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July 29, 2016

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup- MCP Release Notification
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

**Re: MCP Release Notification
Atlantic Bridge Project Weymouth Compressor Station
6 & 50 Bridge Street
Weymouth, Massachusetts**

To Whom It May Concern:

TRC Environmental Corporation (TRC) has prepared this Massachusetts Contingency Plan (MCP 310 CMR 40.0000) release notification letter for petroleum contamination identified in soil above the MCP Reportable Concentrations (RCs) which would trigger a 120-day notification under the MCP. The petroleum contamination was identified during geotechnical boring installation in support of the proposed Atlantic Bridge Project Weymouth Compressor Station (ABPWCS) located at 6 & 50 Bridge Street, Weymouth, Massachusetts. The property triggering release notification is owned by the Calpine Fore River Energy Center, LLC (CFREC) and is located across the street from the energy center. TRC was contracted by Algonquin Gas Transmission, LLC (Algonquin) to evaluate subsurface conditions in support of a potential real estate transaction associated with the property.

SITE LOCATION

The approximately twelve-acre CFREC property is located on a triangular peninsula lying northeast of Route 3A (Bridge Street) and includes the four-acre portion of the property herein referred to as the site (the Site). The property is currently owned by CFREC and is developed with asphalt paved and unpaved access roads, storage areas, an existing Algonquin metering and regulating station on the southwest portion, and MWRA pumping station on the northeast portion. There is an existing public walkway located directly east of the compressor station Site along King's Cove. The Weymouth Fore River is to the north and west of the Site, topographic elevation is approximately 9 feet above mean sea level (MSL), and local topography slopes toward the north.

SITE BACKGROUND

The property and Site is in close proximity of a larger site tracked by the MassDEP under Release Tracking Number (RTN) 3-2387. RTN 3-2387 is included as a reference site based on the inclusion of information (e.g. presence of a large above-ground storage tank which may be associated with the

release notification discussed herein) in a 1997 ABB Response Action Outcome (RAO) Statement associated with RTN 4-3002387 (previously identified as RTN 3-2387 before the Town of Weymouth was moved from DEP Region 3 to Region 4) at the Former Edgar Station located at 1 Bridge Street. The July 1997 RAO applied only to the portion of the RTN located on the northeast of side of Route 3A. The Class B-1 RAO was considered appropriate for this location because no remedial actions had been conducted, a condition of no significant risk was determined to be present, and an activity and use limitation was not deemed required to maintain a condition of no significant risk.

The RAO report identifies two former ASTs located were located on the Site and the tanks were installed in 1974 and 1990, contained No. 2 Fuel Oil and Fuel Additive, and had capacities of 11,256,000 gallons and 6,000 gallons, respectively.

OVERVIEW

As part of Algonquin's evaluation of the property for the proposed construction of a natural gas compressor station, TRC, on behalf of Algonquin, implemented a geotechnical boring program to evaluate subsurface conditions at the property. Borings were installed across the property in areas where proposed building foundations are being considered as well as in areas where subsurface utilities may be located. One of these borings was located in the area of the former 11,256,000 gallon #2 fuel oil tank.

SUBSURFACE DRILLING PROGRAM

TRC provided oversight of geotechnical drilling performed by GZA GeoEnvironmental, Inc. (GZA) from March 29 to April 20, 2016 to monitor management of soil and groundwater on Site prior to facility construction. Boring locations are identified on the attached Figure 1. At boring B105, from approximately 14 to 19 feet below ground surface (bgs), TRC observed petroleum staining and odors. None of the other soil samples collected from the borings exhibited visual or olfactory evidence of contamination.

TRC collected a soil sample from B105 at a depth of 14 to 17 feet bgs for laboratory analysis of extractable petroleum hydrocarbons (EPH) with target polycyclic aromatic hydrocarbons and volatile petroleum hydrocarbons (VPH) with target volatile organic compounds (VOCs) and submitted the sample to Alpha Laboratories of Westborough, Massachusetts on April 13, 2016. The analytical data received on April 22, 2016 is presented on the attached table.

In accordance with TRC standard protocols for laboratory data, the data were reviewed for reliability by TRC's Quality Assurance/Quality Control (QA/QC) Chemist, who found no significant concerns with the data. The analytical data were compared to Massachusetts Contingency Plan (MCP) Reportable Concentration, RCS-1 (RCs). RCS-1 is appropriate because B105 is located within 500 feet of a walking park along King's Cove. The data indicated the following MCP RCS-1 exceedances:

Analyte	RCS-1 (mg/kg)	Concentration (mg/kg)
C9-C18 Aliphatics	1,000	4,570
C11-C22 Aromatics	1,000	9,070
C19-C36 Aliphatics	3,000	9,110

PROPERTY OWNER NOTIFICATION

Algonquin provided CFREC with written notice of the release notification condition on May 11, 2016, after the data had been reviewed and deemed useable. Based on the property owner notification on May 11, 2016, a 120-day notification exists, therefore, notification of the condition is required by August 11, 2016. A Bureau of Waste Site Cleanup (BWSC-103) form has been prepared and will be uploaded to eDEP along with attachments including a Site Figure, Data Table Summary, Laboratory Data sheets and this letter to support the release notification requirements.

