

# FINAL IMMEDIATE RESPONSE ACTION COMPLETION REPORT

90 Bridge Street Weymouth, Massachusetts 02191 Release Tracking Number 4-28615

#### Prepared for:



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#### Prepared by:



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June 2021

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#### 1.0 INTRODUCTION

TRC Environmental Corporation (TRC) is submitting this Final Immediate Response Action (IRA) Completion Report (Final IRA Completion Report) to complete the response to a 2-hour reporting condition under the Massachusetts Contingency Plan (MCP).

The 2-hour reporting condition was identified during shallow sediment sampling performed on November 13, 2020 at the property located at 90 Bridge Street, Weymouth, MA, owned by Calpine Fore River Energy (Weymouth Assessors Block-Lot ID's 63-3) known as the Kings Cove Conservation Area ("Kings Cove").

As part of a wider sampling program, sediment samples were obtained at a depth of 0 to 0.5 feet along 3-sample lines oriented parallel to the shoreline to assess human and ecological exposure.

Two of the sediment samples collected were determined to contain arsenic or total chromium at concentrations exceeding the 2-hour notification threshold specified at 310 CMR 40.0321(2)(b). Following the December 8, 2020 notification to the Massachusetts Department of Environmental Protection (MassDEP), MassDEP assigned Release Tracking Number (RTN) 4-28615 to the reported concentrations of arsenic and total chromium in sediment and approved the IRA activities reported in this Final IRA Completion Report. As part of the IRA, TRC conducted additional sediment sampling at Kings Cove in December 2020. Figure 1 shows the area that is addressed by the IRA including the sampling locations.

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Property Owner: Calpine Fore River Energy Center, LLC

Attention: Mr. Charles Parnell

9 Bridge Street

North Weymouth, MA 02191

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This Final IRA Completion Report is being submitted following the completion of IRA activities in accordance with 310 CMR 40.0427.

## 2.0 RELEASE DESCRIPTION, SITE CONDITIONS AND SURROUNDING RECEPTORS [310 CMR 40.0427 (4)(a)]

The following sections describe the release, site conditions, and surrounding receptors in accordance with 310 CMR 40.0427(4)(a).

#### 2.1 Release Description

On November 13, 2020, TRC performed shallow sediment sampling at 27 locations (SL1-01 through SL1-10, SL2-01 through SL2-10, and SL3-4 through SL3-10) as part of a wider sampling program at Kings Cove to characterize potential fill related impacts in the area. The samples were submitted to Alpha Analytical of Westborough, Massachusetts (Alpha) for laboratory analyses to evaluate potential extractable petroleum hydrocarbons (EPH), polycyclic aromatic hydrocarbons (PAHs), and metals impacts. Laboratory analytical results for sediment sample SL1-08 at a depth of 0 to 0.5 feet indicated a total chromium concentration of 250 milligrams per kilogram (mg/kg), exceeding the 2-hour notification threshold. The laboratory analytical results for sediment sample SL2-10 at a depth of 0 to 0.5 feet indicated an arsenic concentration of 43 mg/kg, exceeding the 2-hour notification threshold.

The applicable 2-hour notification threshold for arsenic is 40 mg/kg and for total chromium it is 200 mg/kg. These thresholds are concentrations in sediment that "poses or could pose an imminent hazard" as specified at 310 CMR 40.0321.

To evaluate whether an Imminent Hazard is actually presented by the circumstances that are the subject of a 2-hour notification, the MCP requires calculation of an Exposure Point Concentration based on all pertinent sampling results for the area that could potentially pose an Imminent Hazard. Thus, even though individual sediment concentrations may exceed the applicable 2-hour notification threshold, whether or not an Imminent Hazard condition actually exists depends on the evaluation of the relevant sampling results.

#### 2.2 Site Conditions

The Kings Cove area is located north of Bridge Street (Route 3A) in Weymouth, just to the east of the Fore River Bridge.

The coordinates of the Site are:

42.244360 N and -70.962189 W

The Kings Cove area addressed by the IRA activities is approximately 0.58 acres. The top 0.5 feet of sediment consists of sand and gravel impacted with some anthropogenic (man-made) materials like coal, coal ash, and clinkers; as well as demolition debris (brick and wire remnants) associated with historic filling.

<sup>&</sup>lt;sup>1</sup> The sample results are included in **Table 1**, and sample locations are identified on **Figure 1**. Copies of the laboratory analytical reports are included in **Appendix B**.

#### 2.3 Surrounding Receptors

The properties in the vicinity of Kings Cove include residential properties along Bridge Street, and commercial properties including the Calpine Fore River Energy Center, the Algonquin Compressor Station and the Massachusetts Water Resource Authority (MWRA) pumping station.

According to data obtained from the Massachusetts Geographic Information System (MassGIS) website (<a href="http://www.mass.gov/mgis/">http://www.mass.gov/mgis/</a>), there are no relevant mapped priority resource features within 500 feet of the Site. A copy of the MassGIS Priority Resources Map for the vicinity of the Kings Cove area is provided as **Figure 2**.

#### 3.0 DESCRIPTION OF WORK COMPLETED [310 CMR 40.0427(4)(b)]

#### 3.1 Supplemental Sediment Sampling

On December 28, 2020, TRC collected additional sediment samples in the vicinity of sample location SL2-10 in order to determine the extent of arsenic impacts at SL2-10, and in the vicinity of location SL1-08 to obtain sediment samples for chromium analysis to allow the estimation of the percentage of the total chromium detected in hexavalent form (chromium speciation) in the vicinity of sample location SL1-08. TRC performed field screening for arsenic and chromium during the sediment sampling using a handheld X-Ray Fluorescence Analyzer (XRF), in order to guide the sampling effort and reduce the potential need for an additional sampling mobilization. The XRF screening results are included in **Appendix A**.

In order to determine the extent of arsenic impacts, sediment samples were collected from depths of 0 to 0.5 feet at nine locations at five, 10, and 15 feet from sample location SL2-10 (SL2-10-S5, SL2-10-S10, SL2-10-S15, SL2-10-W5, SL2-10-W10, SL2-10-W15, SL2-10-E5, SL2-10-E10, SL2-10-N5, SL2-10-N10, and SL2-10-N15). The samples were submitted to Alpha and authorized for laboratory analysis of arsenic as needed to determine the extent of arsenic impacts.

In order to estimate the percentage of the total chromium detected in hexavalent form, sediment samples were collected from 0 to 0.5 feet at five locations including at the original SL1-08 sample location and two feet from the sample location (SL1-08R, SL1-08-S2, SL1-08-W2, SL1-08-E2, and SL1-08-N2). Three of the samples (SL1-08-E2, SL1-08-N2, and SL1-08-W2) were submitted to Alpha for laboratory analysis of total and hexavalent chromium as needed for chromium speciation.

Soil sample locations are identified on **Figure 1** and the sample results are summarized in **Table 1**.

#### 4.0 INVESTIGATIVE AND MONITORING DATA [310 CMR 40.0427(4)(c)]

Investigative and monitoring data obtained during implementation of the IRA are summarized in **Table 1 and Appendix A** and discussed below. Copies of the laboratory analytical reports are included in **Appendix B**.

#### 4.1 Sediment Sample Results

The November 13, 2020 shallow sediment samples were analyzed for EPH including PAHs, and metals. The sample results indicated a concentration of chromium above 200 mg/kg at one location (SL1-08) and a concentration of arsenic above 40 mg/kg at one location (SL2-10).

The December 28, 2020 supplemental sediment sample results indicated that surficial arsenic concentrations exceeded 40 mg/kg at one additional location (SL-2-10-N5), and that sediment arsenic impacts exceeding 40 mg/kg were delineated for the 0 to 0.5 foot interval by samples SL2-10-E5, SL2-10-N10, SL2-10-S5, and SL2-10-W5.

The December 28, 2020 supplemental sediment sample chromium speciation results in the vicinity of sample location SL1-08 indicated that less than ten-percent of total chromium exists in the hexavalent form.

Sample results are summarized in **Table 1** and the sample locations are shown on **Figure 1**.

TRC performed a quality assurance/quality control (QA/QC) review of the laboratory reports (e.g., data completeness, surrogate recoveries, holding times, sample preservation, and sample duplicates for data reproducibility). Based upon data provided by the laboratory, the surrogate recoveries and duplicate results were within acceptable ranges. The samples were analyzed within specified holding times, and sample temperatures were within acceptable ranges. The laboratory data are deemed representative and acceptable for the intended use. The data usability assessment is included in **Appendix C**.

#### 4.2 Imminent Hazard Evaluation

An MCP Method 3 IH Evaluation was performed to support this Final IRA Completion Report (see **Appendix D**). The IH Evaluation evaluates the risks to recreational visitors who may be exposed to metals in sediment at Kings Cove. The IH Evaluation was conducted in a manner consistent with 310 CMR 40.0426, 310 CMR 40.0951 through 40.0955, and MassDEP's Guidance for Disposal Site Risk Characterization (MassDEP, 1995 and updates).

The IH Evaluation was based on the sediment data collected in November and December 2020. Arsenic, chromium, lead, nickel, and vanadium were identified as the contaminants of potential concern (COPCs) based on the data, the MCP, and applicable guidance.

An IH Evaluation is focused on actual or likely exposures to receptors under current site conditions, considering the current use(s) of the site and the surrounding environment, and considering a period of time that is five years or less. Therefore, the potential receptor used for the IH Evaluation is a 1 to 6-year old child recreational visitor. MassDEP's recommended child visitor exposure assumptions and toxicity values were used to estimate the risks for the IH Evaluation, with applicable modification for sediment exposures.

The IH Evaluation concluded that the concentrations of the COPCs in sediment at Kings Cove do not present an IH. The hazard indices (HIs) and excess lifetime cancer risks (ELCRs) for the young child recreational visitor do not exceed MassDEP Risk Limits for an IH. The total ELCR is less than 10<sup>-5</sup>, the total HI is less than 10, and the lead HI is less than 1. The complete IH Evaluation is included in **Appendix D**.

# 5.0 LISTING OF FEDERAL STATE OR LOCAL PERMITS NEEDED TO CONDUCT THE IRA [310 CMR 40.0424(1)(h)]

No federal permits were required for the IRA activities. The IRA activities at Kings Cove are the subject of an Order of Conditions issued by the Weymouth Conservation Commission on October 15, 2020 (Permit #81-1285).

# 6.0 STATEMENT OF IRA FINDINGS AND CONCLUSIONS [310 CMR 40.0427(4)(d)] As discussed in Section 4.2 above, TRC has concluded that the concentrations of the COPCs in sediment do not present an IH.

#### 7.0 DESCRIPTION OF ONGOING ACTIVITIES [310 CMR 40.0427(4)(g)]

No further field investigations are planned regarding the concentrations of COPCs in sediment that are the subject of this IRA. Phase II investigations continue at the site that includes Kings Cove in anticipation of the July 28, 2021 submittal of the Phase II Comprehensive Site Assessment Report and Risk Characterization for the Site.

#### 8.0 MANAGEMENT OF REMEDIATION WASTE [310 CMR 40.0427(4)(e)]

Soil boring material was returned to the boring in the order in which it was removed. Remediation waste was not generated during IRA activities.

#### 9.0 LSP OPINION [310 CMR 40.0427(5)]

The investigation and assessment activities that have been undertaken in performance of this IRA are consistent with the objectives identified in the MCP and have been designed and performed according to our understanding of the conditions present at the Site. The IRA was conducted in conformance with the verbal IRA Plan. As an IH condition does not exist at the Site, IRA activities have been completed. This report is submitted under a MassDEP IRA Completion Statement form (BWSC-105).

#### 10.0 PUBLIC INVOLVEMENT [310 CMR 40.0428]

The Draft IRA Completion Report was presented at a Public Involvement Plan (PIP) meeting on April 7, 2021. Appendix E provides copies of legal notices announcing the public meeting and document availability which were posted in the Boston Globe, the Quincy Patriot Ledger and the Weymouth News, and copies of notices sent to the Mayor, Board of Health and PIP mailing list regarding the availability of the report. Appendix F provides responses to comments received from the public during the PIP meeting and via email following the meeting.

This document will be uploaded to the MassDEP database under RTN 4-28615 and will be available for public review and download after that time. In accordance with the PIP Plan, a notice of availability of this Final IRA Completion Report and the Responses to Public Comments will be sent via electronic mail to the PIP group mailing list. Notice of the availability of the Final IRA Completion Report will also be sent to the Mayor and Board of Health. Copies of these notifications are included in Appendix E. Hard copies of this document will be provided to the information repositories at the Weymouth Health Department and the Tufts Library.

### **FIGURES**





EXTENT OF SITE ADDRESSED BY IMMEDIATE RESPONSE ACTION.

- - - MEAN HIGH WATER

SEDIMENT SAMPLE LOCATION

SEDIMENT SAMPLE LOCATION NOT SUBMITTED FOR LABORATORY ANALYSIS.



PROJECT:

90 Bridge Street

Weymouth, Massachusetts

TITLE:

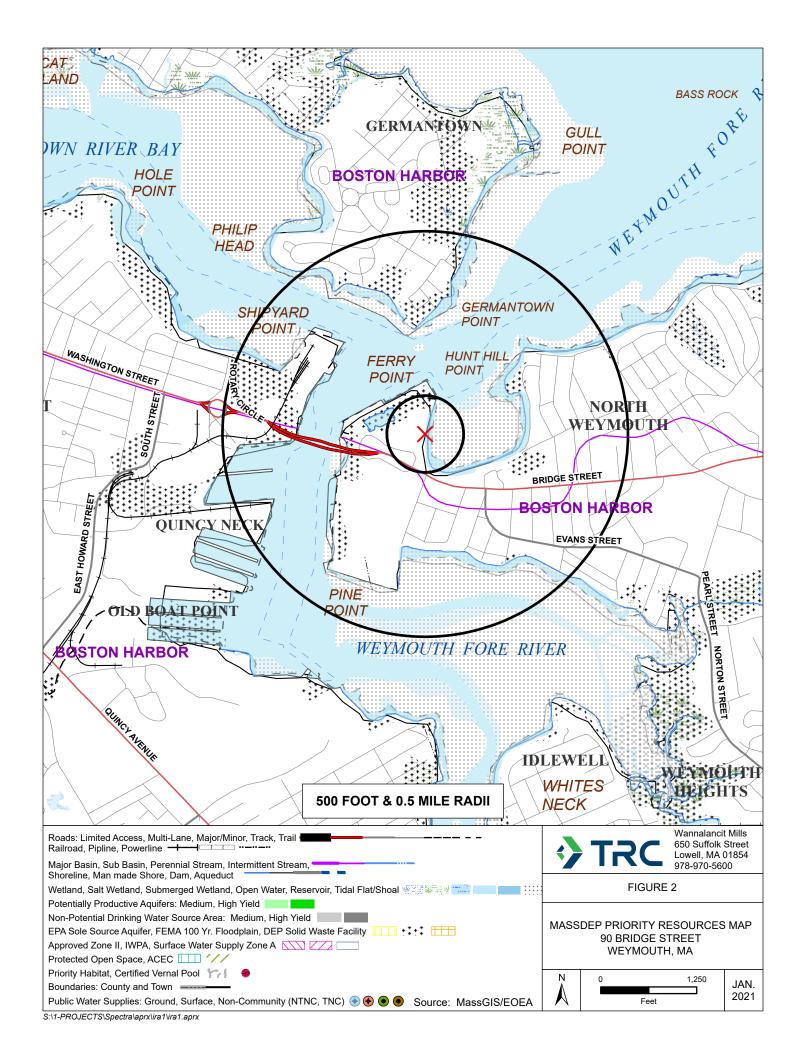
#### SEDIMENT SAMPLING LOCATION MAP

DRAWN BY:	MAN	PROJ NO.:	414883
CHECKED BY:	GP		
APPROVED BY:	JD	FIGURE 1	
DATE:	JAN. 2021		



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sediment\_sampling\_2021\_01\_11.dw



### **TABLE**

#### Table 1 Summary of Analytical Results for Sediment Samples 90 Bridge Street Weymouth, Massachusetts

		Sa	mple Location:	SL1-01	SL1-02	SL1-03	SL1-04	SL1-05	SL1-06	SL	1-07	SL1-08	SL1-08-E2	SL1-0	08-N2	SL1-08-W2	SL1-09	SL1-10	SL2-01	SL2-02	SL2-03	SL2-04	<u> </u>
			Sample Name:	SL1-1 (0-0.5)	SL1-2 (0-0.5)	SL1-3 (0-0.5)	SL1-4 (0-0.5)	SL1-5 (0-0.5)	SL1-6 (0-0.5)	SL1-7 (0-0.5)	DUP-1	SL1-8 (0-0.5)	SL1-8-E2 0-0.5	SL1-8-N2 0-0.5	DUP1	SL1-8-W2 0-0.5	SL1-9 (0-0.5)	SL1-10 (0-0.5)	SL2-1 (0-0.5)	SL2-2 (0-0.5)	SL2-3 (0-0.5)	SL2-4 (0-0.5)	DUP-2
		I	Lab Sample ID:	L2050541-12	L2050541-13	L2050541-14	L2050541-15	L2050541-16	L2050541-17	L2050541-18	L2050541-42	L2050541-19	L2057799-06	L2057799-04	L2057799-01	L2057799-07	L2050541-20	L2050541-21	L2050541-22	L2050541-23	L2050541-24	L2050541-25 L20	2050541-43
			Sample Depth:	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft						
			Sample Date:	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020 11	1/13/2020
Analysis	Analyte	Unit	S-1/GW-3								Field Dup				Field Dup							F	Field Dup
EPH																							
	C9-C18 Aliphatics	mg/kg	1,000	8.95 U	8.58 U	9.38 U	8.52 U	8.16 U	7.90 U	8.11 U	NA	7.50 U	NA	NA	NA	NA	7.57 U	10.1 U	10.4 U	11.6 U	11.6 U	8.57 U	NA
	C19-C36 Aliphatics	mg/kg	3,000	8.95 U	8.58 U	9.38 U	8.52 U	8.16 U	7.90 U	8.11 U	NA	7.50 U	NA	NA	NA	NA	7.57 U	10.1 U	27.6	14.8	11.6 U	8.57 U	NA
	C11-C22 Aromatics	mg/kg	1,000	14.5	8.58 U	14.4	14.0	8.16 U	7.90 U	9.62	NA	7.50 U	NA	NA	NA	NA	7.57 U	62.2	34.1	30.9	11.6 U	8.57 U	NA
PAHs																							
	Naphthalene	mg/kg	500	0.0418	0.00525	0.0102	0.0147	0.0229	0.0320	0.0168	0.0287	0.0154	NA	NA	NA	NA	0.0152	0.0156	0.0400	0.0383	0.0453	0.00702 0.0	.00530 U
	2-Methylnaphthalene	mg/kg	300	0.0295	0.00686	0.0198	0.0349	0.0286	0.0205	0.0301	0.0614	0.0279	NA	NA	NA	NA	0.0330	0.0236	0.1	0.0753	0.0684	0.0111 0.0	.00744
	2-Chloronaphthalene	mg/kg	NS	0.00541 U	0.00525 U	0.00548 U	0.00502 U	0.00630	0.00462 U	0.00481 U	0.00442 U	0.00443 U	NA	NA	NA	NA	0.00467 U	0.00593 U	0.00598 U	0.00662 U	0.00679 U	0.00524 U 0.0	.00530 L
	Acenaphthylene	mg/kg	10	0.0516	0.0497	0.0654	0.0156	0.0233	0.00922	0.00770	0.00947	0.00604	NA	NA	NA	NA	0.00467 U	0.0128	0.14	0.0316	0.0198	0.00524 U <b>0.</b> 0	.00852
	Acenaphthene	mg/kg	1,000	0.0716	0.00525 U	0.00548 U	0.00502 U	0.0235	0.00742	0.00577	0.00937	0.00443 U	NA	NA	NA	NA	0.00467 U	0.00593 U	0.0166	0.0133	0.0156	0.00524 U 0.0	.00530 U
	Fluorene	mg/kg	1,000	0.0545	0.00525 U	0.00966	0.00502 U	0.0197	0.00552	0.00630	0.00614	0.00443 U	NA	NA	NA	NA	0.00467 U	0.00593 U	0.0193	0.0139	0.0157	0.00524 U 0.0	.00530 U
	Phenanthrene	mg/kg	500	0.466	0.0826	0.153	0.106	0.142	0.0869	0.126	0.223	0.0542	NA	NA	NA	NA	0.0822	0.0864	0.392	0.186	0.22	0.0239 0	0.0269
	Anthracene	mg/kg	1,000	0.134	0.0387	0.0594	0.0183	0.0479	0.0259	0.0144	0.0268	0.00886	NA	NA	NA	NA	0.00796	0.0182	0.134	0.0628	0.0540	0.00524 U <b>0.</b> 0	.00752
	Fluoranthene	mg/kg	1,000	0.829	0.305	0.386	0.103	0.238	0.122	0.114	0.268	0.0412	NA	NA	NA	NA	0.0495	0.128	1.21	0.418	0.241	0.0274 0	0.0585
	Pyrene	mg/kg	1,000	0.62	0.241	0.317	0.108	0.193	0.0968	0.101	0.251	0.0372	NA	NA	NA	NA	0.0627	0.104	0.989	0.321	0.207	0.0240 0	0.0491
	Benzo(a)anthracene	mg/kg	7	0.422	0.186	0.235	0.0626	0.128	0.0757	0.0662	0.146	0.0261	NA	NA	NA	NA	0.0369	0.0613	0.669	0.199	0.127	0.0153 0	0.0332
	Chrysene	mg/kg	70	0.43	0.182	0.256	0.0983	0.16	0.103	0.116	0.157	0.0507	NA	NA	NA	NA	0.0661	0.103	0.84	0.293	0.179	0.0248 0	0.0379
	Benzo(b)fluoranthene	mg/kg	7	0.404	0.166	0.213	0.0726	0.167	0.0974	0.0955	0.152	0.0391	NA	NA	NA	NA	0.0500	0.0967	0.846	0.321	0.139		0.0512
	Benzo(k)fluoranthene	mg/kg	70	0.32	0.149	0.192	0.0475	0.132	0.0566	0.0506	0.0994	0.0205	NA	NA	NA	NA	0.0224	0.0685	0.633	0.185	0.107	0.0149 0	0.0274
	Benzo(a)pyrene	mg/kg	2	0.403	0.18	0.23	0.0672	0.152	0.0617	0.0698	0.122	0.0265	NA	NA	NA	NA	0.0381	0.0777	0.789	0.249	0.13	0.0175 0	0.0351
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	0.298	0.123	0.145	0.0501	0.133	0.0491	0.0626	0.0996	0.0208	NA	NA	NA	NA	0.0314	0.0736	0.658	0.215	0.104		0.0324
	Dibenzo(a,h)anthracene	mg/kg	0.7	0.0860	0.0280	0.0376	0.0170	0.0394	0.0136	0.0178	0.0253	0.00783	NA	NA	NA	NA	0.0144	0.0179	0.147	0.0506	0.0319	0.00524 U <b>0.</b> 0	.00825
	Benzo(ghi)perylene	mg/kg	1,000	0.256	0.114	0.141	0.0596	0.127	0.0477	0.0674	0.101	0.0253	NA	NA	NA	NA	0.0360	0.0855	0.632	0.209	0.108	0.0170 0	0.0333
Metals	total																						<u> </u>
	Antimony	mg/kg	20	2.1 U	2.1 U	2.3 U	2.4	2.2	1.9 U	1.9 U	2.2	1.8 U	NA	NA	NA	NA	1.8 U	2.5 U	2.4 U	2.7 U	2.7 U	2.1 U	2.2 U
	Arsenic	mg/kg	20	11	14	22	30	13	11	18	10	15	NA	NA	NA	NA	18	24	14	15	22	19	15
	Barium	mg/kg	1,000	14	14	12	9.8	17	17	16	20	30	NA	NA	NA	NA	20	17	18	29	40	13	14
	Beryllium	mg/kg	90	0.39 U	0.76	0.60	0.59	0.62	0.58	0.45	0.41	0.54	NA	NA	NA	NA	0.59	0.78	0.60	0.62	0.89	0.42	0.51
	Cadmium	mg/kg	70	0.26 U	0.26 U	0.28 U	0.25 U	0.25 U	0.23 U	0.24 U	0.23 U	0.23 U	NA	NA	NA	NA	0.22 U	0.31 U	0.30 U	0.34 U	0.34 U	0.26 U	0.28 L
	Chromium	mg/kg	100	13	20	11	11	16	18	30	17	250	28.7	13.2	16.4	18.4	13	21	18	32	43	14	12
	Lead	mg/kg	200	51	48	33	50	47	58	30	25	53	NA	NA	NA	NA	54	67	47	78	100	57	40
	Mercury	mg/kg	20	0.107 U	0.096 U	0.102 U	0.098 U	0.103 U	0.081 U	0.083 U	0.084 U	0.088 U	NA	NA	NA	NA	0.084 U	0.100 U	0.126 U	0.198	0.221	0.103 U	0.100 L
	Nickel	mg/kg	600	13	47	21	100	46	77	6,100	1,000	2,100	NA	NA	NA	NA	60	24	41	93	64	28	34
	Selenium	mg/kg	400	2.6 U	2.6 U	2.8 U	2.5 U	2.5 U	2.3 U	2.4 U	2.3 U	2.3 U	NA	NA	NA	NA	2.2 U	3.1 U	3.0 U	3.4 U	3.4 U	2.6 U	2.8 L
	Silver	mg/kg	100	0.65 U	0.65 U	0.71 U	0.63 U	0.63 U	0.58 U	0.59 U	0.57 U	0.58 U	NA	NA	NA	NA	0.56 U	0.77 U	0.75 U	0.84 U	0.85 U	0.65 U	0.70 L
	Thallium	mg/kg	8	0.52 U	0.52 U	0.57 U	0.50 U	0.50 U	0.47 U	0.47 U	0.45 U	0.46 U	NA	NA	NA	NA	0.45 U	0.62 U	0.60 U	0.67 U	0.68 U	0.52 U	0.56 L
	Vanadium	mg/kg	400	37	300	230	630	160	1,100	13,000	6,000	7,200	NA	NA	NA	NA	450	120	150	1,400	220	61	100
	Zinc	mg/kg	1,000	48	84	50	47	82	59	80	61	72	NA	NA	NA	NA	81	110	73	110	130	53	66
Genera	l Chemistry		Ì																				
	Chromium (VI)	mg/kg	NS	NA	NA	NA	0.932 U	0.957 U	1.54	0.951 U	NA	NA	NA	NA	NA	NA	NA						
					<u> </u>	<u> </u>		· ·		1 1	<u> </u>	<u> </u>								- 1	<u> </u>	<u> </u>	

#### Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

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 the listed S-1/GW-3 standard.

EPH - Extractable Petroleum Hydrocarbons. PAHs - Polycyclic Aromatic Hydrocarbons.

