dodecane (C12)	58		52		40-140	11		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-09 Batch: WG1011980-2 WG1011980-3								
Tetradecane (C14)	62		55		40-140	12		25
Hexadecane (C16)	65		58		40-140	11		25
Octadecane (C18)	70		62		40-140	12		25
Nonadecane (C19)	70		62		40-140	12		25
Eicosane (C20)	72		63		40-140	13		25
Docosane (C22)	72		64		40-140	12		25
Tetracosane (C24)	74		64		40-140	14		25
Hexacosane (C26)	77		64		40-140	18		25
Octacosane (C28)	81		64		40-140	23		25
Triacontane (C30)	86		64		40-140	29	Q	25
Hexatriacontane (C36)	106		65		40-140	48	Q	25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	57		52		40-140
o-Terphenyl	74		73		40-140
2-Fluorobiphenyl	68		68		40-140
2-Bromonaphthalene	67		66		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WEYMOUTH C/S  
**Project Number:** 140143.0000.4903

**Lab Number:** L1718827  
**Report Date:** 06/14/17

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-09,11 Batch: WG1012604-1 WG1012604-2								
C5-C8 Aliphatics	101		101		70-130	0		25
C9-C12 Aliphatics	106		106		70-130	0		25
C9-C10 Aromatics	98		98		70-130	1		25
Benzene	97		99		70-130	2		25
Toluene	97		99		70-130	2		25
Ethylbenzene	99		100		70-130	1		25
p/m-Xylene	99		100		70-130	1		25
o-Xylene	98		99		70-130	1		25
Methyl tert butyl ether	94		97		70-130	3		25
Naphthalene	96		99		70-130	3		25
1,2,4-Trimethylbenzene	98		98		70-130	1		25
Pentane	100		99		70-130	1		25
2-Methylpentane	102		102		70-130	0		25
2,2,4-Trimethylpentane	101		101		70-130	0		25
n-Nonane	104		104		30-130	0		25
n-Decane	107		107		70-130	0		25
n-Butylcyclohexane	107		107		70-130	0		25

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	93		95		70-130
2,5-Dibromotoluene-FID	99		102		70-130



**Project Name:** WEYMOUTH C/S**Lab Number:** L1718827**Project Number:** 140143.0000.4903**Report Date:** 06/14/17**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent
B	Absent
C	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1718827-01A	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-01B	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-01C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-01D	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-01E	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-02A	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-02B	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-02C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-02D	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-02E	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-03A	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-03B	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-03C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-03D	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-03E	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-04A	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-04B	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-04C	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-04D	Amber 1000ml HCl preserved	C	<2	<2	5.1	Y	Absent		EPH-DELUX-10(14)
L1718827-04E	Amber 1000ml HCl preserved	C	<2	<2	5.1	Y	Absent		EPH-DELUX-10(14)
L1718827-05A	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)

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**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1718827-05B	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-05C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-05D	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-05E	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-06A	Vial HCl preserved	B	N/A	N/A	5.2	Y	Absent		VPH-DELUX-10(14)
L1718827-06B	Vial HCl preserved	B	N/A	N/A	5.2	Y	Absent		VPH-DELUX-10(14)
L1718827-06C	Vial HCl preserved	B	N/A	N/A	5.2	Y	Absent		VPH-DELUX-10(14)
L1718827-06D	Amber 1000ml HCl preserved	B	<2	<2	5.2	Y	Absent		EPH-DELUX-10(14)
L1718827-06E	Amber 1000ml HCl preserved	B	<2	<2	5.2	Y	Absent		EPH-DELUX-10(14)
L1718827-07A	Vial HCl preserved	B	N/A	N/A	5.2	Y	Absent		VPH-DELUX-10(14)
L1718827-07B	Vial HCl preserved	B	N/A	N/A	5.2	Y	Absent		VPH-DELUX-10(14)
L1718827-07C	Vial HCl preserved	B	N/A	N/A	5.2	Y	Absent		VPH-DELUX-10(14)
L1718827-07D	Amber 1000ml HCl preserved	B	<2	<2	5.2	Y	Absent		EPH-DELUX-10(14)
L1718827-07E	Amber 1000ml HCl preserved	B	<2	<2	5.2	Y	Absent		EPH-DELUX-10(14)
L1718827-08A	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-08B	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-08C	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-08D	Amber 1000ml HCl preserved	C	<2	<2	5.1	Y	Absent		EPH-DELUX-10(14)
L1718827-08E	Amber 1000ml HCl preserved	C	<2	<2	5.1	Y	Absent		EPH-DELUX-10(14)
L1718827-09A	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-09B	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-09C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-09D	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-09E	Amber 1000ml HCl preserved	A	<2	<2	5.6	Y	Absent		EPH-DELUX-10(14)
L1718827-10A	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		HOLD-VPH(14)
L1718827-10B	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		HOLD-VPH(14)
L1718827-10C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		HOLD-VPH(14)
L1718827-11A	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)

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**Project Number:** 140143.0000.4903

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**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1718827-11B	Vial HCl preserved	C	N/A	N/A	5.1	Y	Absent		VPH-DELUX-10(14)
L1718827-11C	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-11D	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-11E	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)
L1718827-11F	Vial HCl preserved	A	N/A	N/A	5.6	Y	Absent		VPH-DELUX-10(14)

**Project Name:** WEYMOUTH C/S  
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## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

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

### Terms

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

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

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

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report



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#### Data Qualifiers

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

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

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## REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