CONCLUSIONS

Based on the concentration of EPH compounds above the RCs, an MCP 120-day notification exists. The date of the notification is based on the date the property owner obtains knowledge in accordance with 310 CMR 40.0315. In accordance with the MCP, *Persons are required to notify under 310 CMR 40.0331 shall notify the Department not more than 120 days after obtaining knowledge that a release meets the following condition:*

- (1) A release to the environment indicated by the measurement of one or more hazardous materials in soil or groundwater in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 40.1600.*

TRC requests correspondence associated this release notification be provided to Algonquin and the property owner, Calpine. If you require additional information, please do not hesitate to contact the under signed.

Sincerely,
TRC ENVIRONMENTAL CORPORATION



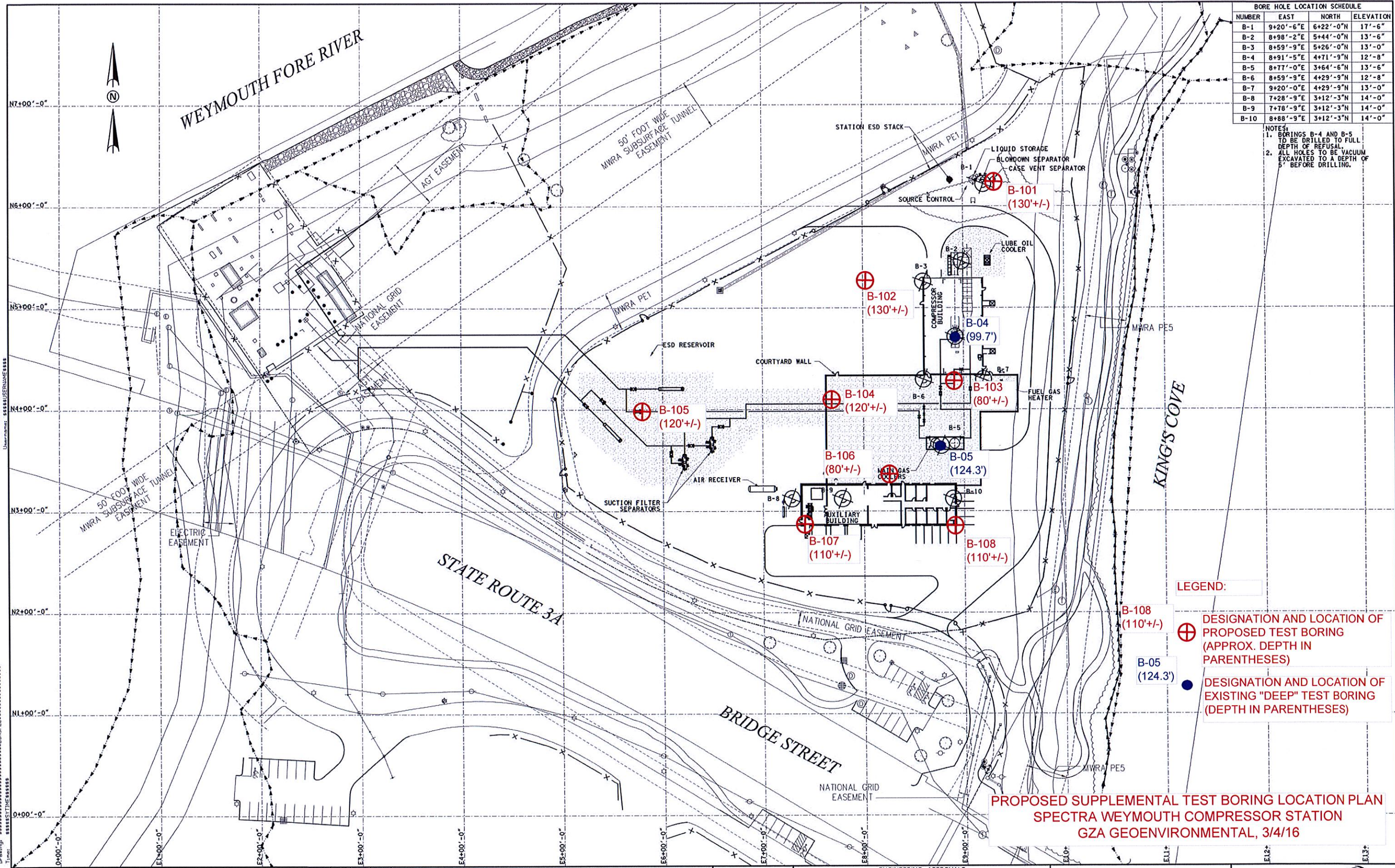
Kelley C. Race, P.G., LSP

cc Charles Parnell, Calpine Fore River Energy Center, LLC
Gary Davis, Terry Doyle- Algonquin

Attachments

Figure 1: Boring Locations
Table 1: Sample Analytical Results
Laboratory Datasheets