#### Table 1 Summary of Analytical Results for Sediment Samples 90 Bridge Street Weymouth, Massachusetts

										CI 2 10 EE	SL2-10-N5	SL2-10-N10	CI 2	10-S5	SL2-10-W5	SL3-04	SL3-05	SL3-06	SL3-07	SL3-08	SL3-09	SL3-10
		ample Location: Sample Name:	SL2-05 SL2-5 (0-0.			2 <b>-07</b> 7 (0-0.5)	SL2-08 SL2-8 (0-0.5)	SL2-09 SL2-9 (0-0.5)	SL2-10 SL2-10 (0-0.5)	SL2-10-E5 SL2-10-E5 0-0.5	SL2-10-N5 SL2-10-N5 0-0.5		.5SL2-10-S5 0-0.5	DUP2	SL2-10-W5 SL2-10-W5 0-0.5	SL3-4 (0-0.5)	SL3-05 SL3-5 (0-0.5)	SL3-6 (0-0.5)	SL3-07 SL3-7 (0-0.5)	SL3-06 SL3-8 (0-0.5)	SL3-09 SL3-9 (0-0.5)	SL3-10 (0-0.5)
	1	Lab Sample ID:	L2050541-2	,	· ·	0541-28	L2050541-29	L2050541-30	L2050541-31	L2057799-14	L2057799-16	L2100350-01	L2057799-08	L2057799-02	L2057799-11	L2050541-35	L2050541-36	L2050541-37	L2050541-38	L2050541-39	L2050541-40	L2050541-41
	1	Sample Depth:	0-0.5 ft	0-0.5		0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
		Sample Date:	11/13/2020			3/2020	11/13/2020	11/13/2020	11/13/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020
Analysis Analyte	Unit	S-1/GW-3	11/15/202	11/15/2	7020	5/2020	11/13/2020	11, 15, 2020	11/13/2020	12/20/2020	12/20/2020	12/20/2020	12/20/2020	Field Dup	12/20/2020	11/10/2020	11/10/2020	11,10,2020	11/10/2020	11/13/2020	11, 10, 2020	11/13/2020
ЕРН														·								
C9-C18 Aliphatics	mg/kg	1,000	9.35	U 9.78	3 U 8	3.35 U	7.86 U	8.70 U	8.72 U	NA	NA	NA	NA	NA	NA	10.1 U	8.92 U	32.9 U	63.8	10.5 U	27.7 U	8.46 U
C19-C36 Aliphatics	mg/kg	3,000	9.35	U 9.78	8 U 8	3.35 U	7.86 U	8.70 U	8.72 U	NA	NA	NA	NA	NA	NA	13.6	8.92 U	32.9 U	31.1 U	13.9	27.7 U	8.46 U
C11-C22 Aromatics	mg/kg	1,000	9.35	U 18.5	8	3.35 U	7.86 U	8.70 U	38.5	NA	NA	NA	NA	NA	NA	18.3	8.92 U	32.9 U	31.1 U	15.7	46.0	8.46 U
PAHs																						
Naphthalene	mg/kg	500	0.0127	0.0209	0.009	900	0.0176	0.0104	0.00745	NA	NA	NA	NA	NA	NA	0.0170	0.00662	0.0292	0.0156	0.0188	0.0454	0.0109
2-Methylnaphthalene	mg/kg	300	0.0162	0.0297	0.01	147	0.0326	0.0126	0.00708	NA	NA	NA	NA	NA	NA	0.0332	0.0110	0.0506	0.0233	0.0339	0.0604	0.0146
2-Chloronaphthalene	mg/kg	NS	0.00531	U 0.00573	B U 0.004	497 U	0.00461 U	0.00520 U	0.00553 U	NA	NA	NA	NA	NA	NA	0.00568 U	0.00551 U	0.00683 U	0.00633 U	0.00604 U	0.00561 U	0.00482 U
Acenaphthylene	mg/kg	10	0.0148	0.0777	0.005		0.0135	0.00520 U	0.00553 U	NA	NA	NA	NA	NA	NA	0.0174	0.00551 U	0.0343	0.0154	0.0306	0.0142	0.00637
Acenaphthene	mg/kg	1,000	0.00651	0.0267	0.004		0.00461 U	0.00520 U	0.00553 U	NA	NA	NA	NA	NA	NA	0.0105	0.00551 U	0.0101	0.00675	0.00931	0.0152	0.00482 U
Fluorene	mg/kg	1,000	0.00652	0.0478	0.004	497 U	0.00461 U	0.00520 U	0.00553 U	NA	NA	NA	NA	NA	NA	0.0186	0.00551 U	0.0184	0.00825	0.0107	0.0155	0.00482 U
Phenanthrene	mg/kg	500	0.0483	0.611			0.0510	0.0321	0.0206	NA	NA	NA	NA	NA	NA	0.182	0.0258	0.244	0.107	0.183	0.226	0.0497
Anthracene	mg/kg	1,000	0.0144	0.147			0.0176	0.00667	0.00553 U	NA	NA	NA	NA	NA	NA	0.0464	0.00694	0.0465	0.0272	0.0515	0.0336	0.0136
Fluoranthene	mg/kg	1,000	0.0904	0.995			0.0922	0.0616	0.0372	NA	NA	NA	NA	NA	NA	0.372	0.0625	0.502	0.262	0.393	0.435	0.0833
Pyrene	mg/kg	1,000	0.0811	0.812			0.0828	0.0497	0.0323	NA	NA	NA	NA	NA	NA	0.275	0.0489	0.373	0.201	0.314	0.347	0.0686
Benzo(a)anthracene	mg/kg	7	0.0508	0.457			0.0550	0.0307	0.0214	NA	NA	NA	NA	NA	NA	0.183	0.0373	0.251	0.133	0.228	0.178	0.0472
Chrysene	mg/kg	70	0.0647	0.501			0.0713	0.0393	0.0300	NA	NA	NA	NA	NA	NA	0.176	0.0428	0.266	0.143	0.237	0.232	0.0554
Benzo(b)fluoranthene	mg/kg	7	0.0851	0.396			0.0742	0.0436	0.0308	NA	NA	NA	NA	NA	NA	0.193	0.0482	0.327	0.189	0.338	0.198	0.0686
Benzo(k)fluoranthene	mg/kg	70	0.0472	0.283			0.0463	0.0302	0.0216	NA	NA	NA	NA	NA	NA	0.102	0.0328	0.178	0.116	0.176	0.14	0.0404
Benzo(a)pyrene	mg/kg	2	0.0643	0.389			0.0612	0.0357	0.0248	NA	NA	NA	NA	NA	NA	0.132	0.0336	0.22	0.131	0.229	0.139	0.0444
Indeno(1,2,3-cd)Pyrene	mg/kg	7	0.0622	0.274			0.0545	0.0328	0.0228	NA	NA	NA	NA	NA	NA	0.0989	0.0292	0.193	0.115	0.198	0.11	0.0408
Dibenzo(a,h)anthracene	mg/kg	0.7	0.0179	0.0697			0.0146	0.00721	0.00553	NA	NA	NA	NA	NA	NA	0.0260	0.00690	0.0497	0.0255	0.0471	0.0303	0.0104
Benzo(ghi)perylene	mg/kg	1,000	0.0622	0.263	0.03	312	0.0570	0.0327	0.0237	NA	NA	NA	NA	NA	NA	0.101	0.0304	0.197	0.119	0.194	0.109	0.0399
Metals, total	ma o /Ir o	20	2.3	11 2.3	B U	2.0 U	2.1	2.1 U	2.1 U	NA	NA	NA	NA	NA	NA	2.3 U	2.2 U	2.8 U	2.6 U	2.5 U	2.2 U	2.0 U
Antimony Arsenic	mg/kg mg/kg	20	16	24		2.0	2.1	8.0	43	14.9	77.6	8.79	16.3	24.4	17.8	10	9.9	15	2.0	12	12	5.1
Barium	mg/kg	1,000	21	23		14	19	6.3	13	NA	NA	NA	NA NA	NA	NA	17	9.9	31	30	32	18	6.7
Bervllium	mg/kg	90	0.60	0.72		0.54	0.55	0.39 U	0.59	NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.52	0.48	0.77	0.77	0.58	0.45	0.38 U
Cadmium	mg/kg	70	0.29			0.25 U	0.23 U	0.26 U	0.27 U	NA	NA NA	NA	NA NA	NA NA	NA NA	0.29 U	0.27 U	0.35 U	0.33 U	0.31 U	0.28 U	0.25 U
Chromium	mg/kg	100	24	24	+ - +	14	28	10	13	NA	NA NA	NA	NA NA	NA	NA NA	20	13	40	37	37	18	8.0
Lead	mg/kg	200	580	100	·	31	40	22	42	NA	NA	NA	NA	NA	NA	29	29	74	55	52	37	13
Mercury	mg/kg	20	0.098			095 U	0.076 U	0.110 U	0.100 U	NA	NA	NA	NA	NA	NA	0.107 U	0.092 U	0.206	0.167	0.191	0.101 U	0.086 U
Nickel	mg/kg	600	170	94		32	40	17	45	NA	NA	NA	NA	NA	NA	40	78	46	28	24	19	11
Selenium	mg/kg	400	2.9	U 2.9		2.5 U	2.3 U	2.6 U	2.7 U	NA	NA	NA	NA	NA	NA	2.9 U	2.7 U	3.5 U	3.3 U	3.1 U	2.8 U	2.5 U
Silver	mg/kg	100	0.72	U 0.72		0.62 U	0.58 U	0.65 U	0.67 U	NA	NA	NA	NA	NA	NA	0.72 U	0.68 U	0.88 U	0.82 U	0.78 U	0.70 U	0.63 U
Thallium	mg/kg	8	0.29	U 0.58	3 U 0	0.50 U	0.46 U	0.52 U	0.54 U	NA	NA	NA	NA	NA	NA	0.57 U	0.54 U	0.70 U	0.65 U	0.63 U	0.56 U	0.50 U
Vanadium	mg/kg	400	480	410	) 2	200	110	49	97	NA	NA	NA	NA	NA	NA	140	310	180	100	120	80	23
Zinc	mg/kg	1,000	190	110		74	120	81	150	NA	NA	NA	NA	NA	NA	59	63	84	84	81	52	21
General Chemistry																						
Chromium (VI)	mg/kg	NS	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

#### Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

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 the listed S-1/GW-3 standard.

EPH - Extractable Petroleum Hydrocarbons.
PAHs - Polycyclic Aromatic Hydrocarbons.

# APPENDIX A XRF SCREENING RESULTS

# Appendix A XRF Screening Results 90 Bridge Street Weymouth, Massachusetts

												cymouti	.,			
Date	Time	Reading	Mode Elap	sed	ID	<u>As</u>	As +/-	- Ave	<u>Cr</u>	Cr +/-	Ave Pass/Fai	I Live Time TI	nstrument Model	Tube Anode	Unit	LBP Result LPB Concer LPB Error Count Rate Resolution Peak 1 Peak 2 Cal Check Status
12/28/2020	10:20:46	#1	Cal Che 1	4.77	Std.							11.76	512345 Delta Premium	Ta	%	61425 150 320 870 Passed
12/28/2020	10:22:57	#2	Soil 1	9.23	NIST 2710	671	20		ND		PASS	14.27	512345 Delta Premium	Ta	PPM	
12/28/2020	10:24:58	#3	Soil 1	9.15	NIST 2711A	115	9		68	19	PASS	14.02	512345 Delta Premium	Ta	PPM	
12/28/2020	10:26:05	#4	Soil 1	9.52	Blank	ND			ND		PASS	15.59	512345 Delta Premium	Ta	PPM	
12/28/2020	13:04:52	#5	Soil	19.5	SL1-8R (Spot shot)	15	2		176	33	PASS	15.66	512345 Delta Premium	Ta	PPM	
12/28/2020	13:24:55	#6	Soil 1	9.16	SL1-8R 0-0.5'	16.6	2		182	22	PASS	14	512345 Delta Premium	Ta	PPM	
12/28/2020	13:26:06	#7	Soil 1	9.28	SL1-8R 0-0.5' D	24	2		150	25	166 PASS	14.5	512345 Delta Premium	Ta	PPM	
12/28/2020	13:28:02	#8 :	Soil 1	9.16	SL1-8-N2 0-0.5'	47	3		240	24	PASS	13.99	512345 Delta Premium	Та	PPM	
12/28/2020	13:29:30	#9	Soil	19	SL1-8-N2 0-0.5' D	22	2		99	19	<b>170</b> PASS	13.4	512345 Delta Premium	Ta	PPM	
12/28/2020	13:31:29	#10	Soil 1	9.24	SL1-8-S2 0-0.5'	16	2		78	21	PASS	14.31	512345 Delta Premium	Та	PPM	
12/28/2020	13:33:05	#11	Soil 1	9.23	SL1-8-S2 0-0.5' D	20	2		99	23	88.5 PASS	14.3	512345 Delta Premium	Та	PPM	
12/28/2020	13:34:23	#12	Soil 1	9.17	SL1-8-E2 0-0.5'	20.9	2		281	25	PASS	14.08	512345 Delta Premium	Та	PPM	
12/28/2020	13:35:30	#13	Soil 1	9.17	SL1-8-E2 0-0.5' D	25	2		137	21	<b>209</b> PASS	14.11	512345 Delta Premium	Та	PPM	
12/28/2020	13:37:05	#14	Soil 1	9.26	SL1-8-W2 0-0.5'	33	3		209	32	PASS	14.26	512345 Delta Premium	Ta	PPM	
12/28/2020	13:38:16	#15	Soil 1	9.23	SL1-8-W2 0-0.5' D	83	4		182	31	<b>196</b> PASS	14.09	512345 Delta Premium	Ta	PPM	
12/28/2020	14:06:01	#16	Soil 1	9.11	SL2-10 Fire Brick	10.5	1.6		119	20	PASS	13.91	512345 Delta Premium	Ta	PPM	
12/28/2020	14:07:41	#17	Soil 1	9.22	SL2-10 Fire Brick (Fresh break)	ND			155	20	PASS	14.42	512345 Delta Premium	Ta	PPM	
12/28/2020	14:10:01	#18	Soil 1	9.26	SL2-10 Red Clay Brick	7	2		81	23	PASS	14.48	512345 Delta Premium	Ta	PPM	
12/28/2020	14:11:42	#19	Soil 1	9.49	SL2-10 Clinkers	ND			118	33	PASS	15.49	512345 Delta Premium	Ta	PPM	
12/28/2020	14:13:35	#20	Soil 1	9.28	SL2-10 Clinkers	8.7	1.9		221	28	PASS	14.5	512345 Delta Premium	Ta	PPM	
12/28/2020	14:20:25	#21	Soil 1	8.91	SL2-10-S5 0-0.5'	11.6	1.5		ND		PASS	13.17	512345 Delta Premium	Ta	PPM	
12/28/2020		#22		8.98	SL2-10-S5 0-0.5' D	10.7	1.6	11.2	ND		PASS	13.37	512345 Delta Premium	Ta	PPM	
12/28/2020	14:26:51	#23	Soil 1	9.06	SL2-10-S10 0-0.5'	22	2		76	20	PASS	13.56	512345 Delta Premium	Ta	PPM	
12/28/2020	14:29:42	#24	Soil 1	9.12	SL2-10-S10 0-0.5' D	26	2	24	106	20	PASS	13.79	512345 Delta Premium	Ta	PPM	
12/28/2020			Soil 1	9.08	SL2-10-S15 0-0.5'	30	3		65	20	PASS	13.62	512345 Delta Premium	Ta	PPM	
12/28/2020				8.87	SL2-10-S15 0-0.5' D	18	1.8	24	ND		PASS	12.87	512345 Delta Premium	Та	PPM	
12/28/2020				9.25	SL2-10-W5 0-0.5'	37	3		ND		PASS	14.43	512345 Delta Premium	Та	PPM	
12/28/2020			Soil	19.3	SL2-10-W5 0-0.5' D	29	3	33	ND		PASS	14.63	512345 Delta Premium	Ta	PPM	
12/28/2020	14:48:08	#29	Soil 1	9.24	SL2-10-W10 0-0.5'	28	2		84	22	PASS	14.29	512345 Delta Premium	Ta	PPM	
12/28/2020	14:49:05	#30		9.33	SL2-10-W10 0-0.5' D	15	3	21.5	ND		PASS	14.59	512345 Delta Premium	Та	PPM	
12/28/2020				9.37	SL2-10-W15 0-0.5'	31	5		ND		PASS	14.65	512345 Delta Premium		PPM	
12/28/2020				9.42	SL2-10-W15 0-0.5' D	20	2	25.5	ND		PASS	15.2	512345 Delta Premium		PPM	
12/28/2020				19.1	SL2-10-E5 0-0.5'	19.2			ND		PASS	13.82			PPM	
12/28/2020				9.09	SL2-10-E5 0-0.5' D	15.9		17.6	178	22	PASS	13.68	512345 Delta Premium		PPM	
12/28/2020				9.12	SL2-10-E10 0-0.5'	13.2			ND		PASS	13.86	512345 Delta Premium	Та	PPM	
12/28/2020				9.14	SL2-10-E10 0-0.5' D	16.7	2	15	ND		PASS	13.9	512345 Delta Premium		PPM	
12/28/2020				9.16	SL2-10-N5 0-0.5'	18	2		ND		PASS	13.99	512345 Delta Premium		PPM	
12/28/2020				8.98	SL2-10-N5 0-0.5' D		1.9	21	ND		PASS	13.32	512345 Delta Premium		PPM	
12/28/2020				9.08	SL2-10-N10 0-0.5'		1.7		65	18	PASS	13.69	512345 Delta Premium		PPM	
12/28/2020				9.13	SL2-10-N10 0-0.5' D			11.1			PASS	13.82	512345 Delta Premium		PPM	
12/28/2020				8.98	SL2-10-N15 0-0.5'		1.7		84	18	PASS	13.25	512345 Delta Premium		PPM	
12/28/2020				9.01	SL2-10-N15 0-0.5' D			9.2	65	18	PASS	13.38	512345 Delta Premium		PPM	
12/28/2020				9.12	SL1-8 Fire Brick		1.5		219	21	PASS	13.93	512345 Delta Premium		PPM	
12/28/2020				9.36	SL1-8 Clinkers	ND			212	37	PASS	14.78	512345 Delta Premium		PPM	
12, 20, 2020	13.10.20		1	2.50	SEE S CHIRCIS				-14	3,	17.55	17.70	Jaza ia Beita i reilialii	1 4		

16.36 512345 Delta Premium Ta

PPM

0.65 SL1-8 Wire Scrap 26 Chromium plated wire is almost 12% Cr

26 4

**118639** 1877

PASS

19.65

Soil

12/28/2020 15:18:56 #45

# APPENDIX B LABORATORY ANALYTICAL REPORTS



#### ANALYTICAL REPORT

Lab Number: L2050541

Client: TRC Environmental Consultants

Wannalancit Mills 650 Suffolk Street

Lowell, MA 01854

ATTN: James Doherty Phone: (978) 656-3680

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883 Report Date: 12/04/20

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

**Lab Number:** L2050541 **Report Date:** 12/04/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2050541-01	SW-1	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:00	11/13/20
L2050541-02	SW-2	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:08	11/13/20
L2050541-03	SW-3	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:11	11/13/20
L2050541-04	SW-4	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:37	11/13/20
L2050541-05	SW-5	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:40	11/13/20
L2050541-06	SW-6	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:44	11/13/20
L2050541-07	SW-7	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:48	11/13/20
L2050541-08	SW-8	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:18	11/13/20
L2050541-09	SW-9	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:22	11/13/20
L2050541-10	SW-10	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:26	11/13/20
L2050541-11	DUP-11	WATER	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:41	11/13/20
L2050541-12	SL1-1 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:00	11/13/20
L2050541-13	SL1-2 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:32	11/13/20
L2050541-14	SL1-3 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:52	11/13/20
L2050541-15	SL1-4 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:45	11/13/20
L2050541-16	SL1-5 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:50	11/13/20
L2050541-17	SL1-6 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:20	11/13/20
L2050541-18	SL1-7 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:05	11/13/20
L2050541-19	SL1-8 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:15	11/13/20
L2050541-20	SL1-9 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:30	11/13/20
L2050541-21	SL1-10 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 11:24	11/13/20
L2050541-22	SL2-1 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:05	11/13/20
L2050541-23	SL2-2 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:45	11/13/20
P2050521224	SL2-3 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:48	11/13/20



Alpha			Sample	Serial_N Collection	o:12042011:31
Sample ID	Client ID	Matrix	Location	Date/Time	Receive Date
L2050541-25	SL2-4 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:50	11/13/20
L2050541-26	SL2-5 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:35	11/13/20
L2050541-27	SL2-6 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:35	11/13/20
L2050541-28	SL2-7 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:30	11/13/20
L2050541-29	SL2-8 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:00	11/13/20
L2050541-30	SL2-9 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:15	11/13/20
L2050541-31	SL2-10 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:11	11/13/20
L2050541-32	SL3-1 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:35	11/13/20
L2050541-33	SL3-2 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 15:30	11/13/20
L2050541-34	SL3-3 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 15:00	11/13/20
L2050541-35	SL3-4 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:55	11/13/20
L2050541-36	SL3-5 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:51	11/13/20
L2050541-37	SL3-6 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:40	11/13/20
L2050541-38	SL3-7 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 15:10	11/13/20
L2050541-39	SL3-8 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:33	11/13/20
L2050541-40	SL3-9 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:11	11/13/20
L2050541-41	SL3-10 (0-0.5')	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 14:09	11/13/20
L2050541-42	DUP-1	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 12:06	11/13/20
L2050541-43	DUP-2	SEDIMENT	6 BRIDGE STREET, WEYMOUTH, MA	11/13/20 13:51	11/13/20



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

#### **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 af	firmative response to questions A through F is required for "Presumptive Certainty" status	
Α	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
В	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
С	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 res	sponse 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
Н	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

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



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

#### **Case Narrative**

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.	



**Project Name: ENBRIDGE WEYMOUTH COMPRESSOR** Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

#### Case Narrative (continued)

MCP Related Narratives

Sample Receipt

At the client's request, the collection date was changed on all samples.

PAHs by SIM

L2050541-22, -32, and -33: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

In reference to question H:

The WG1434890-2 LCS recovery, associated with L2050541-26 and -32 through -43, is outside the individual acceptance criteria for naphthalene (39%); however, the MS/MSD recoveries are within the method criteria. The results of the associated samples are reported. The LCS/LCSD RPD is above the acceptance criteria for naphthalene (31%).

The WG1434849-5 MS recoveries, performed on L2050541-16, are outside the acceptance criteria for naphthalene (37%) and phenanthrene (38%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the native sample.

In reference to question I:

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

**EPH** 

L2050541-33, -34, -37, -38, and -40: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

In reference to question I:

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

**Dissolved Metals** 



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

#### Case Narrative (continued)

L2050541-01 through -11: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the high concentrations of non-target elements.

In reference to question G:

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

#### **Total Metals**

In reference to question G:

L2050541-12 through -43: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG1438827-4/-5 MS/MSD recoveries, performed on L2050541-16, are outside the acceptance criteria for chromium (MSD 130%) and vanadium (MS 269%). Re-analysis of the MS/MSD yielded unacceptable recoveries for chromium and vanadium >125%. The LCS recoveries are acceptable; therefore, no further action was taken. The MS/MSD RPD for vanadium (37%) is above the acceptance criteria.

The WG1438827-7/-8 MS/MSD recoveries, performed on L2050541-26, are outside the acceptance criteria for lead (0%/0%), nickel (MSD 0%), vanadium (MS 0%), and zinc (0%/18%). Re-analysis of the MS yielded unacceptable recoveries of <30%, but the sample detections are above the RL. The LCS recoveries are acceptable; therefore, no further action was taken. The MS/MSD RPD for nickel (38%) is above the acceptance criteria.

The WG1438827-7/-8 MS/MSD recoveries, performed on L2050541-26, are outside the acceptance criteria for nickel (MS 35%) and vanadium (MSD 55%). Re-analysis of the MS/MSD yielded unacceptable recoveries in the range of 30-74%. The LCS recoveries are acceptable; therefore, no further action was taken. The WG1438828-4/-5 MS/MSD recoveries, performed on L2050541-16, are outside the acceptance criteria for mercury (134%/134%). Re-analysis of the MS/MSD yielded unacceptable recoveries for mercury in the range of 30-74% or >125%. The LCS recovery is acceptable; therefore, no further action was taken. The WG1438828-6/-7 MS/MSD recoveries, performed on L2050541-26, are outside the acceptance criteria for mercury (131%/133%). Re-analysis of the MS/MSD yielded unacceptable recoveries for mercury >125%.



Project Name:ENBRIDGE WEYMOUTH COMPRESSORLab Number:L2050541Project Number:414883Report Date:12/04/20

#### Case Narrative (continued)

The LCS recovery is acceptable; therefore, no further action was taken.

The WG1438827-9 serial dilution analysis, associated with L2050541-26, had a %D above the acceptance criteria for lead (50%).

#### Non-MCP Related Narratives

Acid Volatile Sulfide w/Simultaneously Extracted Metals

The WG1436715-3 MS recoveries, performed on L2050541-14, are outside the acceptance criteria for copper (130%) and lead (370%); however, the associated LCS recoveries are within overall method allowances. No further action was required.

The WG1436715-4 Laboratory Duplicate RPD for lead (26%), performed on L2050541-14, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

The WG1439657-4 Laboratory Duplicate RPD for sulfide, acid volatile (29%), performed on L2050541-14, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

#### **Total Organic Carbon**

L2050541-14, -17, -24, -29, -34, and -38 were frozen upon receipt in order to arrest the holding time.

The WG1437504-4 MS recoveries for total organic carbon (rep1) (48%) and total organic carbon (rep2) (41%), performed on L2050541-14, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG1437504-3 Laboratory Duplicate RPD for total organic carbon (rep2) (31%), performed on L2050541-14, is outside the acceptance criteria of 25%. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

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:

Title: Technical Director/Representative Date: 12/04/20

600, Senstrom Kelly Stenstrom

#### **QC OUTLIER SUMMARY REPORT**

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

**Project Number:** 414883

Lab Number: L2050541

**Report Date:** 12/04/20

					Recovery/RPD	QC Limits	Associated	Data Quality
Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	(%)	(%)	Samples	Assessment
MCP PAHs	by GC/MS-SIM - Mansfield Lab							
8270D-SIM	Batch QC (L2050541-16)	WG1434849-5	Naphthalene	MSD	37	40-140	12-25,27- 31	potential low bias
8270D-SIM	Batch QC (L2050541-16)	WG1434849-5	Phenanthrene	MSD	38	40-140	12-25,27- 31	potential low bias
8270D-SIM	Batch QC	WG1434890-2	Naphthalene	LCS	39	40-140	26,32-43	potential low bias
8270D-SIM	Batch QC	WG1434890-3	Naphthalene	LCSD	31	30	26,32-43	non-directional bias
Acid Volatil	e Sulfide w/Simultaneously Extracted	Metals - Mansfield Lab						
6020B	Batch QC (L2050541-14)	WG1436715-3	Copper, Total	MS	130	75-125	14,17,24,29, 34,38	potential high bias
6020B	Batch QC (L2050541-14)	WG1436715-3	Lead, Total	MS	370	75-125	14,17,24,29, 34,38	potential high bias
6020B	Batch QC (L2050541-14)	WG1436715-4	Lead, Total	Duplicate	26	20	14,17,24,29, 34,38	non-directional bias
MCP Total	Metals - Mansfield Lab							
6020B	Batch QC (L2050541-16)	WG1438827-4	Vanadium, Total	MS	269	75-125	12-31	potential high bias
6020B	Batch QC (L2050541-16)	WG1438827-5	Chromium, Total	MSD	130	75-125	12-31	potential high bias
6020B	Batch QC (L2050541-16)	WG1438827-5	Vanadium, Total	MSD	37	35	12-31	non-directional bias
6020B	Batch QC (L2050541-26)	WG1438827-7	Lead, Total	MS	0	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-7	Nickel, Total	MS	35	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-7	Vanadium, Total	MS	0	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-7	Zinc, Total	MS	0	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-8	Lead, Total	MSD	0	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-8	Nickel, Total	MSD	0	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-8	Nickel, Total	MSD	38	35	12-31	non-directional bias
6020B	Batch QC (L2050541-26)	WG1438827-8	Vanadium, Total	MSD	55	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-8	Zinc, Total	MSD	18	75-125	12-31	potential low bias
6020B	Batch QC (L2050541-26)	WG1438827-9	Lead, Total	SERDIL	50	20	12-31	non-directional bias
7471B	Batch QC (L2050541-16)	WG1438828-4	Mercury, Total	MS	134	75-125	12-31	potential high bias
7471B	Batch QC (L2050541-16)	WG1438828-5	Mercury, Total	MSD	134	75-125	12-31	potential high bias
7471B	Batch QC (L2050541-26)	WG1438828-6	Mercury, Total	MS	131	75-125	12-31	potential high bias
7471B	Batch QC (L2050541-26)	WG1438828-7	Mercury, Total	MSD	133	75-125	12-31	potential high bias



L2050541

Lab Number:

#### **QC OUTLIER SUMMARY REPORT**

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883 Report Date: 12/04/20

Recovery/RPD QC Limits Associated Data Quality QC Type (%) Assessment **Parameter** (%) **Samples** Method Client ID (Native ID) Lab ID Total Organic Carbon - Mansfield Lab 14,17,24,29, non-directional bias Batch QC (L2050541-14) WG1437504-3 Total Organic Carbon (Rep2) Duplicate 31 25 34,38 Batch QC (L2050541-14) Total Organic Carbon (Rep1) 14,17,24,29, potential low bias WG1437504-4 MS 48 75-125 34,38 Batch QC (L2050541-14) Total Organic Carbon (Rep2) 14,17,24,29, potential low bias MS 75-125 WG1437504-4 41 34,38



## **ORGANICS**



## **SEMIVOLATILES**



12/04/20

Report Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-01 Date Collected: 11/13/20 11:00

Client ID: SW-1 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 15:04

Analyst: GP

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfi	eld Lab					
Naphthalene	222		ng/l	38.5		1
2-Methylnaphthalene	43.9		ng/l	38.5		1
2-Chloronaphthalene	ND		ng/l	38.5		1
Acenaphthylene	ND		ng/l	38.5		1
Acenaphthene	ND		ng/l	38.5		1
Fluorene	ND		ng/l	38.5		1
Phenanthrene	ND		ng/l	38.5		1
Anthracene	ND		ng/l	38.5		1
Fluoranthene	53.8		ng/l	38.5		1
Pyrene	39.8		ng/l	38.5		1
Benz(a)anthracene	ND		ng/l	38.5		1
Chrysene	ND		ng/l	38.5		1
Benzo(b)fluoranthene	ND		ng/l	38.5		1
Benzo(k)fluoranthene	ND		ng/l	38.5		1
Benzo(a)pyrene	ND		ng/l	38.5		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	38.5		1
Dibenz(a,h)anthracene	ND		ng/l	38.5		1
Benzo(ghi)perylene	ND		ng/l	38.5		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	72		30-130	
Pyrene-d10	77		30-130	
Benzo(b)fluoranthene-d12	77		30-130	



12/04/20

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date:

SAMPLE RESULTS

Lab ID: L2050541-02 Date Collected: 11/13/20 11:08

Client ID: SW-2 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 15:38

Analyst: GP

Parameter	Result	Qualifier I	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Manst	field Lab					
Naphthalene	430		ng/l	38.5		1
2-Methylnaphthalene	67.9		ng/l	38.5		1
2-Chloronaphthalene	ND		ng/l	38.5		1
Acenaphthylene	ND		ng/l	38.5		1
Acenaphthene	ND		ng/l	38.5		1
Fluorene	ND		ng/l	38.5		1
Phenanthrene	ND		ng/l	38.5		1
Anthracene	ND		ng/l	38.5		1
Fluoranthene	ND		ng/l	38.5		1
Pyrene	ND		ng/l	38.5		1
Benz(a)anthracene	ND		ng/l	38.5		1
Chrysene	ND		ng/l	38.5		1
Benzo(b)fluoranthene	ND		ng/l	38.5		1
Benzo(k)fluoranthene	ND		ng/l	38.5		1
Benzo(a)pyrene	ND		ng/l	38.5		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	38.5		1
Dibenz(a,h)anthracene	ND		ng/l	38.5		1
Benzo(ghi)perylene	ND		ng/l	38.5		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	67		30-130	
Pyrene-d10	77		30-130	
Benzo(b)fluoranthene-d12	82		30-130	



12/04/20

**Dilution Factor** 

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-03 Date Collected: 11/13/20 11:11

Client ID: SW-3 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

**Parameter** 

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 16:12

Analyst: GP

Faranietei	Nesuit	Qualifici	Ullits	NL.	MIDL	Dilution i actor	
MCP PAHs by GC/MS-SIM - Mans	sfield Lab						
Naphthalene	ND		ng/l	38.5		1	
2-Methylnaphthalene	ND		ng/l	38.5		1	
2-Chloronaphthalene	ND		ng/l	38.5		1	
Acenaphthylene	ND		ng/l	38.5		1	
Acenaphthene	ND		ng/l	38.5		1	
Fluorene	ND		ng/l	38.5		1	
Phenanthrene	ND		ng/l	38.5		1	
Anthracene	ND		ng/l	38.5		1	
Fluoranthene	ND		ng/l	38.5		1	
Pyrene	ND		ng/l	38.5		1	
Benz(a)anthracene	ND		ng/l	38.5		1	
Chrysene	ND		ng/l	38.5		1	
Benzo(b)fluoranthene	ND		ng/l	38.5		1	
Benzo(k)fluoranthene	ND		ng/l	38.5		1	
Benzo(a)pyrene	ND		ng/l	38.5		1	
Indeno(1,2,3-cd)Pyrene	ND		ng/l	38.5		1	
Dibenz(a,h)anthracene	ND		ng/l	38.5		1	
Benzo(ghi)perylene	ND		ng/l	38.5		1	

Qualifier

Result

Units

RL

MDL

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	68	30-130	
Pyrene-d10	75	30-130	
Benzo(b)fluoranthene-d12	76	30-130	



12/04/20

**Dilution Factor** 

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

SAMPLE RESULTS

Result

Lab ID: L2050541-04 Date Collected: 11/13/20 12:37

Client ID: SW-4 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

**Parameter** 

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 16:46

Analyst: GP

Faranietei	Result	Qualifie	Ullits	NL.	MIDL	Dilution ractor	
MCP PAHs by GC/MS-SIM - Mans	sfield Lab						
Naphthalene	ND		ng/l	38.5		1	
2-Methylnaphthalene	ND		ng/l	38.5		1	
2-Chloronaphthalene	ND		ng/l	38.5		1	
Acenaphthylene	ND		ng/l	38.5		1	
Acenaphthene	ND		ng/l	38.5		1	
Fluorene	ND		ng/l	38.5		1	
Phenanthrene	ND		ng/l	38.5		1	
Anthracene	ND		ng/l	38.5		1	
Fluoranthene	93.7		ng/l	38.5		1	
Pyrene	73.7		ng/l	38.5		1	
Benz(a)anthracene	40.9		ng/l	38.5		1	
Chrysene	57.3		ng/l	38.5		1	
Benzo(b)fluoranthene	65.4		ng/l	38.5		1	
Benzo(k)fluoranthene	41.4		ng/l	38.5		1	
Benzo(a)pyrene	49.6		ng/l	38.5		1	
Indeno(1,2,3-cd)Pyrene	43.8		ng/l	38.5		1	
Dibenz(a,h)anthracene	ND		ng/l	38.5		1	
Benzo(ghi)perylene	46.3		ng/l	38.5		1	

Qualifier

Units

RL

MDL

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	69	30-130	
Pyrene-d10	73	30-130	
Benzo(b)fluoranthene-d12	74	30-130	



12/04/20

Report Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

SAMPLE RESULTS

L2050541-05 Date Collected: 11/13/20 12:40

Client ID: SW-5 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Lab ID:

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 17:20

Analyst: GP

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansf	field Lab					
Naphthalene	ND		ng/l	41.7		1
2-Methylnaphthalene	ND		ng/l	41.7		1
2-Chloronaphthalene	ND		ng/l	41.7		1
Acenaphthylene	ND		ng/l	41.7		1
Acenaphthene	ND		ng/l	41.7		1
Fluorene	ND		ng/l	41.7		1
Phenanthrene	ND		ng/l	41.7		1
Anthracene	ND		ng/l	41.7		1
Fluoranthene	48.1		ng/l	41.7		1
Pyrene	ND		ng/l	41.7		1
Benz(a)anthracene	ND		ng/l	41.7		1
Chrysene	ND		ng/l	41.7		1
Benzo(b)fluoranthene	ND		ng/l	41.7		1
Benzo(k)fluoranthene	ND		ng/l	41.7		1
Benzo(a)pyrene	ND		ng/l	41.7		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	41.7		1
Dibenz(a,h)anthracene	ND		ng/l	41.7		1
Benzo(ghi)perylene	ND		ng/l	41.7		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	69		30-130	
Pyrene-d10	72		30-130	
Benzo(b)fluoranthene-d12	73		30-130	



12/04/20

**Dilution Factor** 

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

SAMPLE RESULTS

Lab ID: L2050541-06 Date Collected: 11/13/20 12:44

Client ID: SW-6 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter

Matrix: Water Extraction Method: EPA 3510C

Result

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 17:54

Analyst: GP

Parameter	Result	Qualifier	Units	KL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansf	ield Lab						
Naphthalene	ND		ng/l	38.5		1	
2-Methylnaphthalene	ND		ng/l	38.5		1	
2-Chloronaphthalene	ND		ng/l	38.5		1	
Acenaphthylene	ND		ng/l	38.5		1	
Acenaphthene	ND		ng/l	38.5		1	
Fluorene	ND		ng/l	38.5		1	
Phenanthrene	ND		ng/l	38.5		1	
Anthracene	69.8		ng/l	38.5		1	
Fluoranthene	ND		ng/l	38.5		1	
Pyrene	ND		ng/l	38.5		1	
Benz(a)anthracene	ND		ng/l	38.5		1	
Chrysene	ND		ng/l	38.5		1	
Benzo(b)fluoranthene	ND		ng/l	38.5		1	
Benzo(k)fluoranthene	ND		ng/l	38.5		1	
Benzo(a)pyrene	ND		ng/l	38.5		1	
Indeno(1,2,3-cd)Pyrene	ND		ng/l	38.5		1	
Dibenz(a,h)anthracene	ND		ng/l	38.5		1	
Benzo(ghi)perylene	ND		ng/l	38.5		1	

Qualifier

Units

RL

MDL

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	69	30-130	
Pyrene-d10	76	30-130	
Benzo(b)fluoranthene-d12	79	30-130	



12/04/20

**Dilution Factor** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883 **Report Date:** 

Result

**SAMPLE RESULTS** 

Lab ID: Date Collected: 11/13/20 12:48 L2050541-07

Date Received: Client ID: 11/13/20 SW-7

Sample Location: Field Prep: 6 BRIDGE STREET, WEYMOUTH, MA Not Specified

Sample Depth:

Parameter

Extraction Method: EPA 3510C Matrix: Water

**Extraction Date:** 11/19/20 15:00 Analytical Method: 97,8270D-SIM Analytical Date: 12/01/20 18:28

Analyst: GP

Parameter	Result	Qualifier	Units	KL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfiel	d Lab						
Naphthalene	ND		ng/l	40.0		1	
2-Methylnaphthalene	ND		ng/l	40.0		1	
2-Chloronaphthalene	ND		ng/l	40.0		1	
Acenaphthylene	ND		ng/l	40.0		1	
Acenaphthene	ND		ng/l	40.0		1	
Fluorene	ND		ng/l	40.0		1	
Phenanthrene	ND		ng/l	40.0		1	
Anthracene	ND		ng/l	40.0		1	
Fluoranthene	ND		ng/l	40.0		1	
Pyrene	ND		ng/l	40.0		1	
Benz(a)anthracene	ND		ng/l	40.0		1	
Chrysene	ND		ng/l	40.0		1	
Benzo(b)fluoranthene	ND		ng/l	40.0		1	
Benzo(k)fluoranthene	ND		ng/l	40.0		1	
Benzo(a)pyrene	ND		ng/l	40.0		1	
Indeno(1,2,3-cd)Pyrene	ND		ng/l	40.0		1	
Dibenz(a,h)anthracene	ND		ng/l	40.0		1	
Benzo(ghi)perylene	ND		ng/l	40.0		1	

Qualifier

Units

RL

MDL

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	52	30-130	
Pyrene-d10	55	30-130	
Benzo(b)fluoranthene-d12	54	30-130	



12/04/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-08 Date Collected: 11/13/20 13:18

Client ID: SW-8 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 19:02

Analyst: GP

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mans	field Lab					
Naphthalene	ND		ng/l	41.7		1
2-Methylnaphthalene	ND		ng/l	41.7		1
2-Chloronaphthalene	ND		ng/l	41.7		1
Acenaphthylene	ND		ng/l	41.7		1
Acenaphthene	ND		ng/l	41.7		1
Fluorene	ND		ng/l	41.7		1
Phenanthrene	ND		ng/l	41.7		1
Anthracene	ND		ng/l	41.7		1
Fluoranthene	44.6		ng/l	41.7		1
Pyrene	ND		ng/l	41.7		1
Benz(a)anthracene	ND		ng/l	41.7		1
Chrysene	ND		ng/l	41.7		1
Benzo(b)fluoranthene	ND		ng/l	41.7		1
Benzo(k)fluoranthene	ND		ng/l	41.7		1
Benzo(a)pyrene	ND		ng/l	41.7		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	41.7		1
Dibenz(a,h)anthracene	ND		ng/l	41.7		1
Benzo(ghi)perylene	ND		ng/l	41.7		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	66		30-130	
Pyrene-d10	71		30-130	
Benzo(b)fluoranthene-d12	72		30-130	



12/04/20

**Dilution Factor** 

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

SAMPLE RESULTS

Lab ID: L2050541-09 Date Collected: 11/13/20 13:22

Client ID: SW-9 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter

Matrix: Water Extraction Method: EPA 3510C

Result

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 19:36

Analyst: GP

Parameter	Result	Quaimer	Units	KL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mans	field Lab						
Naphthalene	ND		ng/l	38.5		1	
2-Methylnaphthalene	ND		ng/l	38.5		1	
2-Chloronaphthalene	ND		ng/l	38.5		1	
Acenaphthylene	ND		ng/l	38.5		1	
Acenaphthene	ND		ng/l	38.5		1	
Fluorene	ND		ng/l	38.5		1	
Phenanthrene	ND		ng/l	38.5		1	
Anthracene	ND		ng/l	38.5		1	
Fluoranthene	102		ng/l	38.5		1	
Pyrene	85.3		ng/l	38.5		1	
Benz(a)anthracene	57.4		ng/l	38.5		1	
Chrysene	82.9		ng/l	38.5		1	
Benzo(b)fluoranthene	80.5		ng/l	38.5		1	
Benzo(k)fluoranthene	59.3		ng/l	38.5		1	
Benzo(a)pyrene	67.3		ng/l	38.5		1	
Indeno(1,2,3-cd)Pyrene	53.2		ng/l	38.5		1	
Dibenz(a,h)anthracene	ND		ng/l	38.5		1	
Benzo(ghi)perylene	55.6		ng/l	38.5		1	

Qualifier

Units

RL

MDL

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	64		30-130	
Pyrene-d10	71		30-130	
Benzo(b)fluoranthene-d12	68		30-130	



12/04/20

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Date Collected: 11/13/20 13:26

Report Date:

Lab ID: L2050541-10

Date Received: Client ID: 11/13/20 SW-10 Sample Location: Field Prep: 6 BRIDGE STREET, WEYMOUTH, MA Not Specified

Sample Depth:

Extraction Method: EPA 3510C Matrix: Water

**Extraction Date:** 11/19/20 15:00 Analytical Method: 97,8270D-SIM Analytical Date: 12/01/20 21:17

Analyst: GP

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	Lab					
Naphthalene	207		ng/l	38.5		1
2-Methylnaphthalene	41.8		ng/l	38.5		1
2-Chloronaphthalene	ND		ng/l	38.5		1
Acenaphthylene	ND		ng/l	38.5		1
Acenaphthene	ND		ng/l	38.5		1
Fluorene	ND		ng/l	38.5		1
Phenanthrene	ND		ng/l	38.5		1
Anthracene	ND		ng/l	38.5		1
Fluoranthene	ND		ng/l	38.5		1
Pyrene	ND		ng/l	38.5		1
Benz(a)anthracene	ND		ng/l	38.5		1
Chrysene	ND		ng/l	38.5		1
Benzo(b)fluoranthene	ND		ng/l	38.5		1
Benzo(k)fluoranthene	ND		ng/l	38.5		1
Benzo(a)pyrene	ND		ng/l	38.5		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	38.5		1
Dibenz(a,h)anthracene	ND		ng/l	38.5		1
Benzo(ghi)perylene	ND		ng/l	38.5		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	57	30-130	
Pyrene-d10	67	30-130	
Benzo(b)fluoranthene-d12	72	30-130	



12/04/20

Report Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-11 Date Collected: 11/13/20 12:41

Client ID: DUP-11 Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM Extraction Date: 11/19/20 15:00
Analytical Date: 12/01/20 21:51

Analyst: GP

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfid	eld Lab					
Naphthalene	ND		ng/l	43.5		1
2-Methylnaphthalene	ND		ng/l	43.5		1
2-Chloronaphthalene	ND		ng/l	43.5		1
Acenaphthylene	ND		ng/l	43.5		1
Acenaphthene	ND		ng/l	43.5		1
Fluorene	ND		ng/l	43.5		1
Phenanthrene	ND		ng/l	43.5		1
Anthracene	ND		ng/l	43.5		1
Fluoranthene	48.5		ng/l	43.5		1
Pyrene	ND		ng/l	43.5		1
Benz(a)anthracene	ND		ng/l	43.5		1
Chrysene	ND		ng/l	43.5		1
Benzo(b)fluoranthene	ND		ng/l	43.5		1
Benzo(k)fluoranthene	ND		ng/l	43.5		1
Benzo(a)pyrene	ND		ng/l	43.5		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	43.5		1
Dibenz(a,h)anthracene	ND		ng/l	43.5		1
Benzo(ghi)perylene	ND		ng/l	43.5		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	63		30-130	
Pyrene-d10	69		30-130	
Benzo(b)fluoranthene-d12	68		30-130	



12/04/20

11/17/20

**Report Date:** 

Cleanup Date:

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-12 Date Collected: 11/13/20 13:00

Date Received: Client ID: 11/13/20 SL1-1 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/02/20 14:53

Analyst: GP 74% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	Lab					
Naphthalene	41.8		ug/kg	5.41		1
2-Methylnaphthalene	29.5		ug/kg	5.41		1
2-Chloronaphthalene	ND		ug/kg	5.41		1
Acenaphthylene	51.6		ug/kg	5.41		1
Acenaphthene	71.6		ug/kg	5.41		1
Fluorene	54.5		ug/kg	5.41		1
Phenanthrene	466		ug/kg	5.41		1
Anthracene	134		ug/kg	5.41		1
Fluoranthene	829		ug/kg	5.41		1
Pyrene	620		ug/kg	5.41		1
Benz(a)anthracene	422		ug/kg	5.41		1
Chrysene	430		ug/kg	5.41		1
Benzo(b)fluoranthene	404		ug/kg	5.41		1
Benzo(k)fluoranthene	320		ug/kg	5.41		1
Benzo(a)pyrene	403		ug/kg	5.41		1
Indeno(1,2,3-cd)Pyrene	298		ug/kg	5.41		1
Dibenz(a,h)anthracene	86.0		ug/kg	5.41		1
Benzo(ghi)perylene	256		ug/kg	5.41		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	46	30-130	
Pyrene-d10	54	30-130	
Benzo(b)fluoranthene-d12	52	30-130	



12/04/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-13 Date Collected: 11/13/20 11:32

Client ID: SL1-2 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570

Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10

Analytical Date: 12/02/20 15:27 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date: 11/17/20

Analyst: GP Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield Lab	)					
Naphthalene	5.25		ug/kg	5.25		1
2-Methylnaphthalene	6.86		ug/kg	5.25		1
2-Chloronaphthalene	ND		ug/kg	5.25		1
Acenaphthylene	49.7		ug/kg	5.25		1
Acenaphthene	ND		ug/kg	5.25		1
Fluorene	ND		ug/kg	5.25		1
Phenanthrene	82.6		ug/kg	5.25		1
Anthracene	38.7		ug/kg	5.25		1
Fluoranthene	305		ug/kg	5.25		1
Pyrene	241		ug/kg	5.25		1
Benz(a)anthracene	186		ug/kg	5.25		1
Chrysene	182		ug/kg	5.25		1
Benzo(b)fluoranthene	166		ug/kg	5.25		1
Benzo(k)fluoranthene	149		ug/kg	5.25		1
Benzo(a)pyrene	180		ug/kg	5.25		1
Indeno(1,2,3-cd)Pyrene	123		ug/kg	5.25		1
Dibenz(a,h)anthracene	28.0		ug/kg	5.25		1
Benzo(ghi)perylene	114		ug/kg	5.25		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	42	30-130	
Pyrene-d10	55	30-130	
Benzo(b)fluoranthene-d12	55	30-130	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-14 Date Collected: 11/13/20 11:52

Client ID: SL1-3 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10
Analytical Date: 12/02/20 16:01 Cleanup Method: EPA 3630
Analyst: GP Cleanup Date: 11/17/20

Analyst: GP Percent Solids: 69%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfield La	b						
Naphthalene	10.2		ug/kg	5.48		1	
2-Methylnaphthalene	19.8		ug/kg	5.48		1	
2-Chloronaphthalene	ND		ug/kg	5.48		1	
Acenaphthylene	65.4		ug/kg	5.48		1	
Acenaphthene	ND		ug/kg	5.48		1	
Fluorene	9.66		ug/kg	5.48		1	
Phenanthrene	153		ug/kg	5.48		1	
Anthracene	59.4		ug/kg	5.48		1	
Fluoranthene	386		ug/kg	5.48		1	
Pyrene	317		ug/kg	5.48		1	
Benz(a)anthracene	235		ug/kg	5.48		1	
Chrysene	256		ug/kg	5.48		1	
Benzo(b)fluoranthene	213		ug/kg	5.48		1	
Benzo(k)fluoranthene	192		ug/kg	5.48		1	
Benzo(a)pyrene	230		ug/kg	5.48		1	
Indeno(1,2,3-cd)Pyrene	145		ug/kg	5.48		1	
Dibenz(a,h)anthracene	37.6		ug/kg	5.48		1	
Benzo(ghi)perylene	141		ug/kg	5.48		1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	46	30-130	
Pyrene-d10	52	30-130	
Benzo(b)fluoranthene-d12	46	30-130	



12/04/20

11/17/20

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Cleanup Date:

**Report Date:** 

Lab ID: L2050541-15 Date Collected: 11/13/20 11:45 Date Received: Client ID: 11/13/20

SL1-4 (0-0.5') 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 Analytical Method: 97,8270D-SIM Cleanup Method: EPA 3630 Analytical Date: 12/02/20 16:35

Analyst: GP 77% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	l Lab					
Naphthalene	14.7		ug/kg	5.02		1
2-Methylnaphthalene	34.9		ug/kg	5.02		1
2-Chloronaphthalene	ND		ug/kg	5.02		1
Acenaphthylene	15.6		ug/kg	5.02		1
Acenaphthene	ND		ug/kg	5.02		1
Fluorene	ND		ug/kg	5.02		1
Phenanthrene	106		ug/kg	5.02		1
Anthracene	18.3		ug/kg	5.02		1
Fluoranthene	103		ug/kg	5.02		1
Pyrene	108		ug/kg	5.02		1
Benz(a)anthracene	62.6		ug/kg	5.02		1
Chrysene	98.3		ug/kg	5.02		1
Benzo(b)fluoranthene	72.6		ug/kg	5.02		1
Benzo(k)fluoranthene	47.5		ug/kg	5.02		1
Benzo(a)pyrene	67.2		ug/kg	5.02		1
Indeno(1,2,3-cd)Pyrene	50.1		ug/kg	5.02		1
Dibenz(a,h)anthracene	17.0		ug/kg	5.02		1
Benzo(ghi)perylene	59.6		ug/kg	5.02		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	43	30-130	
Pyrene-d10	55	30-130	
Benzo(b)fluoranthene-d12	50	30-130	



12/04/20

**Report Date:** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-16 Date Collected: 11/13/20 11:50

Date Received: Client ID: 11/13/20 SL1-5 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/02/20 17:09 Cleanup Date: 11/17/20

Analyst: GP 79% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	Lab					
Naphthalene	22.9		ug/kg	4.95		1
2-Methylnaphthalene	28.6		ug/kg	4.95		1
2-Chloronaphthalene	6.30		ug/kg	4.95		1
Acenaphthylene	23.3		ug/kg	4.95		1
Acenaphthene	23.5		ug/kg	4.95		1
Fluorene	19.7		ug/kg	4.95		1
Phenanthrene	142		ug/kg	4.95		1
Anthracene	47.9		ug/kg	4.95		1
Fluoranthene	238		ug/kg	4.95		1
Pyrene	193		ug/kg	4.95		1
Benz(a)anthracene	128		ug/kg	4.95		1
Chrysene	160		ug/kg	4.95		1
Benzo(b)fluoranthene	167		ug/kg	4.95		1
Benzo(k)fluoranthene	132		ug/kg	4.95		1
Benzo(a)pyrene	152		ug/kg	4.95		1
Indeno(1,2,3-cd)Pyrene	133		ug/kg	4.95		1
Dibenz(a,h)anthracene	39.4		ug/kg	4.95		1
Benzo(ghi)perylene	127		ug/kg	4.95		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	51	30-130	
Pyrene-d10	65	30-130	
Benzo(b)fluoranthene-d12	67	30-130	



12/04/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-17 Date Collected: 11/13/20 12:20

Client ID: SL1-6 (0-0.5') Date Received: 11/13/20
Sample Location: 6 RPIDGE STREET WEYMOUTH MA

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570

Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10

Analytical Date: 12/02/20 18:50 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date: 11/17/20

Analyst: GP Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield L	ab					
Naphthalene	32.0		ug/kg	4.62		1
2-Methylnaphthalene	20.5		ug/kg	4.62		1
2-Chloronaphthalene	ND		ug/kg	4.62		1
Acenaphthylene	9.22		ug/kg	4.62		1
Acenaphthene	7.42		ug/kg	4.62		1
Fluorene	5.52		ug/kg	4.62		1
Phenanthrene	86.9		ug/kg	4.62		1
Anthracene	25.9		ug/kg	4.62		1
Fluoranthene	122		ug/kg	4.62		1
Pyrene	96.8		ug/kg	4.62		1
Benz(a)anthracene	75.7		ug/kg	4.62		1
Chrysene	103		ug/kg	4.62		1
Benzo(b)fluoranthene	97.4		ug/kg	4.62		1
Benzo(k)fluoranthene	56.6		ug/kg	4.62		1
Benzo(a)pyrene	61.7		ug/kg	4.62		1
Indeno(1,2,3-cd)Pyrene	49.1		ug/kg	4.62		1
Dibenz(a,h)anthracene	13.6		ug/kg	4.62		1
Benzo(ghi)perylene	47.7		ug/kg	4.62		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	30	30-130	
Pyrene-d10	50	30-130	
Benzo(b)fluoranthene-d12	53	30-130	



**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-18 Date Collected: 11/13/20 12:05

Date Received: Client ID: SL1-7 (0-0.5') 11/13/20

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/02/20 19:24

Cleanup Date: 11/17/20 Analyst: GP 81% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfield	d Lab						
Naphthalene	16.8		ug/kg	4.81		1	
2-Methylnaphthalene	30.1		ug/kg	4.81		1	
2-Chloronaphthalene	ND		ug/kg	4.81		1	
Acenaphthylene	7.70		ug/kg	4.81		1	
Acenaphthene	5.77		ug/kg	4.81		1	
Fluorene	6.30		ug/kg	4.81		1	
Phenanthrene	126		ug/kg	4.81		1	
Anthracene	14.4		ug/kg	4.81		1	
Fluoranthene	114		ug/kg	4.81		1	
Pyrene	101		ug/kg	4.81		1	
Benz(a)anthracene	66.2		ug/kg	4.81		1	
Chrysene	116		ug/kg	4.81		1	
Benzo(b)fluoranthene	95.5		ug/kg	4.81		1	
Benzo(k)fluoranthene	50.6		ug/kg	4.81		1	
Benzo(a)pyrene	69.8		ug/kg	4.81		1	
Indeno(1,2,3-cd)Pyrene	62.6		ug/kg	4.81		1	
Dibenz(a,h)anthracene	17.8		ug/kg	4.81		1	
Benzo(ghi)perylene	67.4		ug/kg	4.81		1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	40	30-130	
Pyrene-d10	60	30-130	
Benzo(b)fluoranthene-d12	63	30-130	