ATTACHMENT A
SITE PLAN



BORE HOLE LOCATION SCHEDULE			
NUMBER	EAST	NORTH	ELEVATION
B-1	9+20'-6"E	6+22'-0"N	17'-6"
B-2	8+98'-2"E	5+44'-0"N	13'-6"
B-3	8+59'-9"E	5+26'-0"N	13'-0"
B-4	8+91'-5"E	4+71'-9"N	12'-8"
B-5	8+77'-0"E	3+64'-6"N	13'-6"
B-6	8+59'-9"E	4+29'-9"N	12'-8"
B-7	9+20'-0"E	4+29'-9"N	13'-0"
B-8	7+28'-9"E	3+12'-3"N	14'-0"
B-9	7+78'-9"E	3+12'-3"N	14'-0"
B-10	8+88'-9"E	3+12'-3"N	14'-0"

NOTES:
 1. BORINGS B-4 AND B-5 TO BE DRILLED TO FULL DEPTH OF REFUSAL.
 2. ALL HOLES TO BE VACUUM EXCAVATED TO A DEPTH OF 5' BEFORE DRILLING.

LEGEND:

⊕ DESIGNATION AND LOCATION OF PROPOSED TEST BORING (APPROX. DEPTH IN PARENTHESES)

● DESIGNATION AND LOCATION OF EXISTING "DEEP" TEST BORING (DEPTH IN PARENTHESES)

**PROPOSED SUPPLEMENTAL TEST BORING LOCATION PLAN
 SPECTRA WEYMOUTH COMPRESSOR STATION
 GZA GEOENVIRONMENTAL, 3/4/16**

DWG. NO. _____ REFERENCE DWG. _____ REV DSN CK _____ DESCRIPTION _____	BASIC SYSTEMS CAMBRIDGE, OHIO U.S.A. 601-421-3000	ENGINEERING APPROVALS BID _____ CONSTRUCTION _____				GENERAL PLAN SOIL BORING LOCATION PLAN		Spectra Energy Partners Texas Eastern Transmission, LP 3400 Westchester Ct. Houston, TX 77056-5707 625-5400
		DRAWN BY: DAJ DRAFTING SUPERVISOR _____ DESIGN ENGINEER _____ DESIGN MANAGER _____	TITLE _____ SIGNATURE _____ DATE _____ SIGNATURE _____ DATE _____	LOC. WEYMOUTH, MASSACHUSETTS YEAR: 2017 W.O.CE.000089.005 SCALE: 1" = 40' DWG. WEYM-A-0042 REV. Q				

ATTACHMENT B
ANALYTICAL RESULTS TABLE

Summary of Analytical Results for Soil Samples -- April 2016
Spectra Atlantic Bridge Project
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:	B105
		Sample Depth (ft.):	14-17
		Sample Date:	4/12/2016
		RCS-1	
VPH			
(mg/kg)	C5-C8 Aliphatics	100	12.5 U
	C9-C10 Aromatics	100	45
	C9-C12 Aliphatics	1,000	12.5 U
	Benzene	2	0.502 U
	Toluene	30	0.502 U
	Ethylbenzene	40	0.502 U
	p/m-xylene	100	0.502 U
	o-xylene	100	0.502 U
	Methyl tert butyl ether (MTBE)	0.1	0.251 U
	Naphthalene	4	1.0 U
EPH			
(mg/kg)	C9-C18 Aliphatics	1,000	4,570
	C11-C22 Aromatics	1,000	9,070
	C19-C36 Aliphatics	3,000	9,110
	Acenaphthene	4	7.41 U
	Acenaphthylene	1	7.41 U
	Anthracene	1,000	7.41 U
	Benzo(a)anthracene	7	7.41 U
	Benzo(a)pyrene	2	7.41 U
	Benzo(b)fluoranthene	7	7.41 U
	Benzo(g,h,i)perylene	1,000	7.41 U
	Benzo(k)fluoranthene	70	7.41 U
	Chrysene	70	7.41 U
	Dibenz(a,h)anthracene	0.7	7.41 U
	Fluoranthene	1,000	7.41 U
	Fluorene	1,000	7.41 U
	Indeno(1,2,3-cd)pyrene	7	7.41 U
	2-Methylnaphthalene	0.7	7.41 U
	Naphthalene	4	7.41 U
	Phenanthrene	10	7.41 U
	Pyrene	1,000	7.41 U

Notes:

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

U - Analyte was not detected at specified quantitation limit.

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

Values shown in Bold and shaded type exceed MassDEP RCS-1.

EPH - Extractable Petroleum Hydrocarbons.

VPH - Volatile Petroleum Hydrocarbons

RC - Reportable concentration.

ATTACHMENT C
LABORATORY ANALYTICAL DATA



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

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

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

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



Project Name: WEYMOUTH C/S
Project Number: 140143.0000.7478

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

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
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.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	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
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	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: 140143.0000.7478

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
Volatile Petroleum Hydrocarbons - Westborough Lab						
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
Extractable Petroleum Hydrocarbons - Westborough Lab						
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
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> <i>Criteria</i>
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 %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								
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 %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
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, NO₂, NO₃.
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.