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11/17/20

**Report Date:** 

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-19 Date Collected: 11/13/20 12:15

Client ID: SL1-8 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10
Analytical Date: 12/02/20 19:58 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield La	b					
Naphthalene	15.4		ug/kg	4.43		1
2-Methylnaphthalene	27.9		ug/kg	4.43		1
2-Chloronaphthalene	ND		ug/kg	4.43		1
Acenaphthylene	6.04		ug/kg	4.43		1
Acenaphthene	ND		ug/kg	4.43		1
Fluorene	ND		ug/kg	4.43		1
Phenanthrene	54.2		ug/kg	4.43		1
Anthracene	8.86		ug/kg	4.43		1
Fluoranthene	41.2		ug/kg	4.43		1
Pyrene	37.2		ug/kg	4.43		1
Benz(a)anthracene	26.1		ug/kg	4.43		1
Chrysene	50.7		ug/kg	4.43		1
Benzo(b)fluoranthene	39.1		ug/kg	4.43		1
Benzo(k)fluoranthene	20.5		ug/kg	4.43		1
Benzo(a)pyrene	26.5		ug/kg	4.43		1
Indeno(1,2,3-cd)Pyrene	20.8		ug/kg	4.43		1
Dibenz(a,h)anthracene	7.83		ug/kg	4.43		1
Benzo(ghi)perylene	25.3		ug/kg	4.43		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	42	30-130	
Pyrene-d10	53	30-130	
Benzo(b)fluoranthene-d12	53	30-130	



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11/17/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-20 Date Collected: 11/13/20 12:30

Client ID: SL1-9 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10
Analytical Date: 12/02/20 20:32 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date:
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mans	sfield Lab					
Naphthalene	15.2		ug/kg	4.67		1
2-Methylnaphthalene	33.0		ug/kg	4.67		1
2-Chloronaphthalene	ND		ug/kg	4.67		1
Acenaphthylene	ND		ug/kg	4.67		1
Acenaphthene	ND		ug/kg	4.67		1
Fluorene	ND		ug/kg	4.67		1
Phenanthrene	82.2		ug/kg	4.67		1
Anthracene	7.96		ug/kg	4.67		1
Fluoranthene	49.5		ug/kg	4.67		1
Pyrene	62.7		ug/kg	4.67		1
Benz(a)anthracene	36.9		ug/kg	4.67		1
Chrysene	66.1		ug/kg	4.67		1
Benzo(b)fluoranthene	50.0		ug/kg	4.67		1
Benzo(k)fluoranthene	22.4		ug/kg	4.67		1
Benzo(a)pyrene	38.1		ug/kg	4.67		1
Indeno(1,2,3-cd)Pyrene	31.4		ug/kg	4.67		1
Dibenz(a,h)anthracene	14.4		ug/kg	4.67		1
Benzo(ghi)perylene	36.0		ug/kg	4.67		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	41	30-130	
Pyrene-d10	57	30-130	
Benzo(b)fluoranthene-d12	56	30-130	



12/04/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-21 Date Collected: 11/13/20 11:24

Client ID: SL1-10 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570

Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10

Analytical Date: 12/02/20 21:06 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date: 11/17/20

Analyst: GP Percent Solids: 64%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield L	_ab					
Naphthalene	15.6		ug/kg	5.93		1
2-Methylnaphthalene	23.6		ug/kg	5.93		1
2-Chloronaphthalene	ND		ug/kg	5.93		1
Acenaphthylene	12.8		ug/kg	5.93		1
Acenaphthene	ND		ug/kg	5.93		1
Fluorene	ND		ug/kg	5.93		1
Phenanthrene	86.4		ug/kg	5.93		1
Anthracene	18.2		ug/kg	5.93		1
Fluoranthene	128		ug/kg	5.93		1
Pyrene	104		ug/kg	5.93		1
Benz(a)anthracene	61.3		ug/kg	5.93		1
Chrysene	103		ug/kg	5.93		1
Benzo(b)fluoranthene	96.7		ug/kg	5.93		1
Benzo(k)fluoranthene	68.5		ug/kg	5.93		1
Benzo(a)pyrene	77.7		ug/kg	5.93		1
Indeno(1,2,3-cd)Pyrene	73.6		ug/kg	5.93		1
Dibenz(a,h)anthracene	17.9		ug/kg	5.93		1
Benzo(ghi)perylene	85.5		ug/kg	5.93		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	48	30-130	
Pyrene-d10	60	30-130	
Benzo(b)fluoranthene-d12	56	30-130	



12/04/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-22 Date Collected: 11/13/20 13:05

Client ID: SL2-1 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570

Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10

Analytical Date: 12/02/20 21:40 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date: 11/17/20

Analyst: GP Percent Solids: 63%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield La	b					
Naphthalene	40.0		ug/kg	5.98		1
2-Methylnaphthalene	100		ug/kg	5.98		1
2-Chloronaphthalene	ND		ug/kg	5.98		1
Acenaphthylene	140		ug/kg	5.98		1
Acenaphthene	16.6		ug/kg	5.98		1
Fluorene	19.3		ug/kg	5.98		1
Phenanthrene	392		ug/kg	5.98		1
Anthracene	134		ug/kg	5.98		1
Fluoranthene	1260	E	ug/kg	5.98		1
Pyrene	989		ug/kg	5.98		1
Benz(a)anthracene	669		ug/kg	5.98		1
Chrysene	840		ug/kg	5.98		1
Benzo(b)fluoranthene	846		ug/kg	5.98		1
Benzo(k)fluoranthene	633		ug/kg	5.98		1
Benzo(a)pyrene	789		ug/kg	5.98		1
Indeno(1,2,3-cd)Pyrene	658		ug/kg	5.98		1
Dibenz(a,h)anthracene	147		ug/kg	5.98		1
Benzo(ghi)perylene	632		ug/kg	5.98		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	50	30-130	
Pyrene-d10	63	30-130	
Benzo(b)fluoranthene-d12	58	30-130	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-22 D Date Collected: 11/13/20 13:05

Client ID: SL2-1 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10

Analytical Date: 12/03/20 15:04 Cleanup Method: EPA 3630 Analyst: GP Cleanup Date: 11/17/20

Percent Solids: 63%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield Lab						
Fluoranthene	1210		ug/kg	12.0		2
Surrogate			% Recovery	Qualifier		ptance teria

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	47		30-130
Pyrene-d10	59		30-130
Benzo(b)fluoranthene-d12	56		30-130



12/04/20

11/17/20

**Report Date:** 

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-23 Date Collected: 11/13/20 13:45

Client ID: SL2-2 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10
Analytical Date: 12/02/20 22:14 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 57%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfiel	d Lab						
Naphthalene	38.3		ug/kg	6.62		1	
2-Methylnaphthalene	75.3		ug/kg	6.62		1	
2-Chloronaphthalene	ND		ug/kg	6.62		1	
Acenaphthylene	31.6		ug/kg	6.62		1	
Acenaphthene	13.3		ug/kg	6.62		1	
Fluorene	13.9		ug/kg	6.62		1	
Phenanthrene	186		ug/kg	6.62		1	
Anthracene	62.8		ug/kg	6.62		1	
Fluoranthene	418		ug/kg	6.62		1	
Pyrene	321		ug/kg	6.62		1	
Benz(a)anthracene	199		ug/kg	6.62		1	
Chrysene	293		ug/kg	6.62		1	
Benzo(b)fluoranthene	321		ug/kg	6.62		1	
Benzo(k)fluoranthene	185		ug/kg	6.62		1	
Benzo(a)pyrene	249		ug/kg	6.62		1	
Indeno(1,2,3-cd)Pyrene	215		ug/kg	6.62		1	
Dibenz(a,h)anthracene	50.6		ug/kg	6.62		1	
Benzo(ghi)perylene	209		ug/kg	6.62		1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	48		30-130	
Pyrene-d10	58		30-130	
Benzo(b)fluoranthene-d12	59		30-130	



11/17/20

Cleanup Date:

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-24 Date Collected: 11/13/20 14:48

Date Received: Client ID: 11/13/20 SL2-3 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/02/20 22:48

Analyst: GP 57% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield L	ab					
Naphthalene	45.3		ug/kg	6.79		1
2-Methylnaphthalene	68.4		ug/kg	6.79		1
2-Chloronaphthalene	ND		ug/kg	6.79		1
Acenaphthylene	19.8		ug/kg	6.79		1
Acenaphthene	15.6		ug/kg	6.79		1
Fluorene	15.7		ug/kg	6.79		1
Phenanthrene	220		ug/kg	6.79		1
Anthracene	54.0		ug/kg	6.79		1
Fluoranthene	241		ug/kg	6.79		1
Pyrene	207		ug/kg	6.79		1
Benz(a)anthracene	127		ug/kg	6.79		1
Chrysene	179		ug/kg	6.79		1
Benzo(b)fluoranthene	139		ug/kg	6.79		1
Benzo(k)fluoranthene	107		ug/kg	6.79		1
Benzo(a)pyrene	130		ug/kg	6.79		1
Indeno(1,2,3-cd)Pyrene	104		ug/kg	6.79		1
Dibenz(a,h)anthracene	31.9		ug/kg	6.79		1
Benzo(ghi)perylene	108		ug/kg	6.79		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	44	30-130	
Pyrene-d10	54	30-130	
Benzo(b)fluoranthene-d12	54	30-130	



11/17/20

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-25 Date Collected: 11/13/20 13:50

Client ID: SL2-4 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10
Analytical Date: 12/02/20 23:22 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfi	eld Lab						
Naphthalene	7.02		ug/kg	5.24		1	
2-Methylnaphthalene	11.1		ug/kg	5.24		1	
2-Chloronaphthalene	ND		ug/kg	5.24		1	
Acenaphthylene	ND		ug/kg	5.24		1	
Acenaphthene	ND		ug/kg	5.24		1	
Fluorene	ND		ug/kg	5.24		1	
Phenanthrene	23.9		ug/kg	5.24		1	
Anthracene	ND		ug/kg	5.24		1	
Fluoranthene	27.4		ug/kg	5.24		1	
Pyrene	24.0		ug/kg	5.24		1	
Benz(a)anthracene	15.3		ug/kg	5.24		1	
Chrysene	24.8		ug/kg	5.24		1	
Benzo(b)fluoranthene	22.3		ug/kg	5.24		1	
Benzo(k)fluoranthene	14.9		ug/kg	5.24		1	
Benzo(a)pyrene	17.5		ug/kg	5.24		1	
Indeno(1,2,3-cd)Pyrene	16.3		ug/kg	5.24		1	
Dibenz(a,h)anthracene	ND		ug/kg	5.24		1	
Benzo(ghi)perylene	17.0		ug/kg	5.24		1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	40		30-130	
Pyrene-d10	49		30-130	
Benzo(b)fluoranthene-d12	48		30-130	



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**Report Date:** 

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-26 Date Collected: 11/13/20 13:35

Client ID: SL2-5 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:27
Analytical Date: 11/23/20 19:41 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 70%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield La	ıb					
Naphthalene	12.7		ug/kg	5.31		1
2-Methylnaphthalene	16.2		ug/kg	5.31		1
2-Chloronaphthalene	ND		ug/kg	5.31		1
Acenaphthylene	14.8		ug/kg	5.31		1
Acenaphthene	6.51		ug/kg	5.31		1
Fluorene	6.52		ug/kg	5.31		1
Phenanthrene	48.3		ug/kg	5.31		1
Anthracene	14.4		ug/kg	5.31		1
Fluoranthene	90.4		ug/kg	5.31		1
Pyrene	81.1		ug/kg	5.31		1
Benz(a)anthracene	50.8		ug/kg	5.31		1
Chrysene	64.7		ug/kg	5.31		1
Benzo(b)fluoranthene	85.1		ug/kg	5.31		1
Benzo(k)fluoranthene	47.2		ug/kg	5.31		1
Benzo(a)pyrene	64.3		ug/kg	5.31		1
Indeno(1,2,3-cd)Pyrene	62.2		ug/kg	5.31		1
Dibenz(a,h)anthracene	17.9		ug/kg	5.31		1
Benzo(ghi)perylene	62.2		ug/kg	5.31		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	44	30-130	
Pyrene-d10	56	30-130	
Benzo(b)fluoranthene-d12	58	30-130	



12/04/20

**Report Date:** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

L2050541-27 Date Collected: 11/13/20 13:35

Lab ID: Date Received: Client ID: 11/13/20 SL2-6 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/02/20 23:56 Cleanup Date: 11/17/20

Analyst: GP 67% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	Lab					
Naphthalene	20.9		ug/kg	5.73		1
2-Methylnaphthalene	29.7		ug/kg	5.73		1
2-Chloronaphthalene	ND		ug/kg	5.73		1
Acenaphthylene	77.7		ug/kg	5.73		1
Acenaphthene	26.7		ug/kg	5.73		1
Fluorene	47.8		ug/kg	5.73		1
Phenanthrene	611		ug/kg	5.73		1
Anthracene	147		ug/kg	5.73		1
Fluoranthene	995		ug/kg	5.73		1
Pyrene	812		ug/kg	5.73		1
Benz(a)anthracene	457		ug/kg	5.73		1
Chrysene	501		ug/kg	5.73		1
Benzo(b)fluoranthene	396		ug/kg	5.73		1
Benzo(k)fluoranthene	283		ug/kg	5.73		1
Benzo(a)pyrene	389		ug/kg	5.73		1
Indeno(1,2,3-cd)Pyrene	274		ug/kg	5.73		1
Dibenz(a,h)anthracene	69.7		ug/kg	5.73		1
Benzo(ghi)perylene	263		ug/kg	5.73		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	35	30-130	
Pyrene-d10	51	30-130	
Benzo(b)fluoranthene-d12	52	30-130	



11/17/20

Cleanup Date:

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-28 Date Collected: 11/13/20 13:30

Date Received: Client ID: SL2-7 (0-0.5') 11/13/20 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 Analytical Method: 97,8270D-SIM Cleanup Method: EPA 3630 Analytical Date: 12/03/20 00:30

Analyst: GP 78% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield La	ıb					
Naphthalene	9.00		ug/kg	4.97		1
2-Methylnaphthalene	14.7		ug/kg	4.97		1
2-Chloronaphthalene	ND		ug/kg	4.97		1
Acenaphthylene	5.14		ug/kg	4.97		1
Acenaphthene	ND		ug/kg	4.97		1
Fluorene	ND		ug/kg	4.97		1
Phenanthrene	29.4		ug/kg	4.97		1
Anthracene	6.97		ug/kg	4.97		1
Fluoranthene	54.1		ug/kg	4.97		1
Pyrene	42.5		ug/kg	4.97		1
Benz(a)anthracene	28.6		ug/kg	4.97		1
Chrysene	40.3		ug/kg	4.97		1
Benzo(b)fluoranthene	44.3		ug/kg	4.97		1
Benzo(k)fluoranthene	24.9		ug/kg	4.97		1
Benzo(a)pyrene	34.0		ug/kg	4.97		1
Indeno(1,2,3-cd)Pyrene	30.1		ug/kg	4.97		1
Dibenz(a,h)anthracene	7.36		ug/kg	4.97		1
Benzo(ghi)perylene	31.2		ug/kg	4.97		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	35	30-130	
Pyrene-d10	48	30-130	
Benzo(b)fluoranthene-d12	52	30-130	



12/04/20

**Report Date:** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-29 Date Collected: 11/13/20 14:00

Date Received: Client ID: 11/13/20 SL2-8 (0-0.5') 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/03/20 01:04 Cleanup Date: 11/17/20

Analyst: GP 84% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	Lab					
Naphthalene	17.6		ug/kg	4.61		1
2-Methylnaphthalene	32.6		ug/kg	4.61		1
2-Chloronaphthalene	ND		ug/kg	4.61		1
Acenaphthylene	13.5		ug/kg	4.61		1
Acenaphthene	ND		ug/kg	4.61		1
Fluorene	ND		ug/kg	4.61		1
Phenanthrene	51.0		ug/kg	4.61		1
Anthracene	17.6		ug/kg	4.61		1
Fluoranthene	92.2		ug/kg	4.61		1
Pyrene	82.8		ug/kg	4.61		1
Benz(a)anthracene	55.0		ug/kg	4.61		1
Chrysene	71.3		ug/kg	4.61		1
Benzo(b)fluoranthene	74.2		ug/kg	4.61		1
Benzo(k)fluoranthene	46.3		ug/kg	4.61		1
Benzo(a)pyrene	61.2		ug/kg	4.61		1
Indeno(1,2,3-cd)Pyrene	54.5		ug/kg	4.61		1
Dibenz(a,h)anthracene	14.6		ug/kg	4.61		1
Benzo(ghi)perylene	57.0		ug/kg	4.61		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	48	30-130	
Pyrene-d10	65	30-130	
Benzo(b)fluoranthene-d12	67	30-130	



12/04/20

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Date Collected: 11/13/20 13:15

**Report Date:** 

Lab ID: L2050541-30 Date Received: Client ID: 11/13/20 SL2-9 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 15:10 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 12/03/20 13:56 Cleanup Date: 11/17/20

Analyst: GP 73% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield L	ab					
Naphthalene	10.4		ug/kg	5.20		1
2-Methylnaphthalene	12.6		ug/kg	5.20		1
2-Chloronaphthalene	ND		ug/kg	5.20		1
Acenaphthylene	ND		ug/kg	5.20		1
Acenaphthene	ND		ug/kg	5.20		1
Fluorene	ND		ug/kg	5.20		1
Phenanthrene	32.1		ug/kg	5.20		1
Anthracene	6.67		ug/kg	5.20		1
Fluoranthene	61.6		ug/kg	5.20		1
Pyrene	49.7		ug/kg	5.20		1
Benz(a)anthracene	30.7		ug/kg	5.20		1
Chrysene	39.3		ug/kg	5.20		1
Benzo(b)fluoranthene	43.6		ug/kg	5.20		1
Benzo(k)fluoranthene	30.2		ug/kg	5.20		1
Benzo(a)pyrene	35.7		ug/kg	5.20		1
Indeno(1,2,3-cd)Pyrene	32.8		ug/kg	5.20		1
Dibenz(a,h)anthracene	7.21		ug/kg	5.20		1
Benzo(ghi)perylene	32.7		ug/kg	5.20		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	50	30-130	
Pyrene-d10	57	30-130	
Benzo(b)fluoranthene-d12	54	30-130	



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Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-31 Date Collected: 11/13/20 13:11

Client ID: SL2-10 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 15:10
Analytical Date: 12/03/20 14:30 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date:

Percent Solids: 72%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	l Lab					
Naphthalene	7.45		ug/kg	5.53		1
2-Methylnaphthalene	7.08		ug/kg	5.53		1
2-Chloronaphthalene	ND		ug/kg	5.53		1
Acenaphthylene	ND		ug/kg	5.53		1
Acenaphthene	ND		ug/kg	5.53		1
Fluorene	ND		ug/kg	5.53		1
Phenanthrene	20.6		ug/kg	5.53		1
Anthracene	ND		ug/kg	5.53		1
Fluoranthene	37.2		ug/kg	5.53		1
Pyrene	32.3		ug/kg	5.53		1
Benz(a)anthracene	21.4		ug/kg	5.53		1
Chrysene	30.0		ug/kg	5.53		1
Benzo(b)fluoranthene	30.8		ug/kg	5.53		1
Benzo(k)fluoranthene	21.6		ug/kg	5.53		1
Benzo(a)pyrene	24.8		ug/kg	5.53		1
Indeno(1,2,3-cd)Pyrene	22.8		ug/kg	5.53		1
Dibenz(a,h)anthracene	5.53		ug/kg	5.53		1
Benzo(ghi)perylene	23.7		ug/kg	5.53		1

Surrogate	% Recovery	cceptance Criteria	
2-Methylnaphthalene-d10	38	30-130	
Pyrene-d10	52	30-130	
Benzo(b)fluoranthene-d12	54	30-130	



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**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

**Report Date:** 

Cleanup Date:

Lab ID: L2050541-32 Date Collected: 11/13/20 14:35

Date Received: Client ID: 11/13/20 SL3-1 (0-0.5') 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 11/23/20 21:23

Analyst: GP 68% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	30.7		ug/kg	5.65		1
2-Methylnaphthalene	48.3		ug/kg	5.65		1
2-Chloronaphthalene	ND		ug/kg	5.65		1
Acenaphthylene	68.7		ug/kg	5.65		1
Acenaphthene	26.2		ug/kg	5.65		1
Fluorene	29.4		ug/kg	5.65		1
Phenanthrene	616		ug/kg	5.65		1
Anthracene	148		ug/kg	5.65		1
Fluoranthene	1800	Е	ug/kg	5.65		1
Pyrene	1420	Е	ug/kg	5.65		1
Benz(a)anthracene	842		ug/kg	5.65		1
Chrysene	936		ug/kg	5.65		1
Benzo(b)fluoranthene	1130		ug/kg	5.65		1
Benzo(k)fluoranthene	621		ug/kg	5.65		1
Benzo(a)pyrene	898		ug/kg	5.65		1
Indeno(1,2,3-cd)Pyrene	762		ug/kg	5.65		1
Dibenz(a,h)anthracene	169		ug/kg	5.65		1
Benzo(ghi)perylene	726		ug/kg	5.65		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	49	30-130	
Pyrene-d10	62	30-130	
Benzo(b)fluoranthene-d12	63	30-130	



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30-130

30-130

**Project Name: ENBRIDGE WEYMOUTH COMPRESSOR** Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: D Date Collected: 11/13/20 14:35 L2050541-32

Client ID: Date Received: 11/13/20 SL3-1 (0-0.5') Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Pyrene-d10

Benzo(b)fluoranthene-d12

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 Analytical Method: 97,8270D-SIM Cleanup Method: EPA 3630

Analytical Date: 12/02/20 10:22 Cleanup Date: Analyst: GP 68% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield Lab						
Fluoranthene	1500		ug/kg	11.3		2
Pyrene	1160		ug/kg	11.3		2
Surrogate			% Recovery	Qualifier		eptance riteria
2-Methylnaphthalene-d10			41		:	30-130

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Cleanup Date:

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Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date:

SAMPLE RESULTS

Lab ID: L2050541-33 Date Collected: 11/13/20 15:30

Client ID: SL3-2 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:27
Analytical Date: 11/23/20 21:56 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 64%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield Lab	)					
Naphthalene	104		ug/kg	5.96		1
2-Methylnaphthalene	122		ug/kg	5.96		1
2-Chloronaphthalene	ND		ug/kg	5.96		1
Acenaphthylene	94.1		ug/kg	5.96		1
Acenaphthene	170		ug/kg	5.96		1
Fluorene	130		ug/kg	5.96		1
Phenanthrene	1340	E	ug/kg	5.96		1
Anthracene	336		ug/kg	5.96		1
Fluoranthene	2780	E	ug/kg	5.96		1
Pyrene	2060	E	ug/kg	5.96		1
Benz(a)anthracene	1310	E	ug/kg	5.96		1
Chrysene	1390	E	ug/kg	5.96		1
Benzo(b)fluoranthene	1390	E	ug/kg	5.96		1
Benzo(k)fluoranthene	1090		ug/kg	5.96		1
Benzo(a)pyrene	1280	E	ug/kg	5.96		1
Indeno(1,2,3-cd)Pyrene	1010		ug/kg	5.96		1
Dibenz(a,h)anthracene	248		ug/kg	5.96		1
Benzo(ghi)perylene	969		ug/kg	5.96		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	54	30-130	
Pyrene-d10	66	30-130	
Benzo(b)fluoranthene-d12	65	30-130	



11/18/20

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-33 D Date Collected: 11/13/20 15:30

Client ID: SL3-2 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:27
Analytical Date: 12/02/20 14:19 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 64%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mai	nsfield Lab						
Phenanthrene	1200		ug/kg	29.8		5	
Fluoranthene	2460		ug/kg	29.8		5	
Pyrene	1800		ug/kg	29.8		5	
Benz(a)anthracene	1050		ug/kg	29.8		5	
Chrysene	1290		ug/kg	29.8		5	
Benzo(b)fluoranthene	1270		ug/kg	29.8		5	
Benzo(a)pyrene	1090		ua/ka	29.8		5	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
2-Methylnaphthalene-d10	50		30-130	
Pyrene-d10	57		30-130	
Benzo(b)fluoranthene-d12	58		30-130	



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**Report Date:** 

Cleanup Date:

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-34 Date Collected: 11/13/20 15:00

Date Received: Client ID: 11/13/20 SL3-3 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 11/24/20 12:28

Analyst: GP 60% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield La	ab					
Naphthalene	29.7		ug/kg	6.29		1
2-Methylnaphthalene	60.7		ug/kg	6.29		1
2-Chloronaphthalene	ND		ug/kg	6.29		1
Acenaphthylene	31.0		ug/kg	6.29		1
Acenaphthene	11.9		ug/kg	6.29		1
Fluorene	16.0		ug/kg	6.29		1
Phenanthrene	271		ug/kg	6.29		1
Anthracene	55.0		ug/kg	6.29		1
Fluoranthene	597		ug/kg	6.29		1
Pyrene	464		ug/kg	6.29		1
Benz(a)anthracene	318		ug/kg	6.29		1
Chrysene	321		ug/kg	6.29		1
Benzo(b)fluoranthene	392		ug/kg	6.29		1
Benzo(k)fluoranthene	242		ug/kg	6.29		1
Benzo(a)pyrene	280		ug/kg	6.29		1
Indeno(1,2,3-cd)Pyrene	231		ug/kg	6.29		1
Dibenz(a,h)anthracene	58.7		ug/kg	6.29		1
Benzo(ghi)perylene	245		ug/kg	6.29		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	60	30-130	
Pyrene-d10	69	30-130	
Benzo(b)fluoranthene-d12	69	30-130	



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**Report Date:** 

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883

SAMPLE RESULTS

Lab ID: L2050541-35 Date Collected: 11/13/20 14:55

Client ID: SL3-4 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:27
Analytical Date: 11/24/20 13:01 Cleanup Method: EPA 3630

Analyst: GP Percent Solids: 66%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield L	_ab					
Naphthalene	17.0		ug/kg	5.68		1
2-Methylnaphthalene	33.2		ug/kg	5.68		1
2-Chloronaphthalene	ND		ug/kg	5.68		1
Acenaphthylene	17.4		ug/kg	5.68		1
Acenaphthene	10.5		ug/kg	5.68		1
Fluorene	18.6		ug/kg	5.68		1
Phenanthrene	182		ug/kg	5.68		1
Anthracene	46.4		ug/kg	5.68		1
Fluoranthene	372		ug/kg	5.68		1
Pyrene	275		ug/kg	5.68		1
Benz(a)anthracene	183		ug/kg	5.68		1
Chrysene	176		ug/kg	5.68		1
Benzo(b)fluoranthene	193		ug/kg	5.68		1
Benzo(k)fluoranthene	102		ug/kg	5.68		1
Benzo(a)pyrene	132		ug/kg	5.68		1
Indeno(1,2,3-cd)Pyrene	98.9		ug/kg	5.68		1
Dibenz(a,h)anthracene	26.0		ug/kg	5.68		1
Benzo(ghi)perylene	101		ug/kg	5.68		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	54	30-130	
Pyrene-d10	66	30-130	
Benzo(b)fluoranthene-d12	64	30-130	



12/04/20

11/18/20

**Report Date:** 

Cleanup Date:

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-36 Date Collected: 11/13/20 14:51

Date Received: Client ID: 11/13/20 SL3-5 (0-0.5') 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 Analytical Method: 97,8270D-SIM Cleanup Method: EPA 3630 Analytical Date: 11/24/20 13:35

Analyst: GP 71% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield La	b					
Naphthalene	6.62		ug/kg	5.51		1
2-Methylnaphthalene	11.0		ug/kg	5.51		1
2-Chloronaphthalene	ND		ug/kg	5.51		1
Acenaphthylene	ND		ug/kg	5.51		1
Acenaphthene	ND		ug/kg	5.51		1
Fluorene	ND		ug/kg	5.51		1
Phenanthrene	25.8		ug/kg	5.51		1
Anthracene	6.94		ug/kg	5.51		1
Fluoranthene	62.5		ug/kg	5.51		1
Pyrene	48.9		ug/kg	5.51		1
Benz(a)anthracene	37.3		ug/kg	5.51		1
Chrysene	42.8		ug/kg	5.51		1
Benzo(b)fluoranthene	48.2		ug/kg	5.51		1
Benzo(k)fluoranthene	32.8		ug/kg	5.51		1
Benzo(a)pyrene	33.6		ug/kg	5.51		1
Indeno(1,2,3-cd)Pyrene	29.2		ug/kg	5.51		1
Dibenz(a,h)anthracene	6.90		ug/kg	5.51		1
Benzo(ghi)perylene	30.4		ug/kg	5.51		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	48	30-130	
Pyrene-d10	63	30-130	
Benzo(b)fluoranthene-d12	64	30-130	



12/04/20

**Report Date:** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-37 Date Collected: 11/13/20 14:40

Date Received: Client ID: 11/13/20 SL3-6 (0-0.5') 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 11/24/20 14:09 Cleanup Date: 11/18/20

Analyst: GP 55% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield I	Lab					
Naphthalene	29.2		ug/kg	6.83		1
2-Methylnaphthalene	50.6		ug/kg	6.83		1
2-Chloronaphthalene	ND		ug/kg	6.83		1
Acenaphthylene	34.3		ug/kg	6.83		1
Acenaphthene	10.1		ug/kg	6.83		1
Fluorene	18.4		ug/kg	6.83		1
Phenanthrene	244		ug/kg	6.83		1
Anthracene	46.5		ug/kg	6.83		1
Fluoranthene	502		ug/kg	6.83		1
Pyrene	373		ug/kg	6.83		1
Benz(a)anthracene	251		ug/kg	6.83		1
Chrysene	266		ug/kg	6.83		1
Benzo(b)fluoranthene	327		ug/kg	6.83		1
Benzo(k)fluoranthene	178		ug/kg	6.83		1
Benzo(a)pyrene	220		ug/kg	6.83		1
Indeno(1,2,3-cd)Pyrene	193		ug/kg	6.83		1
Dibenz(a,h)anthracene	49.7		ug/kg	6.83		1
Benzo(ghi)perylene	197		ug/kg	6.83		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	51	30-130	
Pyrene-d10	68	30-130	
Benzo(b)fluoranthene-d12	69	30-130	



11/18/20

Cleanup Date:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-38 Date Collected: 11/13/20 15:10

Client ID: SL3-7 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Ticia Ticp. Not op

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570
Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:27
Analytical Date: 11/24/20 15:51 Cleanup Method: EPA 3630

Analyst: GP
Percent Solids: 59%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield	d Lab					
Naphthalene	15.6		ug/kg	6.33		1
2-Methylnaphthalene	23.3		ug/kg	6.33		1
2-Chloronaphthalene	ND		ug/kg	6.33		1
Acenaphthylene	15.4		ug/kg	6.33		1
Acenaphthene	6.75		ug/kg	6.33		1
Fluorene	8.25		ug/kg	6.33		1
Phenanthrene	107		ug/kg	6.33		1
Anthracene	27.2		ug/kg	6.33		1
Fluoranthene	262		ug/kg	6.33		1
Pyrene	201		ug/kg	6.33		1
Benz(a)anthracene	133		ug/kg	6.33		1
Chrysene	143		ug/kg	6.33		1
Benzo(b)fluoranthene	189		ug/kg	6.33		1
Benzo(k)fluoranthene	116		ug/kg	6.33		1
Benzo(a)pyrene	131		ug/kg	6.33		1
Indeno(1,2,3-cd)Pyrene	115		ug/kg	6.33		1
Dibenz(a,h)anthracene	25.5		ug/kg	6.33		1
Benzo(ghi)perylene	119		ug/kg	6.33		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	46	30-130	
Pyrene-d10	59	30-130	
Benzo(b)fluoranthene-d12	61	30-130	



12/04/20

11/18/20

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883 **Report Date:** 

**SAMPLE RESULTS** 

Lab ID: L2050541-39 Date Collected: 11/13/20 14:33

Date Received: Client ID: 11/13/20 SL3-8 (0-0.5') 6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 11/24/20 16:25

Cleanup Date: Analyst: GP 62% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield L	_ab					
Naphthalene	18.8		ug/kg	6.04		1
2-Methylnaphthalene	33.9		ug/kg	6.04		1
2-Chloronaphthalene	ND		ug/kg	6.04		1
Acenaphthylene	30.6		ug/kg	6.04		1
Acenaphthene	9.31		ug/kg	6.04		1
Fluorene	10.7		ug/kg	6.04		1
Phenanthrene	183		ug/kg	6.04		1
Anthracene	51.5		ug/kg	6.04		1
Fluoranthene	393		ug/kg	6.04		1
Pyrene	314		ug/kg	6.04		1
Benz(a)anthracene	228		ug/kg	6.04		1
Chrysene	237		ug/kg	6.04		1
Benzo(b)fluoranthene	338		ug/kg	6.04		1
Benzo(k)fluoranthene	176		ug/kg	6.04		1
Benzo(a)pyrene	229		ug/kg	6.04		1
Indeno(1,2,3-cd)Pyrene	198		ug/kg	6.04		1
Dibenz(a,h)anthracene	47.1		ug/kg	6.04		1
Benzo(ghi)perylene	194		ug/kg	6.04		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	40	30-130	
Pyrene-d10	71	30-130	
Benzo(b)fluoranthene-d12	74	30-130	



12/04/20

11/18/20

**Report Date:** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883

**SAMPLE RESULTS** 

Lab ID: L2050541-40 Date Collected: 11/13/20 14:11

Date Received: Client ID: 11/13/20 SL3-9 (0-0.5')

6 BRIDGE STREET, WEYMOUTH, MA Sample Location: Field Prep: Not Specified

Sample Depth:

Extraction Method: EPA 3570 Matrix: Sediment **Extraction Date:** 11/16/20 16:27 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 11/24/20 16:59

Cleanup Date: Analyst: GP 68% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfiel	d Lab					
Naphthalene	45.4		ug/kg	5.61		1
2-Methylnaphthalene	60.4		ug/kg	5.61		1
2-Chloronaphthalene	ND		ug/kg	5.61		1
Acenaphthylene	14.2		ug/kg	5.61		1
Acenaphthene	15.2		ug/kg	5.61		1
Fluorene	15.5		ug/kg	5.61		1
Phenanthrene	226		ug/kg	5.61		1
Anthracene	33.6		ug/kg	5.61		1
Fluoranthene	435		ug/kg	5.61		1
Pyrene	347		ug/kg	5.61		1
Benz(a)anthracene	178		ug/kg	5.61		1
Chrysene	232		ug/kg	5.61		1
Benzo(b)fluoranthene	198		ug/kg	5.61		1
Benzo(k)fluoranthene	140		ug/kg	5.61		1
Benzo(a)pyrene	139		ug/kg	5.61		1
Indeno(1,2,3-cd)Pyrene	110		ug/kg	5.61		1
Dibenz(a,h)anthracene	30.3		ug/kg	5.61		1
Benzo(ghi)perylene	109		ug/kg	5.61		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	57	30-130	
Pyrene-d10	69	30-130	
Benzo(b)fluoranthene-d12	71	30-130	



Extraction Method: EPA 3570

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-41 Date Collected: 11/13/20 14:09

Date Received: Client ID: 11/13/20 SL3-10 (0-0.5') Sample Location: Field Prep: 6 BRIDGE STREET, WEYMOUTH, MA Not Specified

Sample Depth: Matrix: Sediment

**Extraction Date:** 11/16/20 16:28 97,8270D-SIM Analytical Method: Cleanup Method: EPA 3630 Analytical Date: 11/24/20 17:33

Cleanup Date: 11/18/20 Analyst: GP

79% Percent Solids:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	10.9		ug/kg	4.82		1
2-Methylnaphthalene	14.6		ug/kg	4.82		1
2-Chloronaphthalene	ND		ug/kg	4.82		1
Acenaphthylene	6.37		ug/kg	4.82		1
Acenaphthene	ND		ug/kg	4.82		1
Fluorene	ND		ug/kg	4.82		1
Phenanthrene	49.7		ug/kg	4.82		1
Anthracene	13.6		ug/kg	4.82		1
Fluoranthene	83.3		ug/kg	4.82		1
Pyrene	68.6		ug/kg	4.82		1
Benz(a)anthracene	47.2		ug/kg	4.82		1
Chrysene	55.4		ug/kg	4.82		1
Benzo(b)fluoranthene	68.6		ug/kg	4.82		1
Benzo(k)fluoranthene	40.4		ug/kg	4.82		1
Benzo(a)pyrene	44.4		ug/kg	4.82		1
Indeno(1,2,3-cd)Pyrene	40.8		ug/kg	4.82		1
Dibenz(a,h)anthracene	10.4		ug/kg	4.82		1
Benzo(ghi)perylene	39.9		ug/kg	4.82		1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	43	30-130	
Pyrene-d10	67	30-130	
Benzo(b)fluoranthene-d12	69	30-130	



12/04/20

**Report Date:** 

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

SAMPLE RESULTS

Lab ID: L2050541-42 Date Collected: 11/13/20 12:06

Client ID: DUP-1 Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3570

Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:28

Analytical Date: 11/24/20 18:06 Cleanup Method: EPA 3630

Analyst: GP Cleanup Date: 11/18/20

Analyst: GP Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfield Lab							
Naphthalene	28.7		ug/kg	4.42		1	
2-Methylnaphthalene	61.4		ug/kg	4.42		1	
2-Chloronaphthalene	ND		ug/kg	4.42		1	
Acenaphthylene	9.47		ug/kg	4.42		1	
Acenaphthene	9.37		ug/kg	4.42		1	
Fluorene	6.14		ug/kg	4.42		1	
Phenanthrene	223		ug/kg	4.42		1	
Anthracene	26.8		ug/kg	4.42		1	
Fluoranthene	268		ug/kg	4.42		1	
Pyrene	251		ug/kg	4.42		1	
Benz(a)anthracene	146		ug/kg	4.42		1	
Chrysene	157		ug/kg	4.42		1	
Benzo(b)fluoranthene	152		ug/kg	4.42		1	
Benzo(k)fluoranthene	99.4		ug/kg	4.42		1	
Benzo(a)pyrene	122		ug/kg	4.42		1	
Indeno(1,2,3-cd)Pyrene	99.6		ug/kg	4.42		1	
Dibenz(a,h)anthracene	25.3		ug/kg	4.42		1	
Benzo(ghi)perylene	101		ug/kg	4.42		1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	50	30-130	
Pyrene-d10	84	30-130	
Benzo(b)fluoranthene-d12	85	30-130	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

SAMPLE RESULTS

L2050541-43 Date Collected: 11/13/20 13:51

Client ID: DUP-2 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Lab ID:

Matrix: Sediment Extraction Method: EPA 3570

Analytical Method: 97,8270D-SIM Extraction Date: 11/16/20 16:28

Analytical Date: 11/24/20 18:40 Cleanup Method: EPA 3630

Analytical Date: 11/24/20 18:40 Cleanup Method: EPA 3630 Cleanup Date: 11/18/20 Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
MCP PAHs by GC/MS-SIM - Mansfi	eld Lab						
Naphthalene	ND		ug/kg	5.30		1	
2-Methylnaphthalene	7.44		ug/kg	5.30		1	
2-Chloronaphthalene	ND		ug/kg	5.30		1	
Acenaphthylene	8.52		ug/kg	5.30		1	
Acenaphthene	ND		ug/kg	5.30		1	
Fluorene	ND		ug/kg	5.30		1	
Phenanthrene	26.9		ug/kg	5.30		1	
Anthracene	7.52		ug/kg	5.30		1	
Fluoranthene	58.5		ug/kg	5.30		1	
Pyrene	49.1		ug/kg	5.30		1	
Benz(a)anthracene	33.2		ug/kg	5.30		1	
Chrysene	37.9		ug/kg	5.30		1	
Benzo(b)fluoranthene	51.2		ug/kg	5.30		1	
Benzo(k)fluoranthene	27.4		ug/kg	5.30		1	
Benzo(a)pyrene	35.1		ug/kg	5.30		1	
Indeno(1,2,3-cd)Pyrene	32.4		ug/kg	5.30		1	
Dibenz(a,h)anthracene	8.25		ug/kg	5.30		1	
Benzo(ghi)perylene	33.3		ug/kg	5.30		1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
2-Methylnaphthalene-d10	47	30-130	
Pyrene-d10	73	30-130	
Benzo(b)fluoranthene-d12	76	30-130	



L2050541

Lab Number:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D-SIM Analytical Date: 97,8270D-SIM

Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 11/16/20 15:10
Cleanup Method: EPA 3630
Cleanup Date: 11/17/20

Parameter	Result	Qualifier	Units	RL	MDL
MCP PAHs by GC/MS-SIM - Mansfi	eld Lab for	sample(s):	12-25,27-31	Batch:	WG1434849-1
Naphthalene	ND		ug/kg	4.00	
2-Methylnaphthalene	ND		ug/kg	4.00	
2-Chloronaphthalene	ND		ug/kg	4.00	
Acenaphthylene	ND		ug/kg	4.00	
Acenaphthene	ND		ug/kg	4.00	
Fluorene	ND		ug/kg	4.00	
Phenanthrene	ND		ug/kg	4.00	
Anthracene	ND		ug/kg	4.00	
Fluoranthene	ND		ug/kg	4.00	
Pyrene	ND		ug/kg	4.00	
Benz(a)anthracene	ND		ug/kg	4.00	
Chrysene	ND		ug/kg	4.00	<del></del>
Benzo(b)fluoranthene	ND		ug/kg	4.00	
Benzo(k)fluoranthene	ND		ug/kg	4.00	
Benzo(a)pyrene	ND		ug/kg	4.00	
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	4.00	
Dibenz(a,h)anthracene	ND		ug/kg	4.00	
Benzo(ghi)perylene	ND		ug/kg	4.00	

		Acceptance
Surrogate	%Recovery	Qualifier Criteria
2-Methylnaphthalene-d10	37	30-130
Pyrene-d10	54	30-130
Benzo(b)fluoranthene-d12	60	30-130



L2050541

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number:

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D-SIM Analytical Date: 97,8270D-SIM 11/23/20 12:18

Analyst: GP

Extraction Method: EPA 3570
Extraction Date: 11/16/20 16:27
Cleanup Method: EPA 3630
Cleanup Date: 11/18/20

arameter	Result	Qualifier	Units	RL	MDL
ICP PAHs by GC/MS-SIM - Ma	ansfield Lab for	sample(s):	26,32-43	Batch:	WG1434890-1
Naphthalene	ND		ug/kg	4.00	
2-Methylnaphthalene	ND		ug/kg	4.00	
2-Chloronaphthalene	ND		ug/kg	4.00	
Acenaphthylene	ND		ug/kg	4.00	
Acenaphthene	ND		ug/kg	4.00	
Fluorene	ND		ug/kg	4.00	
Phenanthrene	ND		ug/kg	4.00	
Anthracene	ND		ug/kg	4.00	
Fluoranthene	ND		ug/kg	4.00	
Pyrene	ND		ug/kg	4.00	
Benz(a)anthracene	ND		ug/kg	4.00	
Chrysene	ND		ug/kg	4.00	
Benzo(b)fluoranthene	ND		ug/kg	4.00	
Benzo(k)fluoranthene	ND		ug/kg	4.00	
Benzo(a)pyrene	ND		ug/kg	4.00	
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	4.00	
Dibenz(a,h)anthracene	ND		ug/kg	4.00	
Benzo(ghi)perylene	ND		ug/kg	4.00	

		Acceptance
Surrogate	%Recovery 0	Qualifier Criteria
2-Methylnaphthalene-d10	50	30-130
Pyrene-d10	74	30-130
Benzo(b)fluoranthene-d12	81	30-130



L2050541

Lab Number:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D-SIM Extraction Method: EPA 3510C
Analytical Date: 12/01/20 10:33 Extraction Date: 11/19/20 15:00

Analyst: GP

arameter	Result	Qualifier	Units	RL	MDL	
ICP PAHs by GC/MS-SIM -	Mansfield Lab for	sample(s):	01-11	Batch:	WG1436264-1	
Naphthalene	ND		ng/l	10.0		
2-Methylnaphthalene	ND		ng/l	10.0		
2-Chloronaphthalene	ND		ng/l	10.0		
Acenaphthylene	ND		ng/l	10.0		
Acenaphthene	ND		ng/l	10.0		
Fluorene	ND		ng/l	10.0		
Phenanthrene	ND		ng/l	10.0		
Anthracene	ND		ng/l	10.0		
Fluoranthene	ND		ng/l	10.0		
Pyrene	ND		ng/l	10.0		
Benz(a)anthracene	ND		ng/l	10.0		
Chrysene	ND		ng/l	10.0		
Benzo(b)fluoranthene	ND		ng/l	10.0		
Benzo(k)fluoranthene	ND		ng/l	10.0		
Benzo(a)pyrene	ND		ng/l	10.0		
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0		
Dibenz(a,h)anthracene	ND		ng/l	10.0		
Benzo(ghi)perylene	ND		ng/l	10.0		

	Acceptance						
Surrogate	%Recovery (	Qualifier Criteria					
2-Methylnaphthalene-d10	57	30-130					
Pyrene-d10	71	30-130					
Benzo(b)fluoranthene-d12	82	30-130					



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number: L2050541

Report Date: 12/04/20

Parameter	LCS %Recovery	Qual	LCS %Reco		Qual	%Recovery Limits	RPD	Qual	RPD Limits	
MCP PAHs by GC/MS-SIM - Mansfield Lab	Associated sam	ple(s): 1	2-25,27-31 I	Batch:	WG1434849-2	2 WG1434849-3				
Naphthalene	46		45	5		40-140	2		30	
2-Methylnaphthalene	52		5	1		40-140	2		30	
2-Chloronaphthalene	48		47	7		40-140	2		30	
Acenaphthylene	50		52	2		40-140	4		30	
Acenaphthene	51		5	1		40-140	0		30	
Fluorene	55		56	6		40-140	2		30	
Phenanthrene	53		55	5		40-140	4		30	
Anthracene	63		66	6		40-140	5		30	
Fluoranthene	63		66	6		40-140	5		30	
Pyrene	56		58	3		40-140	4		30	
Benz(a)anthracene	62		65	5		40-140	5		30	
Chrysene	60		60	3		40-140	5		30	
Benzo(b)fluoranthene	66		7	1		40-140	7		30	
Benzo(k)fluoranthene	56		58	3		40-140	4		30	
Benzo(a)pyrene	58		59	9		40-140	2		30	
Indeno(1,2,3-cd)Pyrene	72		76	6		40-140	5		30	
Dibenz(a,h)anthracene	68		72	2		40-140	6		30	
Benzo(ghi)perylene	70		73	3		40-140	4		30	



ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

**Project Number:** 414883

**Project Name:** 

Report Date:

12/04/20

	LCS		LCSD		%Recovery			RPD
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits

MCP PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 12-25,27-31 Batch: WG1434849-2 WG1434849-3

Surrogate	LCS %Recovery Qua	LCSD al %Recovery Qua	Acceptance   Criteria
2-Methylnaphthalene-d10	50	49	30-130
Pyrene-d10	63	64	30-130
Benzo(b)fluoranthene-d12	65	68	30-130

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number: L2050541

**Report Date:** 12/04/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	%Recovery Qual Limits	RPD	Qual	RPD Limits
MCP PAHs by GC/MS-SIM - Mansfield Lab	Associated sam	ple(s): 26,32-4	13 Batch: WG	31434890-2 WG1434890-3	3		
Naphthalene	39	Q	49	40-140	31	Q	30
2-Methylnaphthalene	46		56	40-140	29		30
2-Chloronaphthalene	40		48	40-140	26		30
Acenaphthylene	46		52	40-140	26		30
Acenaphthene	47		53	40-140	23		30
Fluorene	52		57	40-140	19		30
Phenanthrene	48		58	40-140	13		30
Anthracene	56		66	40-140	15		30
Fluoranthene	56		69	40-140	12		30
Pyrene	49		60	40-140	12		30
Benz(a)anthracene	56		70	40-140	12		30
Chrysene	53		68	40-140	13		30
Benzo(b)fluoranthene	62		76	40-140	14		30
Benzo(k)fluoranthene	48		66	40-140	10		30
Benzo(a)pyrene	50		65	40-140	17		30
Indeno(1,2,3-cd)Pyrene	66		81	40-140	13		30
Dibenz(a,h)anthracene	61		78	40-140	14		30
Benzo(ghi)perylene	61		80	40-140	15		30

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

**Project Number:** 414883 Report Date:

12/04/20

	LCS		LCSD		%Recovery			RPD
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits

MCP PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 26,32-43 Batch: WG1434890-2 WG1434890-3

Surrogate	LCS %Recovery Qual	LCSD %Recovery Qual	Acceptance Criteria
2-Methylnaphthalene-d10	45	55	30-130
Pyrene-d10	58	69	30-130
Benzo(b)fluoranthene-d12	61	77	30-130

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

Project Number: 414883

Report Date: 12/04/20

arameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
ICP PAHs by GC/MS-SIM - Mansfield Lab	Associated sam	ple(s): 01-11	Batch: WG14	36264-2	WG1436264-3			
Naphthalene	58		60		40-140	3		20
2-Methylnaphthalene	64		68		40-140	6		20
2-Chloronaphthalene	58		60		40-140	3		20
Acenaphthylene	63		65		40-140	3		20
Acenaphthene	60		62		40-140	3		20
Fluorene	64		66		40-140	3		20
Phenanthrene	61		61		40-140	0		20
Anthracene	68		68		40-140	0		20
Fluoranthene	69		72		40-140	4		20
Pyrene	60		60		40-140	0		20
Benz(a)anthracene	66		68		40-140	3		20
Chrysene	66		68		40-140	3		20
Benzo(b)fluoranthene	68		72		40-140	6		20
Benzo(k)fluoranthene	66		65		40-140	2		20
Benzo(a)pyrene	63		63		40-140	0		20
Indeno(1,2,3-cd)Pyrene	83		82		40-140	1		20
Dibenz(a,h)anthracene	74		75		40-140	1		20
Benzo(ghi)perylene	75		78		40-140	4		20



ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number:

RPD

L2050541

**Project Number:** 

**Project Name:** 

**Parameter** 

Report Date:

12/04/20

414883

LCS %Recovery Qual

**LCSD** %Recovery

Qual

%Recovery Limits

Qual

RPD Limits

MCP PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-11 Batch: WG1436264-2 WG1436264-3

Surrogate	LCS %Recovery Qua	LCSD I %Recovery Qual	Acceptance Criteria
2-Methylnaphthalene-d10	69	67	30-130
Pyrene-d10	70	69	30-130
Benzo(b)fluoranthene-d12	75	76	30-130

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual Found	MSD %Recovery		Recovery Limits	RPD	Qual	RPD Limits
MCP PAHs by GC/MS-S SL1-5 (0-0.5')	IM - Mansfield Lab	Associated	l sample(s):	12-25,27-31 (	QC Batch ID: WG14	34849-4 WG14	34849-5	QC Samp	ole: L20	50541-10	6 Client ID:
Naphthalene	22.9	619	272	40	257	37	Q	40-140	6		30
2-Methylnaphthalene	28.6	619	335	50	305	44		40-140	9		30
2-Chloronaphthalene	6.30	619	275	43	258	40		40-140	6		30
Acenaphthylene	23.3	619	320	48	304	45		40-140	5		30
Acenaphthene	23.5	619	322	48	288	42		40-140	11		30
Fluorene	19.7	619	340	52	310	46		40-140	9		30
Phenanthrene	142	619	412	44	382	38	Q	40-140	8		30
Anthracene	47.9	619	386	55	371	52		40-140	4		30
Fluoranthene	238	619	519	45	520	45		40-140	0		30
Pyrene	193	619	464	44	470	44		40-140	1		30
Benz(a)anthracene	128	619	451	52	485	57		40-140	7		30
Chrysene	160	619	499	55	510	56		40-140	2		30
Benzo(b)fluoranthene	167	619	525	58	526	57		40-140	0		30
Benzo(k)fluoranthene	132	619	431	48	472	54		40-140	9		30
Benzo(a)pyrene	152	619	444	47	470	51		40-140	6		30
Indeno(1,2,3-cd)Pyrene	133	619	518	62	554	67		40-140	7		30
Dibenz(a,h)anthracene	39.4	619	445	66	458	67		40-140	3		30
Benzo(ghi)perylene	127	619	504	61	519	63		40-140	3		30

	MS	MSD	Acceptance
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria
2-Methylnaphthalene-d10	48	43	30-130
Benzo(b)fluoranthene-d12	63	64	30-130



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

	Native	MS	MS	MS		MSD	MSD		Recovery			RPD
Parameter	Sample	Added	Found	%Recovery	Qual	Found	%Recovery	Qual	Limits	RPD	Qual	Limits

MCP PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 12-25,27-31 QC Batch ID: WG1434849-4 WG1434849-5 QC Sample: L2050541-16 Client ID: SL1-5 (0-0.5')

	MS	MSD	Acceptance
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria
Pyrene-d10	62	62	30-130



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual Found	MSD %Recovery	Recovery Qual Limits	RPD	RPD Qual Limits
MCP PAHs by GC/MS-S SL2-5 (0-0.5')	IM - Mansfield Lab	Associate	d sample(s): 2	6,32-43 QC E	Batch ID: WG143489	0-4 WG1434	890-5 QC Sample:	L2050	541-26 Client ID:
Naphthalene	12.7	705	311	42	313	46	40-140	14	30
2-Methylnaphthalene	16.2	705	376	51	359	52	40-140	8	30
2-Chloronaphthalene	ND	705	325	46	297	45	40-140	4	30
Acenaphthylene	14.8	705	365	50	338	49	40-140	2	30
Acenaphthene	6.51	705	354	49	331	50	40-140	0	30
Fluorene	6.52	705	389	54	349	52	40-140	4	30
Phenanthrene	48.3	705	440	56	412	56	40-140	10	30
Anthracene	14.4	705	416	57	414	61	40-140	4	30
Fluoranthene	90.4	705	545	65	517	65	40-140	11	30
Pyrene	81.1	705	471	55	452	57	40-140	9	30
Benz(a)anthracene	50.8	705	508	65	498	68	40-140	6	30
Chrysene	64.7	705	424	51	467	61	40-140	4	30
Benzo(b)fluoranthene	85.1	705	566	68	561	73	40-140	3	30
Benzo(k)fluoranthene	47.2	705	380	47	434	59	40-140	3	30
Benzo(a)pyrene	64.3	705	415	50	458	60	40-140	0	30
Indeno(1,2,3-cd)Pyrene	62.2	705	542	68	583	80	40-140	3	30
Dibenz(a,h)anthracene	17.9	705	471	64	493	73	40-140	1	30
Benzo(ghi)perylene	62.2	705	484	60	537	73	40-140	0	30

	MS	MSD	Acceptance
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria
2-Methylnaphthalene-d10	52	52	30-130
Benzo(b)fluoranthene-d12	62	69	30-130



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

	Native	MS	MS	MS		MSD	MSD		Recovery	•		RPD	
Parameter	Sample	Added	Found	%Recovery	Qual	Found	%Recovery	Qual	Limits	RPD	Qual	Limits	

MCP PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 26,32-43 QC Batch ID: WG1434890-5 QC Sample: L2050541-26 Client ID: SL2-5 (0-0.5')

	MS	MSD	Acceptance
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria
Pyrene-d10	61	66	30-130



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual Found	MSD %Recovery	Recovery Qual Limits	RPD	RPD Qual Limits
MCP PAHs by GC/MS-SIM	- Mansfield Lab	Associate	d sample(s): 0	1-11 QC Bat	ch ID: WG1436264-4	WG1436264	1-5 QC Sample: L2	2050541-	09 Client ID: SW-9
Naphthalene	ND	1920	982	51	1090	57	40-140	10	20
2-Methylnaphthalene	ND	1920	1080	56	1190	62	40-140	10	20
2-Chloronaphthalene	ND	1920	933	48	1030	54	40-140	10	20
Acenaphthylene	ND	1920	1080	56	1210	63	40-140	11	20
Acenaphthene	ND	1920	1060	55	1200	62	40-140	12	20
Fluorene	ND	1920	1140	59	1260	66	40-140	10	20
Phenanthrene	ND	1920	1120	58	1220	63	40-140	9	20
Anthracene	ND	1920	1260	66	1380	72	40-140	9	20
Fluoranthene	102	1920	1290	62	1430	69	40-140	10	20
Pyrene	85.3	1920	1200	58	1310	64	40-140	9	20
Benz(a)anthracene	57.4	1920	1280	64	1340	67	40-140	5	20
Chrysene	82.9	1920	1280	62	1360	66	40-140	6	20
Benzo(b)fluoranthene	80.5	1920	1430	70	1370	67	40-140	4	20
Benzo(k)fluoranthene	59.3	1920	1180	58	1300	64	40-140	10	20
Benzo(a)pyrene	67.3	1920	1200	59	1260	62	40-140	5	20
Indeno(1,2,3-cd)Pyrene	53.2	1920	1510	76	1480	74	40-140	2	20
Dibenz(a,h)anthracene	ND	1920	1390	72	1400	73	40-140	1	20
Benzo(ghi)perylene	55.6	1920	1440	72	1470	74	40-140	2	20

	MS	MSD	Acceptance	
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria	
2-Methylnaphthalene-d10	60	68	30-130	
Benzo(b)fluoranthene-d12	69	70	30-130	
Pyrene-d10	70	74	30-130	



## PETROLEUM HYDROCARBONS



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-12 Date Collected: 11/13/20 13:00

Client ID: SL1-1 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:06
Analytical Date: 11/10/20 05:24

Analytical Date: 11/19/20 05:24 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 74%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	8.95		1			
C19-C36 Aliphatics	ND		mg/kg	8.95		1			
C11-C22 Aromatics	15.0		mg/kg	8.95		1			
C11-C22 Aromatics, Adjusted	14.5		mg/kg	8.95		1			

	Acceptance						
Surrogate	% Recovery	Qualifier	Criteria				
Chloro-Octadecane	55		40-140				
o-Terphenyl	65		40-140				
2-Fluorobiphenyl	77		40-140				
2-Bromonaphthalene	79		40-140				



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-13 Date Collected: 11/13/20 11:32

Client ID: SL1-2 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:06

Analytical Date: 11/21/20 13:31 Cleanup Method1: EPH-04-1
Analyst: LL Cleanup Date1: 11/18/20

Percent Solids: 75%

## **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	8.58		1			
C19-C36 Aliphatics	ND		mg/kg	8.58		1			
C11-C22 Aromatics	ND		mg/kg	8.58		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.58		1			

	Acceptance							
Surrogate	% Recovery	Qualifier	Criteria					
Chloro-Octadecane	48		40-140					
o-Terphenyl	44		40-140					
2-Fluorobiphenyl	90		40-140					
2-Bromonaphthalene	95		40-140					



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-14 Date Collected: 11/13/20 11:52

Client ID: SL1-3 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:06

 Analytical Date:
 11/19/20 06:12
 Cleanup Method1:
 EPH-04-1

 Analyst:
 MEO
 Cleanup Date1:
 11/18/20

Percent Solids: 69%

## **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	9.38		1				
C19-C36 Aliphatics	ND		mg/kg	9.38		1				
C11-C22 Aromatics	17.0		mg/kg	9.38		1				
C11-C22 Aromatics, Adjusted	14.4		mg/kg	9.38		1				

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	64		40-140	
o-Terphenyl	64		40-140	
2-Fluorobiphenyl	82		40-140	
2-Bromonaphthalene	82		40-140	



**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOI** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-15 Date Collected: 11/13/20 11:45

Client ID: SL1-4 (0-0.5') Date Received: 11/13/20

6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Sample Location: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546 Analytical Method: 135,EPH-19-2.1 **Extraction Date:** 11/16/20 11:06

Analytical Date: 11/19/20 06:36 Cleanup Method1: EPH-04-1 Analyst: **MEO** 11/18/20

Cleanup Date1: Percent Solids: 77%

## **Quality Control Information**

Condition of sample received: Satisfactory Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	8.52		1			
C19-C36 Aliphatics	ND		mg/kg	8.52		1			
C11-C22 Aromatics	15.9		mg/kg	8.52		1			
C11-C22 Aromatics, Adjusted	14.0		mg/kg	8.52		1			

Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	66		40-140	
o-Terphenyl	67		40-140	
2-Fluorobiphenyl	82		40-140	
2-Bromonaphthalene	81		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-16 Date Collected: 11/13/20 11:50

Client ID: SL1-5 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:06

 Analytical Date:
 11/19/20 04:11
 Cleanup Method1:
 EPH-04-1

 Analyst:
 MEO
 Cleanup Date1:
 11/18/20

Percent Solids: 79%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	8.16		1				
C19-C36 Aliphatics	ND		mg/kg	8.16		1				
C11-C22 Aromatics	ND		mg/kg	8.16		1				
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.16		1				

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	65		40-140	
o-Terphenyl	60		40-140	
2-Fluorobiphenyl	77		40-140	
2-Bromonaphthalene	79		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-17 Date Collected: 11/13/20 12:20

Client ID: SL1-6 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:06

 Analytical Date:
 11/19/20 07:00
 Cleanup Method1:
 EPH-04-1

 Analyst:
 MEO
 Cleanup Date1:
 11/18/20

Percent Solids: 83%

## **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	7.90		1			
C19-C36 Aliphatics	ND		mg/kg	7.90		1			
C11-C22 Aromatics	ND		mg/kg	7.90		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.90		1			

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	45		40-140	
o-Terphenyl	44		40-140	
2-Fluorobiphenyl	81		40-140	
2-Bromonaphthalene	82		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-18 Date Collected: 11/13/20 12:05

Client ID: SL1-7 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:06

Analytical Date: 11/19/20 07:25 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 81%

## **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	8.11		1				
C19-C36 Aliphatics	ND		mg/kg	8.11		1				
C11-C22 Aromatics	10.0		mg/kg	8.11		1				
C11-C22 Aromatics, Adjusted	9.62		mg/kg	8.11		1				

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	60		40-140		
o-Terphenyl	59		40-140		
2-Fluorobiphenyl	81		40-140		
2-Bromonaphthalene	79		40-140		



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-19 Date Collected: 11/13/20 12:15

Client ID: SL1-8 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:06

Analytical Date: 11/19/20 07:49 Cleanup Method1: EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20 Percent Solids: 85%

## **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	7.50		1			
C19-C36 Aliphatics	ND		mg/kg	7.50		1			
C11-C22 Aromatics	ND		mg/kg	7.50		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.50		1			

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	68		40-140		
o-Terphenyl	67		40-140		
2-Fluorobiphenyl	79		40-140		
2-Bromonaphthalene	80		40-140		



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-20 Date Collected: 11/13/20 12:30

Client ID: SL1-9 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:07
Applytical Date: 11/10/20 08:13

Analytical Date: 11/19/20 08:13 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 85%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Extractable Petroleum Hydrocarbons - Westborough Lab							
C9-C18 Aliphatics	ND		mg/kg	7.57		1	
C19-C36 Aliphatics	ND		mg/kg	7.57		1	
C11-C22 Aromatics	ND		mg/kg	7.57		1	
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.57		1	

	Acceptance					
Surrogate	% Recovery	Qualifier	Criteria			
Chloro-Octadecane	62		40-140			
o-Terphenyl	61		40-140			
2-Fluorobiphenyl	79		40-140			
2-Bromonaphthalene	81		40-140			



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-21 Date Collected: 11/13/20 11:24

Client ID: SL1-10 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Percent Solids:

64%

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:07
Applytical Date: 11/10/20 08:37

Analytical Date: 11/19/20 08:37 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice

Sample Extraction method: Extracted Per the Method

**Quality Control Information** 

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Extractable Petroleum Hydrocarbons - Westborough Lab							
C9-C18 Aliphatics	ND		mg/kg	10.1		1	
C19-C36 Aliphatics	ND		mg/kg	10.1		1	
C11-C22 Aromatics	110		mg/kg	10.1		1	
C11-C22 Aromatics, Adjusted	62.2		mg/kg	10.1		1	

	Acceptance					
Surrogate	% Recovery	Qualifier	Criteria			
Chloro-Octadecane	63		40-140			
o-Terphenyl	62		40-140			
2-Fluorobiphenyl	77		40-140			
2-Bromonaphthalene	78		40-140			



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-22 Date Collected: 11/13/20 13:05

Client ID: SL2-1 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/19/20 09:01Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20 Percent Solids: 63%

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method: Extracted Per the Method

**Quality Control Information** 

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	10.4		1			
C19-C36 Aliphatics	27.6		mg/kg	10.4		1			
C11-C22 Aromatics	39.0		mg/kg	10.4		1			
C11-C22 Aromatics, Adjusted	34.1		mg/kg	10.4		1			

	Acceptance					
Surrogate	% Recovery	Qualifier	Criteria			
Chloro-Octadecane	61		40-140			
o-Terphenyl	60		40-140			
2-Fluorobiphenyl	75		40-140			
2-Bromonaphthalene	74		40-140			



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-23 Date Collected: 11/13/20 13:45

Client ID: SL2-2 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:07

Analytical Date: 11/19/20 09:25 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 57%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	11.6		1				
C19-C36 Aliphatics	14.8		mg/kg	11.6		1				
C11-C22 Aromatics	41.6		mg/kg	11.6		1				
C11-C22 Aromatics, Adjusted	30.9		mg/kg	11.6		1				

Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	59		40-140	
o-Terphenyl	59		40-140	
2-Fluorobiphenyl	77		40-140	
2-Bromonaphthalene	76		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-24 Date Collected: 11/13/20 14:48

Client ID: SL2-3 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 11:07
Applytical Date: 11/10/20 00:40

Analytical Date: 11/19/20 09:49 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20

Percent Solids: 57%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	11.6		1				
C19-C36 Aliphatics	ND		mg/kg	11.6		1				
C11-C22 Aromatics	ND		mg/kg	11.6		1				
C11-C22 Aromatics, Adjusted	ND		mg/kg	11.6		1				

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	62		40-140	
o-Terphenyl	58		40-140	
2-Fluorobiphenyl	79		40-140	
2-Bromonaphthalene	80		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-25 Date Collected: 11/13/20 13:50

Client ID: SL2-4 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/19/20 08:00Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 73%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	8.57		1				
C19-C36 Aliphatics	ND		mg/kg	8.57		1				
C11-C22 Aromatics	ND		mg/kg	8.57		1				
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.57		1				

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	66		40-140	
o-Terphenyl	73		40-140	
2-Fluorobiphenyl	95		40-140	
2-Bromonaphthalene	100		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-26 Date Collected: 11/13/20 13:35

Client ID: SL2-5 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/19/20 08:35Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 70%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	9.35		1				
C19-C36 Aliphatics	ND		mg/kg	9.35		1				
C11-C22 Aromatics	ND		mg/kg	9.35		1				
C11-C22 Aromatics, Adjusted	ND		mg/kg	9.35		1				

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	63		40-140	
o-Terphenyl	61		40-140	
2-Fluorobiphenyl	80		40-140	
2-Bromonaphthalene	85		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-27 Date Collected: 11/13/20 13:35

Client ID: SL2-6 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/22/20 17:41Analytical Date:11/24/20 19:32Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/24/20

Percent Solids: 67%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	9.78		1				
C19-C36 Aliphatics	ND		mg/kg	9.78		1				
C11-C22 Aromatics	18.5		mg/kg	9.78		1				
C11-C22 Aromatics, Adjusted	18.5		mg/kg	9.78		1				

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	60		40-140	
o-Terphenyl	82		40-140	
2-Fluorobiphenyl	119		40-140	
2-Bromonaphthalene	123		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-28 Date Collected: 11/13/20 13:30

Client ID: SL2-7 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/19/20 12:48Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 78%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	8.35		1			
C19-C36 Aliphatics	ND		mg/kg	8.35		1			
C11-C22 Aromatics	ND		mg/kg	8.35		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.35		1			

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	40		40-140	
o-Terphenyl	67		40-140	
2-Fluorobiphenyl	83		40-140	
2-Bromonaphthalene	89		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-29 Date Collected: 11/13/20 14:00

Client ID: SL2-8 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/19/20 13:23Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20

Percent Solids: 84%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	7.86		1			
C19-C36 Aliphatics	ND		mg/kg	7.86		1			
C11-C22 Aromatics	ND		mg/kg	7.86		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.86		1			

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	62		40-140		
o-Terphenyl	72		40-140		
2-Fluorobiphenyl	99		40-140		
2-Bromonaphthalene	105		40-140		



11/18/20

Cleanup Date1:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-30 Date Collected: 11/13/20 13:15

Client ID: SL2-9 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/25/20 03:19Cleanup Method1:EPH-04-1

Analyst: MEO
Percent Solids: 73%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	8.70		1			
C19-C36 Aliphatics	ND		mg/kg	8.70		1			
C11-C22 Aromatics	ND		mg/kg	8.70		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.70		1			

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	76		40-140	
o-Terphenyl	89		40-140	
2-Fluorobiphenyl	106		40-140	
2-Bromonaphthalene	110		40-140	



**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOI** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-31 Date Collected: 11/13/20 13:11

Client ID: SL2-10 (0-0.5') Date Received: 11/13/20

6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Sample Location: Not Specified

Sample Depth:

72%

Matrix: Sediment Extraction Method: EPA 3546 Analytical Method: 135,EPH-19-2.1 **Extraction Date:** 11/16/20 11:07

Analytical Date: 11/19/20 14:35 Cleanup Method1: EPH-04-1 Analyst: **MEO** Cleanup Date1: 11/18/20 Percent Solids:

#### **Quality Control Information**

Condition of sample received: Satisfactory Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	8.72		1			
C19-C36 Aliphatics	ND		mg/kg	8.72		1			
C11-C22 Aromatics	48.9		mg/kg	8.72		1			
C11-C22 Aromatics, Adjusted	38.5		mg/kg	8.72		1			

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	61		40-140		
o-Terphenyl	69		40-140		
2-Fluorobiphenyl	83		40-140		
2-Bromonaphthalene	88		40-140		



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-32 Date Collected: 11/13/20 14:35

Client ID: SL3-1 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 11:07Analytical Date:11/19/20 15:11Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 68%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	9.63		1			
C19-C36 Aliphatics	51.2		mg/kg	9.63		1			
C11-C22 Aromatics	ND		mg/kg	9.63		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	9.63		1			

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	65		40-140		
o-Terphenyl	64		40-140		
2-Fluorobiphenyl	82		40-140		
2-Bromonaphthalene	87		40-140		



**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOI** L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-33 Date Collected: 11/13/20 15:30

Client ID: SL3-2 (0-0.5') Date Received: 11/13/20

6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Sample Location: Not Specified

Sample Depth:

64%

Matrix: Sediment Extraction Method: EPA 3546 **Extraction Date:** Analytical Method: 135,EPH-19-2.1 11/16/20 15:52

Analytical Date: 11/19/20 03:59 Cleanup Method1: EPH-04-1 Analyst: **MEO** Cleanup Date1: 11/18/20 Percent Solids:

### **Quality Control Information**

Condition of sample received: Satisfactory Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	28.6		1			
C19-C36 Aliphatics	43.5		mg/kg	28.6		1			
C11-C22 Aromatics	97.3		mg/kg	28.6		1			
C11-C22 Aromatics, Adjusted	77.4		mg/kg	28.6		1			

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	47		40-140		
o-Terphenyl	57		40-140		
2-Fluorobiphenyl	63		40-140		
2-Bromonaphthalene	67		40-140		



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-34 Date Collected: 11/13/20 15:00

Client ID: SL3-3 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 15:52

Analytical Date: 11/19/20 04:24 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 60%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	28.8		1			
C19-C36 Aliphatics	ND		mg/kg	28.8		1			
C11-C22 Aromatics	98.4		mg/kg	28.8		1			
C11-C22 Aromatics, Adjusted	75.1		mg/kg	28.8		1			

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	45		40-140	
o-Terphenyl	53		40-140	
2-Fluorobiphenyl	64		40-140	
2-Bromonaphthalene	66		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-35 Date Collected: 11/13/20 14:55

Client ID: SL3-4 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 13:25Analytical Date:11/18/20 04:07Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/17/20
Percent Solids: 66%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	10.1		1				
C19-C36 Aliphatics	13.6		mg/kg	10.1		1				
C11-C22 Aromatics	18.3		mg/kg	10.1		1				
C11-C22 Aromatics, Adjusted	18.3		mg/kg	10.1		1				

	Acce				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	64		40-140		
o-Terphenyl	61		40-140		
2-Fluorobiphenyl	75		40-140		
2-Bromonaphthalene	75		40-140		



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-36 Date Collected: 11/13/20 14:51

Client ID: SL3-5 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 13:25

Analytical Date: 11/18/20 04:31 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/17/20

Analyst: MEO Cleanup Date1: 11/17/20 Percent Solids: 71%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbo	ons - Westborough L	ab				
C9-C18 Aliphatics	ND		mg/kg	8.92		1
C19-C36 Aliphatics	ND		mg/kg	8.92		1
C11-C22 Aromatics	ND		mg/kg	8.92		1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.92		1

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	64		40-140	
o-Terphenyl	64		40-140	
2-Fluorobiphenyl	79		40-140	
2-Bromonaphthalene	82		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-37 Date Collected: 11/13/20 14:40

Client ID: SL3-6 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 15:52

Analytical Date: 11/19/20 04:49 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 55%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	32.9		1			
C19-C36 Aliphatics	ND		mg/kg	32.9		1			
C11-C22 Aromatics	ND		mg/kg	32.9		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	32.9		1			

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	46		40-140	
o-Terphenyl	53		40-140	
2-Fluorobiphenyl	63		40-140	
2-Bromonaphthalene	65		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-38 Date Collected: 11/13/20 15:10

Client ID: SL3-7 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 15:52

Analytical Date: 11/19/20 05:13 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 59%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	63.8		mg/kg	31.1		1			
C19-C36 Aliphatics	ND		mg/kg	31.1		1			
C11-C22 Aromatics	ND		mg/kg	31.1		1			
C11-C22 Aromatics, Adjusted	ND		mg/kg	31.1		1			

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	42		40-140	
o-Terphenyl	48		40-140	
2-Fluorobiphenyl	62		40-140	
2-Bromonaphthalene	64		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-39 Date Collected: 11/13/20 14:33

Client ID: SL3-8 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 13:27Analytical Date:11/18/20 04:56Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/17/20
Percent Solids: 62%

### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Extractable Petroleum Hydrocarbons - Westborough Lab									
C9-C18 Aliphatics	ND		mg/kg	10.5		1			
C19-C36 Aliphatics	13.9		mg/kg	10.5		1			
C11-C22 Aromatics	15.7		mg/kg	10.5		1			
C11-C22 Aromatics, Adjusted	15.7		mg/kg	10.5		1			

		Acceptance		
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	65		40-140	
o-Terphenyl	63		40-140	
2-Fluorobiphenyl	79		40-140	
2-Bromonaphthalene	78		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-40 Date Collected: 11/13/20 14:11

Client ID: SL3-9 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Extraction Method: EPA 3546
Analytical Method: 135,EPH-19-2.1 Extraction Date: 11/16/20 15:52

Analytical Date: 11/19/20 05:38 Cleanup Method1: EPH-04-1
Analyst: MEO Cleanup Date1: 11/18/20
Percent Solids: 68%

#### **Quality Control Information**

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Extractable Petroleum Hydrocarbons - Westborough Lab										
C9-C18 Aliphatics	ND		mg/kg	27.7		1				
C19-C36 Aliphatics	ND		mg/kg	27.7		1				
C11-C22 Aromatics	57.7		mg/kg	27.7		1				
C11-C22 Aromatics, Adjusted	46.0		mg/kg	27.7		1				

	Acceptance				
Surrogate	% Recovery	Qualifier	Criteria		
Chloro-Octadecane	47		40-140		
o-Terphenyl	54		40-140		
2-Fluorobiphenyl	61		40-140		
2-Bromonaphthalene	63		40-140		



Project Name: ENBRIDGE WEYMOUTH COMPRESSOI Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-41 Date Collected: 11/13/20 14:09

Client ID: SL3-10 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix:SedimentExtraction Method:EPA 3546Analytical Method:135,EPH-19-2.1Extraction Date:11/16/20 13:27Analytical Date:11/18/20 05:20Cleanup Method1:EPH-04-1

Analyst: MEO Cleanup Date1: 11/17/20 Percent Solids: 79%

Condition of sample received:

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method: Extracted Per the Method

**Quality Control Information** 

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbo	ons - Westborough La	ıb				
C9-C18 Aliphatics	ND		mg/kg	8.46		1
C19-C36 Aliphatics	ND		mg/kg	8.46		1
C11-C22 Aromatics	ND		mg/kg	8.46		1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.46		1

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
Chloro-Octadecane	76		40-140	
o-Terphenyl	86		40-140	
2-Fluorobiphenyl	94		40-140	
2-Bromonaphthalene	94		40-140	



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Analytical Method: 135,EPH-19-2.1 Analytical Date: 11/19/20 03:47

Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 11/16/20 11:06
Cleanup Method: EPH-04-1
Cleanup Date: 11/18/20

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons WG1434778-1	s - Westboi	ough Lab f	or sample(s):	12-26,28-32	Batch:
C9-C18 Aliphatics	ND		mg/kg	6.58	
C19-C36 Aliphatics	ND		mg/kg	6.58	
C11-C22 Aromatics	ND		mg/kg	6.58	
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.58	

		Acceptance
Surrogate	%Recovery Quali	fier Criteria
Chloro-Octadecane	64	40-140
o-Terphenyl	66	40-140
2-Fluorobiphenyl	79	40-140
2-Bromonaphthalene	79	40-140



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Analytical Method: 135,EPH-19-2.1 Analytical Date: 11/18/20 00:53

Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 11/16/20 13:25
Cleanup Method: EPH-04-1
Cleanup Date: 11/17/20

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons	s - Westbord	ough Lab f	or sample(s):	33-41	Batch: WG1434830-1
C9-C18 Aliphatics	ND		mg/kg	6.26	
C19-C36 Aliphatics	ND		mg/kg	6.26	
C11-C22 Aromatics	ND		mg/kg	6.26	
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.26	

		Acceptance
Surrogate	%Recovery Qualifie	r Criteria
Chloro-Octadecane	74	40-140
o-Terphenyl	66	40-140
2-Fluorobiphenyl	72	40-140
• •		
2-Bromonaphthalene	73	40-140



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Analytical Method: 135,EPH-19-2.1 Analytical Date: 11/24/20 18:19

Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 11/22/20 17:41
Cleanup Method: EPH-04-1
Cleanup Date: 11/24/20

Parameter	Result	Qualifier	Units	RL	MDL	
Extractable Petroleum Hydrocarbons	s - Westbord	ough Lab	for sample(s):	27	Batch: WG1437282-1	
C9-C18 Aliphatics	ND		mg/kg	6.59		
C19-C36 Aliphatics	ND		mg/kg	6.59		
C11-C22 Aromatics	ND		mg/kg	6.59		
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.59		

		Acceptance	
Surrogate	%Recovery Qualifie	r Criteria	
Chloro-Octadecane	63	40-140	
o-Terphenyl	66	40-140	
2-Fluorobiphenyl	97	40-140	
2-Bromonaphthalene	100	40-140	



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number:

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**Project Number:** 414883

Report Date:

Parameter	LCS %Recovery		.CSD ecovery	Qual	%Recovery Limits	RPD	RPD Qual Limits
Extractable Petroleum Hydrocarbons - Westb	orough Lab As	ssociated sample(s):	12-26,28-32	Batch:	WG1434778-2	WG1434778-3	
C9-C18 Aliphatics	58		55		40-140	5	25
C19-C36 Aliphatics	78		71		40-140	9	25
C11-C22 Aromatics	76		70		40-140	8	25
Naphthalene	69		65		40-140	6	25
2-Methylnaphthalene	69		66		40-140	4	25
Acenaphthylene	68		64		40-140	6	25
Acenaphthene	74		71		40-140	4	25
Fluorene	72		67		40-140	7	25
Phenanthrene	72		66		40-140	9	25
Anthracene	74		69		40-140	7	25
Fluoranthene	76		69		40-140	10	25
Pyrene	77		70		40-140	10	25
Benzo(a)anthracene	73		67		40-140	9	25
Chrysene	78		71		40-140	9	25
Benzo(b)fluoranthene	83		76		40-140	9	25
Benzo(k)fluoranthene	64		59		40-140	8	25
Benzo(a)pyrene	72		65		40-140	10	25
Indeno(1,2,3-cd)Pyrene	71		64		40-140	10	25
Dibenzo(a,h)anthracene	76		70		40-140	8	25
Benzo(ghi)perylene	71		64		40-140	10	25



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

**Project Number:** 414883

Report Date: 12/04/20

	LCS		LCSD		%Recovery			RPD
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits

Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 12-26,28-32 Batch: WG1434778-2 WG1434778-3

Surrogate	LCS %Recovery Qual	LCSD %Recovery Qual	Acceptance Criteria
Chloro-Octadecane	73	72	40-140
o-Terphenyl	70	65	40-140
2-Fluorobiphenyl	82	77	40-140
2-Bromonaphthalene	81	76	40-140
% Naphthalene Breakthrough	0	0	
% 2-Methylnaphthalene Breakthrough	0	0	



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number:

L2050541

**Project Number:** 414883

Report Date:

12/04/20

arameter	LCS %Recovery		LCSD ecovery	Qu	%Recove	•	Qual	RPD Limits	
xtractable Petroleum Hydrocarbons	s - Westborough Lab Asso	ociated sample(s):	33-41	Batch:	WG1434830-2	WG1434830-3			
C9-C18 Aliphatics	62		62		40-140	0		25	
C19-C36 Aliphatics	74		77		40-140	4		25	
C11-C22 Aromatics	66		76		40-140	14		25	
Naphthalene	60		67		40-140	11		25	
2-Methylnaphthalene	61		69		40-140	12		25	
Acenaphthylene	60		68		40-140	13		25	
Acenaphthene	66		75		40-140	13		25	
Fluorene	63		71		40-140	12		25	
Phenanthrene	62		71		40-140	14		25	
Anthracene	65		75		40-140	14		25	
Fluoranthene	66		75		40-140	13		25	
Pyrene	66		76		40-140	14		25	
Benzo(a)anthracene	62		70		40-140	12		25	
Chrysene	65		73		40-140	12		25	
Benzo(b)fluoranthene	69		80		40-140	15		25	
Benzo(k)fluoranthene	53		61		40-140	14		25	
Benzo(a)pyrene	61		70		40-140	14		25	
Indeno(1,2,3-cd)Pyrene	57		66		40-140	15		25	
Dibenzo(a,h)anthracene	60		69		40-140	14		25	
Benzo(ghi)perylene	56		64		40-140	13		25	



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number:

L2050541

Project Number: 414883

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Report Date:

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	LCS		LCSD		%Recovery			RPD
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits

Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 33-41 Batch: WG1434830-2 WG1434830-3

Surrogate	LCS %Recovery Qu	LCSD al %Recovery	Acceptance Qual Criteria
	,		
Chloro-Octadecane	71	68	40-140
o-Terphenyl	67	71	40-140
2-Fluorobiphenyl	70	78	40-140
2-Bromonaphthalene	70	76	40-140
% Naphthalene Breakthrough	0	0	
% 2-Methylnaphthalene Breakthrough	0	0	



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

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Project Number: 414883

Lab Number: L2050541

**Report Date:** 12/04/20

C9-C18 Aliphatics   59   63   40-140   7   25	LCS %Recovery	Parameter		LCSD %Recovery	%Recovery Qual Limits	RPD	RPD Qual Limits
C19-C36 Aliphatics       75       79       40-140       5       25         C11-C22 Aromatics       93       83       40-140       11       25         Naphthalene       86       71       40-140       19       25         2-Methylnaphthalene       89       75       40-140       17       25         Acenaphthylene       85       74       40-140       14       25         Acenaphthene       90       79       40-140       13       25         Fluorene       88       80       40-140       10       25         Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	s - Westborough Lab As	Extractable Petroleum Hydrocarbons - West	ab Associated sample	e(s): 27 Batch:	WG1437282-2 WG14372	32-3	
C11-C22 Aromatics       93       83       40-140       11       25         Naphthalene       86       71       40-140       19       25         2-Methylnaphthalene       89       75       40-140       17       25         Acenaphthylene       85       74       40-140       14       25         Acenaphthene       90       79       40-140       13       25         Fluorene       88       80       40-140       10       25         Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	59	C9-C18 Aliphatics	Э	63	40-140	7	25
Naphthalene       86       71       40-140       19       25         2-Methylnaphthalene       89       75       40-140       17       25         Acenaphthylene       85       74       40-140       14       25         Acenaphthene       90       79       40-140       13       25         Fluorene       88       80       40-140       10       25         Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	75	C19-C36 Aliphatics	5	79	40-140	5	25
2-Methylnaphthalene       89       75       40-140       17       25         Acenaphthylene       85       74       40-140       14       25         Acenaphthene       90       79       40-140       13       25         Fluorene       88       80       40-140       10       25         Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	93	C11-C22 Aromatics	3	83	40-140	11	25
Acenaphthylene       85       74       40-140       14       25         Acenaphthene       90       79       40-140       13       25         Fluorene       88       80       40-140       10       25         Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	86	Naphthalene	5	71	40-140	19	25
Acenaphthene       90       79       40-140       13       25         Fluorene       88       80       40-140       10       25         Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	89	2-Methylnaphthalene	9	75	40-140	17	25
Fluorene 88 80 40-140 10 25  Phenanthrene 89 80 40-140 11 25  Anthracene 91 82 40-140 10 25  Fluoranthene 95 86 40-140 10 25  Pyrene 93 84 40-140 10 25  Benzo(a)anthracene 93 82 40-140 13 25  Chrysene 96 82 40-140 16 25  Benzo(b)fluoranthene 101 90 40-140 12 25	85	Acenaphthylene	5	74	40-140	14	25
Phenanthrene       89       80       40-140       11       25         Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	90	Acenaphthene	)	79	40-140	13	25
Anthracene       91       82       40-140       10       25         Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	88	Fluorene	3	80	40-140	10	25
Fluoranthene       95       86       40-140       10       25         Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	89	Phenanthrene	9	80	40-140	11	25
Pyrene       93       84       40-140       10       25         Benzo(a)anthracene       93       82       40-140       13       25         Chrysene       96       82       40-140       16       25         Benzo(b)fluoranthene       101       90       40-140       12       25	91	Anthracene	1	82	40-140	10	25
Benzo(a)anthracene     93     82     40-140     13     25       Chrysene     96     82     40-140     16     25       Benzo(b)fluoranthene     101     90     40-140     12     25	95	Fluoranthene	5	86	40-140	10	25
Chrysene         96         82         40-140         16         25           Benzo(b)fluoranthene         101         90         40-140         12         25	93	Pyrene	3	84	40-140	10	25
Benzo(b)fluoranthene 101 90 40-140 12 25	93	Benzo(a)anthracene	3	82	40-140	13	25
	96	Chrysene	5	82	40-140	16	25
Benzo(k)fluoranthene 77 68 40-140 12 25	101	Benzo(b)fluoranthene	11	90	40-140	12	25
	77	Benzo(k)fluoranthene	7	68	40-140	12	25
Benzo(a)pyrene 88 79 40-140 11 25	88	Benzo(a)pyrene	3	79	40-140	11	25
Indeno(1,2,3-cd)Pyrene 82 74 40-140 10 25	82	Indeno(1,2,3-cd)Pyrene	2	74	40-140	10	25
Dibenzo(a,h)anthracene 90 78 40-140 14 25	90	Dibenzo(a,h)anthracene	0	78	40-140	14	25
Benzo(ghi)perylene 79 71 40-140 11 25	79	Benzo(ghi)perylene	9	71	40-140	11	25



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

**Project Number:** 414883 Report Date:

12/04/20

	LCS		LCSD		%Recovery			RPD
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits

Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 27 Batch: WG1437282-2 WG1437282-3

Surrogate	LCS %Recovery Qual	LCSD %Recovery Qual	Acceptance Criteria
Chloro-Octadecane	66	70	40-140
o-Terphenyl	88	80	40-140
2-Fluorobiphenyl	120	93	40-140
2-Bromonaphthalene	124	98	40-140
% Naphthalene Breakthrough	0	0	
% 2-Methylnaphthalene Breakthrough	0	0	



L2050541

Lab Number:

# Matrix Spike Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883 Report Date: 12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery		Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydroc 16 Client ID: SL1-5 (0-0.5')	arbons - Wes	tborough Lab	Associated	sample(s): 12-	26,28-32	QC Batc	h ID: WG1434	778-4 V	VG1434778	-5 QC	Sample	L2050541-
C9-C18 Aliphatics	ND	48.4	26.5	55		29.4	58		40-140	10		50
C19-C36 Aliphatics	ND	64.6	50.0	77		54.4	81		40-140	8		50
C11-C22 Aromatics	ND	137	97.9	71		109	76		40-140	11		50
Naphthalene	ND	8.07	4.97	62		5.49	65		40-140	10		50
2-Methylnaphthalene	ND	8.07	5.01	62		5.56	66		40-140	10		50
Acenaphthylene	ND	8.07	4.96	61		5.58	66		40-140	12		50
Acenaphthene	ND	8.07	5.53	68		6.20	74		40-140	11		50
Fluorene	ND	8.07	5.32	66		6.02	72		40-140	12		50
Phenanthrene	ND	8.07	5.33	66		6.03	72		40-140	12		50
Anthracene	ND	8.07	5.31	66		6.09	72		40-140	14		50
Fluoranthene	ND	8.07	5.53	68		6.24	74		40-140	12		50
Pyrene	ND	8.07	5.61	69		6.28	75		40-140	11		50
Benzo(a)anthracene	ND	8.07	5.26	65		5.93	70		40-140	12		50
Chrysene	ND	8.07	5.60	69		6.35	75		40-140	13		50
Benzo(b)fluoranthene	ND	8.07	6.00	74		6.74	80		40-140	12		50
Benzo(k)fluoranthene	ND	8.07	4.62	57		5.20	62		40-140	12		50
Benzo(a)pyrene	ND	8.07	5.18	64		5.83	69		40-140	12		50
Indeno(1,2,3-cd)Pyrene	ND	8.07	5.05	62		5.66	67		40-140	11		50
Dibenzo(a,h)anthracene	ND	8.07	5.42	67		6.06	72		40-140	11		50
Benzo(ghi)perylene	ND	8.07	5.04	62		5.66	67		40-140	12		50



# Matrix Spike Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

	Native	MS	MS	MS		MSD	MSD		Recovery			RPD
Parameter	Sample	Added	Found	%Recovery	Qual	Found	%Recovery	Qual	Limits	RPD	Qual	Limits

Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 12-26,28-32 QC Batch ID: WG1434778-4 WG1434778-5 QC Sample: L2050541-16 Client ID: SL1-5 (0-0.5')

	MS	MSD	Acceptance	
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria	
2-Bromonaphthalene	78	77	40-140	
2-Fluorobiphenyl	79	78	40-140	
Chloro-Octadecane	62	67	40-140	
o-Terphenyl	61	67	40-140	



L2050541

12/04/20

Lab Number:

# Matrix Spike Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883 Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Recovery Qual Limits	, RPD	RPD Qual Limits
Extractable Petroleum Hydroc 26 Client ID: SL2-5 (0-0.5')	arbons - Wes	tborough Lab	Associated	sample(s): 12-	-26,28-32	QC Batc	h ID: WG1434	1778-6 WG143477	'8-7 QC	Sample: L2050541-
C9-C18 Aliphatics	ND	55.2	24.7	45		24.7	44	40-140	0	50
C19-C36 Aliphatics	ND	73.5	58.1	79		61.1	81	40-140	5	50
C11-C22 Aromatics	ND	156	125	80		140	87	40-140	11	50
Naphthalene	ND	9.19	6.49	71		7.12	76	40-140	9	50
2-Methylnaphthalene	ND	9.19	6.68	73		7.38	78	40-140	10	50
Acenaphthylene	ND	9.19	6.44	70		7.12	76	40-140	10	50
Acenaphthene	ND	9.19	6.80	74		7.54	80	40-140	10	50
Fluorene	ND	9.19	7.00	76		7.78	82	40-140	11	50
Phenanthrene	ND	9.19	7.21	78		8.03	85	40-140	11	50
Anthracene	ND	9.19	7.14	78		8.00	85	40-140	11	50
Fluoranthene	ND	9.19	7.32	80		8.15	86	40-140	11	50
Pyrene	ND	9.19	7.30	79		8.13	86	40-140	11	50
Benzo(a)anthracene	ND	9.19	7.32	80		8.16	86	40-140	11	50
Chrysene	ND	9.19	7.28	79		8.10	86	40-140	11	50
Benzo(b)fluoranthene	ND	9.19	8.08	88		8.93	95	40-140	10	50
Benzo(k)fluoranthene	ND	9.19	6.05	66		6.67	71	40-140	10	50
Benzo(a)pyrene	ND	9.19	6.95	76		7.66	81	40-140	10	50
Indeno(1,2,3-cd)Pyrene	ND	9.19	6.82	74		7.54	80	40-140	10	50
Dibenzo(a,h)anthracene	ND	9.19	7.29	79		8.04	85	40-140	10	50
Benzo(ghi)perylene	ND	9.19	6.55	71		7.22	76	40-140	10	50

### Matrix Spike Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

	Native	MS	MS	MS		MSD	MSD		Recovery	•		RPD
Parameter	Sample	Added	Found	%Recovery	Qual	Found	%Recovery	Qual	Limits	RPD	Qual	Limits

Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 12-26,28-32 QC Batch ID: WG1434778-6 WG1434778-7 QC Sample: L2050541-26 Client ID: SL2-5 (0-0.5')

	MS	MSD	Acceptance	
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria	
2-Bromonaphthalene	90	100	40-140	
2-Fluorobiphenyl	86	96	40-140	
Chloro-Octadecane	64	66	40-140	
o-Terphenyl	70	76	40-140	



### **METALS**



11/13/20 11:00

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-01

Client ID: SW-1 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Me	tals - Mar	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:30	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 15:44	EPA 3005A	97,6020B	AM



11/13/20 11:08

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-02

Client ID: SW-2 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:33	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 17:07	EPA 3005A	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-03 Date Collected: 11/13/20 11:11

Client ID: SW-3 Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:36	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 17:12	EPA 3005A	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-04 Date Collected: 11/13/20 12:37

Client ID: SW-4 Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Met	als - Man	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	АМ
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:40	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 17:17	EPA 3005A	97,6020B	AM



11/13/20 12:40

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-05

Client ID: SW-5 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Me	tals - Mar	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:43	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 17:22	EPA 3005A	97,6020B	AM
•											



11/13/20 12:44

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-06 Date Collected:

Client ID: SW-6 Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Me	tals - Man	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:46	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 18:07	EPA 3005A	97,6020B	AM



11/13/20 12:48

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-07

Client ID: SW-7 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Met	als - Man	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:49	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 18:12	EPA 3005A	97,6020B	AM



**Project Name:** Lab Number: ENBRIDGE WEYMOUTH COMPRESSOR L2050541

**Project Number: Report Date:** 414883 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-08

Date Collected: 11/13/20 13:18 Client ID: SW-8 Date Received: 11/13/20

6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified Sample Location:

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Me	tals - Man	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:59	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 18:17	EPA 3005A	97,6020B	AM
			-								



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-09 Date Collected: 11/13/20 13:22

Client ID: SW-9 Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Met	tals - Man	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	12/01/20 11:01	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 15:20	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 17:02	EPA 3005A	97,6020B	AM



11/13/20 13:26

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-10

Client ID: SW-10 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Me	tals - Mar	nsfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 16:03	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 18:22	EPA 3005A	97,6020B	AM



11/13/20 12:41

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-11

Client ID: DUP-11 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Met	tals - Man	sfield Lab									
Antimony, Dissolved	ND		mg/l	0.2000		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Barium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Chromium, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Lead, Dissolved	ND		mg/l	0.0500		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Mercury, Dissolved	ND		mg/l	0.0002		1	11/30/20 09:26	11/30/20 16:06	EPA 7470A	97,7470A	EW
Nickel, Dissolved	ND		mg/l	0.1000		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Selenium, Dissolved	ND		mg/l	0.250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Silver, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Thallium, Dissolved	ND		mg/l	0.0250		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.2500		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM
Zinc, Dissolved	ND		mg/l	0.5000		50	11/30/20 09:22	11/30/20 18:28	EPA 3005A	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-12
 Date Collected:
 11/13/20 13:00

 Client ID:
 SL1-1 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 74% Dilution Date Date Prep Analytical

reiterit Solius.	7 4 70					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals	- Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.1		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Arsenic, Total	11		mg/kg	0.65		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Barium, Total	14		mg/kg	3.9		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Beryllium, Total	ND		mg/kg	0.39		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.26		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Chromium, Total	13		mg/kg	2.6		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Lead, Total	51		mg/kg	0.78		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.107		1	12/01/20 14:49	12/01/20 18:28	EPA 7471B	97,7471B	VW
Nickel, Total	13		mg/kg	1.3		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.6		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.65		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.52		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Vanadium, Total	37		mg/kg	1.3		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM
Zinc, Total	48		mg/kg	13		10	12/01/20 15:01	12/01/20 18:05	EPA 3050B	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-13 Date Collected: 11/13/20 11:32 Client ID: SL1-2 (0-0.5') Date Received: 11/13/20

Client ID: SL1-2 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

84

75% Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Factor **Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.1 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B AM 14 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B Arsenic, Total mg/kg 0.65 AM Barium, Total 14 mg/kg 3.9 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B ΑM Beryllium, Total 0.76 mg/kg 0.39 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.26 AM 20 2.6 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 48 mg/kg 0.78 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total 0.096 12/01/20 14:49 12/01/20 18:31 EPA 7471B VW mg/kg 10 97,6020B Nickel, Total 47 mg/kg 1.3 12/01/20 15:01 12/01/20 18:10 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.6 12/01/20 15:01 12/01/20 18:10 EPA 3050B AM ND 10 97,6020B Silver, Total 0.65 --12/01/20 15:01 12/01/20 18:10 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.52 --12/01/20 15:01 12/01/20 18:10 EPA 3050B ΑM 97,6020B Vanadium, Total 300 1.3 10 12/01/20 15:01 12/01/20 18:10 EPA 3050B AM mg/kg

13

mg/kg

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10

12/01/20 15:01 12/01/20 18:10 EPA 3050B



97,6020B

ΑM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-14
 Date Collected:
 11/13/20 11:52

 Client ID:
 SL1-3 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 69% Dilution Date Date Prep Analytical Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analy

Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals	- Mansfield	d Lab									
Antimony, Total	ND		mg/kg	2.3		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Arsenic, Total	22		mg/kg	0.71		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Barium, Total	12		mg/kg	4.3		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Beryllium, Total	0.60		mg/kg	0.43		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.28		10	12/01/20 15:01	1 12/01/20 18:15	EPA 3050B	97,6020B	AM
Chromium, Total	11		mg/kg	2.8		10	12/01/20 15:01	1 12/01/20 18:15	EPA 3050B	97,6020B	AM
Lead, Total	33		mg/kg	0.85		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.102		1	12/01/20 14:49	9 12/01/20 18:35	EPA 7471B	97,7471B	VW
Nickel, Total	21		mg/kg	1.4		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.8		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.71		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.57		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Vanadium, Total	230		mg/kg	1.4		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Zinc, Total	50		mg/kg	14		10	12/01/20 15:01	12/01/20 18:15	EPA 3050B	97,6020B	AM
Acid Volatile Sulfid	e w/Simul	taneously	Extracted	Metals -	Mansfi	eld Lab					
Sulfide, Acid Volatile	ND		umoles/gm	0.624		1			36,-	36,-	TM
Cadmium, Total	ND		umoles/g	0.001876		5	11/21/20 10:44	11/23/20 14:14	36,-	1,6020B	AM
Copper, Total	0.324969		umoles/g	0.016591		5	11/21/20 10:44	11/23/20 14:14	36,-	1,6020B	AM
Lead, Total	0.194830		umoles/g	0.010176		5	11/21/20 10:44	11/23/20 14:14	36,-	1,6020B	AM
Nickel, Total	0.092356		umoles/g	0.035919		5	11/21/20 10:44	11/23/20 14:14	36,-	1,6020B	AM
Zinc, Total	0.567617		umoles/g	0.032254		5	11/21/20 10:44	11/23/20 14:14	36,-	1,6020B	AM
SEM/AVS Ratio	NA		-	0	NA	5	11/21/20 10:44	11/23/20 14:14	36,-	1,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-15 Date Collected: 11/13/20 11:45

Client ID: SL1-4 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 77%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total 2.4 mg/kg 2.0 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B ΑM Arsenic, Total 30 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B mg/kg 0.63 AM Barium, Total 9.8 mg/kg 3.8 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B ΑM Beryllium, Total 0.59 mg/kg 0.38 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.25 AM 11 2.5 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 50 mg/kg 0.75 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.098 12/01/20 14:49 12/01/20 18:38 EPA 7471B VW 10 97,6020B Nickel, Total 100 mg/kg 1.2 12/01/20 15:01 12/01/20 18:20 EPA 3050B ΑM 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B Selenium, Total ND mg/kg 2.5 AM ND 10 97,6020B Silver, Total 0.63 --12/01/20 15:01 12/01/20 18:20 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.50 --12/01/20 15:01 12/01/20 18:20 EPA 3050B ΑM 97,6020B Vanadium, Total 630 1.2 10 12/01/20 15:01 12/01/20 18:20 EPA 3050B AM mg/kg 47 12 --10 12/01/20 15:01 12/01/20 18:20 EPA 3050B 97,6020B Zinc, Total mg/kg ΑM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-16 Date Collected: 11/13/20 11:50

Client ID: SL1-5 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 79%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Factor **Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total 2.2 mg/kg 2.0 10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B ΑM 13 10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B Arsenic, Total mg/kg 0.63 AM Barium, Total 17 mg/kg 3.8 10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B ΑM Beryllium, Total 0.62 mg/kg 0.38 10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.25 AM 16 2.5 10 12/01/20 15:01 12/02/20 08:28 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 47 mg/kg 0.75 10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.103 12/01/20 14:49 12/01/20 18:03 EPA 7471B VW 10 97,6020B Nickel, Total 46 mg/kg 1.2 12/01/20 15:01 12/01/20 17:38 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.5 12/01/20 15:01 12/01/20 17:38 EPA 3050B AM ND 10 97,6020B Silver, Total 0.63 --12/01/20 15:01 12/01/20 17:38 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.50 --12/01/20 15:01 12/01/20 17:38 EPA 3050B ΑM Vanadium, Total 160 1.2 10 12/01/20 15:01 12/02/20 08:28 EPA 3050B 97,6020B AM mg/kg 82 12 --10 12/01/20 15:01 12/01/20 17:38 EPA 3050B 97,6020B Zinc, Total mg/kg AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-17 Date Collected: 11/13/20 12:20

Client ID: SL1-6 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

83% Percent Solids: Dilution Date Date Prep **Analytical** Method Qualifier **Factor Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 1.9 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B ΑM 10 97,6020B Arsenic, Total 11 mg/kg 0.58 12/01/20 15:01 12/01/20 18:25 EPA 3050B AM Barium, Total 17 mg/kg 3.5 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B ΑM Beryllium, Total 0.58 0.35 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B AM mg/kg ND 10 97,6020B Cadmium, Total mg/kg 0.23 12/01/20 15:01 12/01/20 18:25 EPA 3050B AM 18 2.3 10 97,6020B Chromium, Total mg/kg 12/01/20 15:01 12/01/20 18:25 EPA 3050B ΑM Lead, Total 58 0.70 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B mg/kg AM ND 97,7471B 0.081 1 12/01/20 14:49 12/01/20 18:48 EPA 7471B VW Mercury, Total mg/kg 77 10 97,6020B Nickel, Total mg/kg 1.2 12/01/20 15:01 12/01/20 18:25 EPA 3050B ΑM Selenium, Total ND 2.3 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B AM mg/kg 97,6020B ND 0.58 --10 12/01/20 15:01 12/01/20 18:25 EPA 3050B ΑM Silver, Total mg/kg 97,6020B Thallium, Total ND mg/kg 0.47 --10 12/01/20 15:01 12/01/20 18:25 EPA 3050B ΑM Vanadium, Total 1100 1.2 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B AM mg/kg 59 12 10 12/01/20 15:01 12/01/20 18:25 EPA 3050B 97,6020B Zinc, Total mg/kg AM Acid Volatile Sulfide w/Simultaneously Extracted Metals - Mansfield Lab 36,-Sulfide, Acid Volatile ND umoles/gm 0.624 1 36,-TM ND 0.002071 5 11/21/20 10:44 11/23/20 14:19 36,-1,6020B Cadmium, Total ΑM umoles/g Copper, Total 0.387891 umoles/g 0.018320 5 11/21/20 10:44 11/23/20 14:19 36,-1,6020B AM Lead, Total 0.227310 umoles/g 0.011236 5 11/21/20 10:44 11/23/20 14:19 36,-1,6020B ΑM 5 1,6020B 0.039662 36,-Nickel, Total 0.341980 11/21/20 10:44 11/23/20 14:19 ΑM umoles/g --Zinc, Total 0.691273 0.035615 --5 11/21/20 10:44 11/23/20 14:19 36,-1,6020B ΑM umoles/g

0

NA

5

11/21/20 10:44 11/23/20 14:19



1,6020B

AM

36,-

SEM/AVS Ratio

NA

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-18 Date Collected: 11/13/20 12:05

Client ID: SL1-7 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 81%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 1.9 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B ΑM 18 0.59 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B Arsenic, Total mg/kg AM Barium, Total 16 mg/kg 3.5 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B ΑM Beryllium, Total 0.45 mg/kg 0.35 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.24 AM 30 2.4 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 30 mg/kg 0.71 10 12/01/20 15:01 12/01/20 18:30 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.083 12/01/20 14:49 12/01/20 18:51 EPA 7471B VW 500 97,6020B Nickel, Total 6100 mg/kg 59 12/01/20 15:01 12/02/20 10:12 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.4 12/01/20 15:01 12/01/20 18:30 EPA 3050B AM ND 10 97,6020B Silver, Total 0.59 --12/01/20 15:01 12/01/20 18:30 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.47 --12/01/20 15:01 12/01/20 18:30 EPA 3050B ΑM

500

10

12/01/20 15:01 12/02/20 10:12 EPA 3050B

12/01/20 15:01 12/01/20 18:30 EPA 3050B

59

12

mg/kg

mg/kg



97,6020B

97,6020B

AM

AM

Vanadium, Total

Zinc, Total

13000

80

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-19 Date Collected: 11/13/20 12:15

Client ID: SL1-8 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 85%

Dilution Date Date Prep Analytical
Parameter Result Qualifier Units RI MDI Factor Prepared Analyzed Method Method Analyse

Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals -	Mansfield	l Lab									
Antimony, Total	ND		mg/kg	1.8		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Arsenic, Total	15		mg/kg	0.58		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Barium, Total	30		mg/kg	3.5		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Beryllium, Total	0.54		mg/kg	0.35		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.23		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Chromium, Total	250		mg/kg	2.3		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Lead, Total	53		mg/kg	0.69		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.088		1	12/01/20 14:49	12/01/20 18:54	EPA 7471B	97,7471B	VW
Nickel, Total	2100		mg/kg	1.2		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.3		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.58		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.46		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM
Vanadium, Total	7200		mg/kg	58		500	12/01/20 15:01	12/02/20 11:12	EPA 3050B	97,6020B	AM
Zinc, Total	72		mg/kg	12		10	12/01/20 15:01	12/01/20 18:35	EPA 3050B	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-20 Date Collected: 11/13/20 12:30

Client ID: SL1-9 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

81

85% Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 1.8 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B ΑM Arsenic, Total 18 0.56 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B mg/kg AM Barium, Total 20 mg/kg 3.4 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B ΑM Beryllium, Total 0.59 mg/kg 0.34 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.22 AM 13 2.2 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 54 mg/kg 0.67 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.084 12/01/20 14:49 12/01/20 18:58 EPA 7471B VW 10 97,6020B Nickel, Total 60 mg/kg 1.1 12/01/20 15:01 12/01/20 18:40 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.2 12/01/20 15:01 12/01/20 18:40 EPA 3050B AM ND 10 97,6020B Silver, Total 0.56 --12/01/20 15:01 12/01/20 18:40 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.45 --12/01/20 15:01 12/01/20 18:40 EPA 3050B ΑM 97,6020B Vanadium, Total 450 1.1 10 12/01/20 15:01 12/01/20 18:40 EPA 3050B AM mg/kg

11

mg/kg

--

10

12/01/20 15:01 12/01/20 18:40 EPA 3050B



97,6020B

AM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-21 Date Collected: 11/13/20 11:24

Client ID: SL1-10 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 64%

Dilution Date Date Prep Analytical
Factor Proposed Analyzed Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals	s - Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.5		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Arsenic, Total	24		mg/kg	0.77		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Barium, Total	17		mg/kg	4.6		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Beryllium, Total	0.78		mg/kg	0.46		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.31		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Chromium, Total	21		mg/kg	3.1		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Lead, Total	67		mg/kg	0.93		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.100		1	12/01/20 14:49	12/01/20 19:01	EPA 7471B	97,7471B	VW
Nickel, Total	24		mg/kg	1.5		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	3.1		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.77		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.62		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Vanadium, Total	120		mg/kg	1.5		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM
Zinc, Total	110		mg/kg	15		10	12/01/20 15:01	12/01/20 18:45	EPA 3050B	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-22 Date Collected: 11/13/20 13:05

Client ID: SL2-1 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 63%

Dilution Date Date Prep Analytical

Percent Solids: 63%

Dilution Date Date Prep Analytical Method Method Method Method Analyzed Method Method

Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Prep Method	Method	Analyst
MCP Total Metals	s - Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.4		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Arsenic, Total	14		mg/kg	0.75		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Barium, Total	18		mg/kg	4.5		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Beryllium, Total	0.60		mg/kg	0.45		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.30		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Chromium, Total	18		mg/kg	3.0		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Lead, Total	47		mg/kg	0.90		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.126		1	12/01/20 14:49	9 12/01/20 19:04	EPA 7471B	97,7471B	VW
Nickel, Total	41		mg/kg	1.5		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	3.0		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.75		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.60		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM
Vanadium, Total	150		mg/kg	1.5		10	12/01/20 15:01	1 12/02/20 08:38	EPA 3050B	97,6020B	AM
Zinc, Total	73		mg/kg	15		10	12/01/20 15:01	12/02/20 08:38	EPA 3050B	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-23 Date Collected: 11/13/20 13:45

Client ID: SL2-2 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 57%

Prep Dilution Date Date Analytical Method Qualifier Factor **Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.7 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B ΑM 15 10 97,6020B Arsenic, Total mg/kg 0.84 12/01/20 15:01 12/02/20 08:43 EPA 3050B AM Barium, Total 29 mg/kg 5.0 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B ΑM Beryllium, Total 0.62 mg/kg 0.50 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.34 AM 32 3.4 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 78 mg/kg 1.0 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B AM 1 97,7471B Mercury, Total 0.198 0.128 12/01/20 14:49 12/01/20 19:08 EPA 7471B VW mg/kg 93 10 97,6020B Nickel, Total mg/kg 1.7 12/01/20 15:01 12/02/20 08:43 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 3.4 12/01/20 15:01 12/02/20 08:43 EPA 3050B AM ND 10 97,6020B Silver, Total 0.84 --12/01/20 15:01 12/02/20 08:43 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.67 --12/01/20 15:01 12/02/20 08:43 EPA 3050B ΑM Vanadium, Total 1400 1.7 10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B AM mg/kg 110 17 --10 12/01/20 15:01 12/02/20 08:43 EPA 3050B 97,6020B Zinc, Total mg/kg AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-24 Date Collected: 11/13/20 14:48

Client ID: SL2-3 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 57%

Percent Solids: Dilution Date Date Prep **Analytical** Method Qualifier **Factor Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.7 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B ΑM 22 10 97,6020B Arsenic, Total mg/kg 0.85 12/01/20 15:01 12/02/20 09:28 EPA 3050B AM Barium, Total 40 mg/kg 5.1 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B ΑM Beryllium, Total 0.89 0.51 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B AM mg/kg ND 10 97,6020B Cadmium, Total mg/kg 0.34 12/01/20 15:01 12/02/20 09:28 EPA 3050B AM 43 10 97,6020B Chromium, Total mg/kg 3.4 12/01/20 15:01 12/02/20 09:28 EPA 3050B ΑM Lead, Total 100 1.0 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B mg/kg AM 97,7471B 0.221 1 12/01/20 14:49 12/01/20 19:11 EPA 7471B VW Mercury, Total mg/kg 0.118 10 97,6020B Nickel, Total 64 mg/kg 1.7 12/01/20 15:01 12/02/20 09:28 EPA 3050B ΑM Selenium, Total ND 3.4 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B AM mg/kg 97,6020B ND 0.85 --10 12/01/20 15:01 12/02/20 09:28 EPA 3050B ΑM Silver, Total mg/kg 97,6020B Thallium, Total ND mg/kg 0.68 --10 12/01/20 15:01 12/02/20 09:28 EPA 3050B ΑM Vanadium, Total 220 1.7 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B AM mg/kg 130 17 10 12/01/20 15:01 12/02/20 09:28 EPA 3050B 97,6020B Zinc, Total mg/kg AM Acid Volatile Sulfide w/Simultaneously Extracted Metals - Mansfield Lab 36,-Sulfide, Acid Volatile 6.01 umoles/gm 0.624 1 36,-TM ND 0.003395 5 36,-1,6020B Cadmium, Total 11/21/20 10:44 11/23/20 14:25 ΑM umoles/g Copper, Total 0.503314 0.030026 5 11/21/20 10:44 11/23/20 14:25 36,-1,6020B AM umoles/g Lead, Total 0.464640 umoles/g 0.018416 5 11/21/20 10:44 11/23/20 14:25 36,-1,6020B ΑM 5 0.358799 36,-1,6020B Nickel, Total 0.065003 11/21/20 10:44 11/23/20 14:25 ΑM umoles/g --Zinc, Total 1.42365 0.058371 --5 11/21/20 10:44 11/23/20 14:25 36,-1,6020B ΑM umoles/g

NA

5

11/21/20 10:44 11/23/20 14:25



1,6020B

AM

36,-

SEM/AVS Ratio

0.457638

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-25 Date Collected: 11/13/20 13:50

Client ID: SL2-4 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 73%

53

Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.1 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B ΑM Arsenic, Total 19 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B mg/kg 0.65 AM Barium, Total 13 mg/kg 3.9 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B ΑM Beryllium, Total 0.42 mg/kg 0.39 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.26 AM 14 2.6 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 57 mg/kg 0.78 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.103 12/01/20 14:49 12/01/20 19:14 EPA 7471B VW 10 97,6020B Nickel, Total 28 mg/kg 1.3 12/01/20 15:01 12/02/20 09:42 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.6 12/01/20 15:01 12/02/20 09:42 EPA 3050B AM ND 10 97,6020B Silver, Total 0.65 --12/01/20 15:01 12/02/20 09:42 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.52 --12/01/20 15:01 12/02/20 09:42 EPA 3050B ΑM 97,6020B Vanadium, Total 61 1.3 10 12/01/20 15:01 12/02/20 09:42 EPA 3050B AM mg/kg

13

mg/kg

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10

12/01/20 15:01 12/02/20 09:42 EPA 3050B



97,6020B

AM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-26 Date Collected: 11/13/20 13:35

Client ID: SL2-5 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 70%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Factor **Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.3 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B ΑM 16 10 97,6020B Arsenic, Total mg/kg 0.72 12/01/20 15:01 12/02/20 08:33 EPA 3050B AM Barium, Total 21 mg/kg 4.3 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B ΑM Beryllium, Total 0.60 mg/kg 0.43 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.29 AM 24 2.9 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 580 mg/kg 0.86 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total 0.098 12/01/20 14:49 12/01/20 18:18 EPA 7471B VW mg/kg 10 97,6020B Nickel, Total 170 mg/kg 1.4 12/01/20 15:01 12/02/20 08:33 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.9 12/01/20 15:01 12/02/20 08:33 EPA 3050B AM ND 10 97,6020B Silver, Total 0.72 --12/01/20 15:01 12/02/20 08:33 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.29 --12/01/20 15:01 12/02/20 08:33 EPA 3050B ΑM Vanadium, Total 480 1.4 10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B AM mg/kg 190 14 --10 12/01/20 15:01 12/02/20 08:33 EPA 3050B 97,6020B Zinc, Total mg/kg AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-27 Date Collected: 11/13/20 13:35

Client ID: SL2-6 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

110

67% Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.3 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B 97,6020B ΑM Arsenic, Total 24 10 97,6020B mg/kg 0.72 12/01/20 15:01 12/02/20 09:47 EPA 3050B AM 97,6020B Barium, Total 23 mg/kg 4.3 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B ΑM Beryllium, Total 0.72 mg/kg 0.43 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.29 AM 24 2.9 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 100 mg/kg 0.87 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B 97,6020B AM 1 97,7471B VW Mercury, Total 0.174 0.102 12/01/20 14:49 12/01/20 19:18 EPA 7471B mg/kg 10 97,6020B Nickel, Total 94 mg/kg 1.4 12/01/20 15:01 12/02/20 09:47 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.9 12/01/20 15:01 12/02/20 09:47 EPA 3050B AM ND 10 97,6020B Silver, Total 0.72 --12/01/20 15:01 12/02/20 09:47 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.58 --12/01/20 15:01 12/02/20 09:47 EPA 3050B ΑM 97,6020B Vanadium, Total 410 1.4 10 12/01/20 15:01 12/02/20 09:47 EPA 3050B AM mg/kg

14

mg/kg

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10

12/01/20 15:01 12/02/20 09:47 EPA 3050B



97,6020B

AM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-28 Date Collected: 11/13/20 13:30

Client ID: SL2-7 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 78%

74

Prep Dilution Date Date Analytical Method Qualifier Factor **Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.0 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B 97,6020B ΑM 23 10 97,6020B Arsenic, Total mg/kg 0.62 12/01/20 15:01 12/02/20 09:52 EPA 3050B AM Barium, Total 14 mg/kg 3.7 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B 97,6020B ΑM Beryllium, Total 0.54 mg/kg 0.37 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.25 AM 14 2.5 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 31 mg/kg 0.74 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.095 12/01/20 14:49 12/01/20 19:27 EPA 7471B VW 32 10 97,6020B Nickel, Total mg/kg 1.2 12/01/20 15:01 12/02/20 09:52 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.5 12/01/20 15:01 12/02/20 09:52 EPA 3050B AM ND 10 97,6020B Silver, Total 0.62 --12/01/20 15:01 12/02/20 09:52 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.50 --12/01/20 15:01 12/02/20 09:52 EPA 3050B ΑM 97,6020B Vanadium, Total 200 1.2 10 12/01/20 15:01 12/02/20 09:52 EPA 3050B AM mg/kg

12

mg/kg

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10

12/01/20 15:01 12/02/20 09:52 EPA 3050B



97,6020B

AM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-29 Date Collected: 11/13/20 14:00

Client ID: SL2-8 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

84% Percent Solids: Dilution Date Date Prep **Analytical** Method Qualifier **Factor Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total 2.1 mg/kg 1.8 10 12/01/20 15:01 12/02/20 09:57 EPA 3050B 97,6020B ΑM 20 10 97,6020B Arsenic, Total mg/kg 0.58 12/01/20 15:01 12/02/20 09:57 EPA 3050B AM Barium, Total 19 mg/kg 3.5 10 12/01/20 15:01 12/02/20 09:57 EPA 3050B 97,6020B ΑM Beryllium, Total 0.55 0.35 10 12/01/20 15:01 12/02/20 09:57 EPA 3050B 97,6020B AM mg/kg ND 10 97,6020B Cadmium, Total mg/kg 0.23 12/01/20 15:01 12/02/20 09:57 EPA 3050B AM 28 2.3 10 97,6020B Chromium, Total mg/kg 12/01/20 15:01 12/02/20 09:57 EPA 3050B ΑM 12/01/20 15:01 12/02/20 09:57 EPA 3050B Lead, Total 40 0.69 10 97,6020B mg/kg AM ND 97,7471B 0.076 1 12/01/20 14:49 12/01/20 19:31 EPA 7471B VW Mercury, Total mg/kg 10 97,6020B Nickel, Total 40 mg/kg 1.2 12/01/20 15:01 12/02/20 09:57 EPA 3050B ΑM Selenium, Total ND 2.3 10 12/01/20 15:01 12/02/20 09:57 EPA 3050B 97,6020B AM mg/kg ND 97,6020B 0.58 --10 12/01/20 15:01 12/02/20 09:57 EPA 3050B ΑM Silver, Total mg/kg 97,6020B Thallium, Total ND mg/kg 0.46 --10 12/01/20 15:01 12/02/20 09:57 EPA 3050B ΑM Vanadium, Total 110 1.2 10 12/01/20 15:01 12/02/20 09:57 EPA 3050B 97,6020B AM mg/kg 120 12 10 12/01/20 15:01 12/02/20 09:57 EPA 3050B 97,6020B Zinc, Total mg/kg AM Acid Volatile Sulfide w/Simultaneously Extracted Metals - Mansfield Lab 36,-Sulfide, Acid Volatile ND umoles/gm 0.624 1 36,-TM ND 0.001357 5 11/21/20 10:44 11/23/20 14:30 36,-1,6020B Cadmium, Total ΑM umoles/g Copper, Total 0.830047 0.012004 5 11/21/20 10:44 11/23/20 14:30 36,-1,6020B AM umoles/g Lead, Total 0.152185 umoles/g 0.007362 5 11/21/20 10:44 11/23/20 14:30 36,-1,6020B ΑM 5 1,6020B 0.105079 0.025988 36,-Nickel, Total 11/21/20 10:44 11/23/20 14:30 ΑM umoles/g --Zinc, Total 0.678504 0.023336 --5 11/21/20 10:44 11/23/20 14:30 36,-1,6020B ΑM umoles/g

0

NA

5

11/21/20 10:44 11/23/20 14:30



1,6020B

AM

36,-

SEM/AVS Ratio

NA

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-30 Date Collected: 11/13/20 13:15

Client ID: SL2-9 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

81

73% Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.1 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B ΑM Arsenic, Total 8.0 0.65 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B mg/kg AM 97,6020B Barium, Total 6.3 mg/kg 3.9 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B ΑM Beryllium, Total ND mg/kg 0.39 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B AM ND 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.26 AM 10 2.6 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 22 mg/kg 0.78 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B AM ND 1 97,7471B VW Mercury, Total mg/kg 0.110 12/01/20 14:49 12/01/20 19:34 EPA 7471B 17 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B 97,6020B Nickel, Total mg/kg 1.3 ΑM 10 97,6020B Selenium, Total ND mg/kg 2.6 12/01/20 15:01 12/02/20 10:02 EPA 3050B AM ND 10 97,6020B Silver, Total 0.65 --12/01/20 15:01 12/02/20 10:02 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.52 --12/01/20 15:01 12/02/20 10:02 EPA 3050B ΑM 97,6020B Vanadium, Total 49 1.3 10 12/01/20 15:01 12/02/20 10:02 EPA 3050B AM mg/kg

13

mg/kg

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10

12/01/20 15:01 12/02/20 10:02 EPA 3050B



97,6020B

AM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-31 Date Collected: 11/13/20 13:11

Client ID: SL2-10 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 72%

i crociit Collas.	,•					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals	- Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.1		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Arsenic, Total	43		mg/kg	0.67		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Barium, Total	13		mg/kg	4.0		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Beryllium, Total	0.59		mg/kg	0.40		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.27		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Chromium, Total	13		mg/kg	2.7		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Lead, Total	42		mg/kg	0.80		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.100		1	12/01/20 14:49	12/01/20 19:37	EPA 7471B	97,7471B	VW
Nickel, Total	45		mg/kg	1.3		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.7		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.67		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.54		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Vanadium, Total	97		mg/kg	1.3		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM
Zinc, Total	150		mg/kg	13		10	12/01/20 15:01	12/02/20 10:07	EPA 3050B	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-32 Date Collected: 11/13/20 14:35

Client ID: SL3-1 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 68%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.3 10 11/30/20 15:47 12/01/20 13:57 EPA 3050B 97,6020B ΑM Arsenic, Total 10 10 97,6020B mg/kg 0.73 11/30/20 15:47 12/01/20 13:57 EPA 3050B AM 97,6020B Barium, Total 21 mg/kg 4.4 10 11/30/20 15:47 12/01/20 13:57 EPA 3050B ΑM Beryllium, Total ND mg/kg 0.44 10 11/30/20 15:47 12/01/20 13:57 EPA 3050B 97,6020B AM ND 10 11/30/20 15:47 12/01/20 13:57 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.29 AM 38 2.9 10 11/30/20 15:47 12/01/20 13:57 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 50 mg/kg 0.87 10 11/30/20 15:47 12/01/20 13:57 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.106 11/30/20 15:55 11/30/20 19:23 EPA 7471B EW 10 97,6020B Nickel, Total 45 mg/kg 1.4 11/30/20 15:47 12/01/20 13:57 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.9 11/30/20 15:47 12/01/20 13:57 EPA 3050B AM ND 10 97,6020B Silver, Total 0.73 --11/30/20 15:47 12/01/20 13:57 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.58 --11/30/20 15:47 12/01/20 13:57 EPA 3050B ΑM

10

10

11/30/20 15:47 12/01/20 13:57 EPA 3050B

11/30/20 15:47 12/01/20 13:57 EPA 3050B

1.4

14

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mg/kg

mg/kg



97,6020B

97,6020B

AM

AM

Vanadium, Total

Zinc, Total

110

110

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-33 Date Collected: 11/13/20 15:30

Client ID: SL3-2 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Mercury, Total

Selenium, Total

Nickel, Total

Silver, Total

Zinc, Total

Thallium, Total

Vanadium, Total

Matrix: Sediment Percent Solids: 64%

0.120

32

ND

ND

ND

100

92

Prep Dilution Date Date Analytical Method Qualifier Factor **Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.4 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B AM 9.0 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B Arsenic, Total mg/kg 0.76 ΑM Barium, Total 28 mg/kg 4.6 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B ΑM Beryllium, Total 0.56 mg/kg 0.46 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B AM ND 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.30 AM 23 3.0 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 47 mg/kg 0.91 10 11/30/20 15:47 12/01/20 14:02 EPA 3050B 97,6020B AM

0.110

1.5

3.0

0.76

0.61

1.5

15

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--

--

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

1

10

10

10

10

10

10

11/30/20 15:55 11/30/20 19:33 EPA 7471B

11/30/20 15:47 12/01/20 14:02 EPA 3050B



97,7471B

97,6020B

97,6020B

97,6020B

97,6020B

97,6020B

97,6020B

EW

ΑM

AM

ΑM

ΑM

AM

AM

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-34 Date Collected: 11/13/20 15:00

Client ID: SL3-3 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

60% Percent Solids: Dilution Date Date Prep **Analytical** Method Qualifier **Factor Prepared** Analyzed Method **Parameter** Result Units RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.7 10 11/30/20 15:47 12/01/20 14:07 EPA 3050B 97,6020B ΑM 10 10 97,6020B Arsenic, Total mg/kg 0.83 11/30/20 15:47 12/01/20 14:07 EPA 3050B AM Barium, Total 16 mg/kg 5.0 10 11/30/20 15:47 12/01/20 14:07 EPA 3050B 97,6020B ΑM Beryllium, Total 0.51 0.50 10 11/30/20 15:47 12/01/20 14:07 EPA 3050B 97,6020B AM mg/kg ND 10 97,6020B Cadmium, Total mg/kg 0.33 11/30/20 15:47 12/01/20 14:07 EPA 3050B AM 22 3.3 10 97,6020B Chromium, Total mg/kg 11/30/20 15:47 12/01/20 14:07 EPA 3050B ΑM Lead, Total 30 1.0 10 97,6020B mg/kg 11/30/20 15:47 12/01/20 14:07 EPA 3050B AM 97,7471B 0.120 1 11/30/20 15:55 11/30/20 19:36 EPA 7471B EW Mercury, Total mg/kg 0.116 10 97,6020B Nickel, Total 25 mg/kg 1.7 11/30/20 15:47 12/01/20 14:07 EPA 3050B ΑM Selenium, Total ND 3.3 10 11/30/20 15:47 12/01/20 14:07 EPA 3050B 97,6020B AM mg/kg ND 97,6020B 0.83 --10 11/30/20 15:47 12/01/20 14:07 EPA 3050B ΑM Silver, Total mg/kg 97,6020B Thallium, Total ND mg/kg 0.67 --10 11/30/20 15:47 12/01/20 14:07 EPA 3050B ΑM Vanadium, Total 130 1.7 10 11/30/20 15:47 12/01/20 14:07 EPA 3050B 97,6020B AM mg/kg 70 17 10 97,6020B Zinc, Total mg/kg 11/30/20 15:47 12/01/20 14:07 EPA 3050B AM Acid Volatile Sulfide w/Simultaneously Extracted Metals - Mansfield Lab 36,-Sulfide, Acid Volatile 7.21 umoles/gm 0.624 1 36,-TM ND 0.002383 5 36,-1,6020B Cadmium, Total 11/21/20 10:44 11/23/20 14:35 ΑM umoles/g Copper, Total 0.122005 0.021075 5 11/21/20 10:44 11/23/20 14:35 36,-1,6020B ΑM umoles/g Lead, Total 0.126350 umoles/g 0.012926 5 11/21/20 10:44 11/23/20 14:35 36,-1,6020B ΑM 5 36,-1,6020B Nickel, Total 0.200296 0.045625 11/21/20 10:44 11/23/20 14:35 ΑM umoles/g --

0.040969

umoles/g

--

NA

5

5

11/21/20 10:44 11/23/20 14:35

11/21/20 10:44 11/23/20 14:35



1,6020B

1,6020B

ΑM

AM

36,-

36,-

Zinc, Total

SEM/AVS Ratio

0.594173

0.144636

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-35 Date Collected: 11/13/20 14:55 Client ID: SL3-4 (0-0.5') Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 66%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.3 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B ΑM Arsenic, Total 10 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B mg/kg 0.72 AM 97,6020B Barium, Total 17 mg/kg 4.3 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B ΑM Beryllium, Total 0.52 mg/kg 0.43 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B AM ND 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.29 AM 20 2.9 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 29 mg/kg 0.86 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.107 11/30/20 15:55 11/30/20 19:40 EPA 7471B EW 10 97,6020B Nickel, Total 40 mg/kg 1.4 11/30/20 15:47 12/01/20 14:12 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.9 11/30/20 15:47 12/01/20 14:12 EPA 3050B AM ND 10 97,6020B Silver, Total 0.72 --11/30/20 15:47 12/01/20 14:12 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.57 --11/30/20 15:47 12/01/20 14:12 EPA 3050B ΑM 97,6020B Vanadium, Total 140 1.4 10 11/30/20 15:47 12/01/20 14:12 EPA 3050B AM mg/kg 59 14 --10 11/30/20 15:47 12/01/20 14:12 EPA 3050B 97,6020B Zinc, Total mg/kg AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-36
 Date Collected:
 11/13/20 14:51

 Client ID:
 SL3-5 (0-0.5')
 Date Received:
 11/13/20

Client ID: SL3-5 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 71%

Percent Solids:	1 1 /0					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals -	- Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.2		10	11/30/20 15:47	7 12/01/20 14:17	EPA 3050B	97,6020B	AM
Arsenic, Total	9.9		mg/kg	0.68		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Barium, Total	11		mg/kg	4.0		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Beryllium, Total	0.48		mg/kg	0.40		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.27		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Chromium, Total	13		mg/kg	2.7		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Lead, Total	29		mg/kg	0.81		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.092		1	11/30/20 15:55	5 11/30/20 19:43	EPA 7471B	97,7471B	EW
Nickel, Total	78		mg/kg	1.4		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.7		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.68		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.54		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Vanadium, Total	310		mg/kg	1.4		10	11/30/20 15:47	12/01/20 14:17	EPA 3050B	97,6020B	AM
Zinc, Total	63		mg/kg	14		10	11/30/20 15:47	7 12/01/20 14:17	EPA 3050B	97,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-37 Date Collected: 11/13/20 14:40

Client ID: SL3-6 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 55%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.8 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B ΑM Arsenic, Total 15 0.88 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B mg/kg AM Barium, Total 31 mg/kg 5.3 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B ΑM Beryllium, Total 0.77 mg/kg 0.53 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B AM ND 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.35 AM 40 3.5 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 74 mg/kg 1.0 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B AM 1 97,7471B Mercury, Total 0.206 0.132 11/30/20 15:55 11/30/20 19:46 EPA 7471B EW mg/kg 10 97,6020B Nickel, Total 46 mg/kg 1.8 11/30/20 15:47 12/01/20 14:22 EPA 3050B ΑM 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B Selenium, Total ND mg/kg 3.5 AM ND 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B Silver, Total 0.88 --ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.70 --11/30/20 15:47 12/01/20 14:22 EPA 3050B ΑM 97,6020B Vanadium, Total 180 1.8 10 11/30/20 15:47 12/01/20 14:22 EPA 3050B AM mg/kg 84 18 --10 11/30/20 15:47 12/01/20 14:22 EPA 3050B 97,6020B Zinc, Total mg/kg AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-38 Date Collected: 11/13/20 15:10

Client ID: SL3-7 (0-0.5') Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment Percent Solids: 59%

Percent Solids: 59% Dilution Date Date Prep Analytical Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analy

Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals	- Mansfield	d Lab									
Antimony, Total	ND		mg/kg	2.6		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Arsenic, Total	21		mg/kg	0.82		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Barium, Total	30		mg/kg	4.9		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Beryllium, Total	0.77		mg/kg	0.49		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.33		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Chromium, Total	37		mg/kg	3.3		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Lead, Total	55		mg/kg	0.98		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Mercury, Total	0.167		mg/kg	0.128		1	11/30/20 15:55	11/30/20 19:50	EPA 7471B	97,7471B	EW
Nickel, Total	28		mg/kg	1.6		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	3.3		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.82		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.65		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Vanadium, Total	100		mg/kg	1.6		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Zinc, Total	84		mg/kg	16		10	11/30/20 15:47	12/01/20 14:27	EPA 3050B	97,6020B	AM
Acid Volatile Sulfid	e w/Simult	aneously	Extracted	Metals -	Mansfi	eld Lab					
Sulfide, Acid Volatile	8.49		umoles/gm	0.624		1			36,-	36,-	TM
Cadmium, Total	ND		umoles/g	0.003473		5	11/21/20 10:44	11/23/20 14:40	36,-	1,6020B	AM
Copper, Total	0.399660		umoles/g	0.030715		5	11/21/20 10:44	11/23/20 14:40	36,-	1,6020B	AM
Lead, Total	0.290325		umoles/g	0.018838		5	11/21/20 10:44	11/23/20 14:40	36,-	1,6020B	AM
Nickel, Total	0.219380		umoles/g	0.066494		5	11/21/20 10:44	11/23/20 14:40	36,-	1,6020B	AM
Zinc, Total	1.01609		umoles/g	0.059710		5	11/21/20 10:44	11/23/20 14:40	36,-	1,6020B	AM
SEM/AVS Ratio	0.226791		-	-	NA	5	11/21/20 10:44	11/23/20 14:40	36,-	1,6020B	AM



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-39 Date Collected: 11/13/20 14:33

Client ID: SL3-8 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 62%

Dilution Date Date Prep Analytical

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals	s - Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.5		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Arsenic, Total	12		mg/kg	0.78		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Barium, Total	32		mg/kg	4.7		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Beryllium, Total	0.58		mg/kg	0.47		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.31		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Chromium, Total	37		mg/kg	3.1		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Lead, Total	52		mg/kg	0.94		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Mercury, Total	0.191		mg/kg	0.120		1	11/30/20 15:55	11/30/20 19:53	EPA 7471B	97,7471B	EW
Nickel, Total	24		mg/kg	1.6		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	3.1		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.78		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.63		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Vanadium, Total	120		mg/kg	1.6		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM
Zinc, Total	81		mg/kg	16		10	11/30/20 15:47	12/01/20 14:32	EPA 3050B	97,6020B	AM



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

SAMPLE RESULTS

Lab ID: L2050541-40 Date Collected: 11/13/20 14:11

Client ID: SL3-9 (0-0.5') Date Received: 11/13/20

6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Sample Location: Not Specified

Sample Depth:

Sediment Matrix: 68%

Percent Solids: Prep Dilution Date Date Analytical Method Qualifier Units Factor **Prepared** Analyzed Method **Parameter** Result RL MDL Analyst MCP Total Metals - Mansfield Lab Antimony, Total ND mg/kg 2.2 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B ΑM Arsenic, Total 12 0.70 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B mg/kg AM Barium, Total 18 mg/kg 4.2 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B ΑM Beryllium, Total 0.45 mg/kg 0.42 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B AM ND 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B Cadmium, Total mg/kg 0.28 AM 18 2.8 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B Chromium, Total mg/kg ΑM Lead, Total 37 mg/kg 0.83 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B AM ND 1 97,7471B Mercury, Total mg/kg 0.101 11/30/20 15:55 11/30/20 19:56 EPA 7471B EW 10 97,6020B Nickel, Total 19 mg/kg 1.4 11/30/20 15:47 12/01/20 14:36 EPA 3050B ΑM 10 97,6020B Selenium, Total ND mg/kg 2.8 11/30/20 15:47 12/01/20 14:36 EPA 3050B AM ND 0.70 10 97,6020B Silver, Total --11/30/20 15:47 12/01/20 14:36 EPA 3050B ΑM mg/kg ND 10 97,6020B Thallium, Total mg/kg 0.56 --11/30/20 15:47 12/01/20 14:36 EPA 3050B ΑM 97,6020B Vanadium, Total 80 1.4 10 11/30/20 15:47 12/01/20 14:36 EPA 3050B AM mg/kg 52 14 --10 11/30/20 15:47 12/01/20 14:36 EPA 3050B 97,6020B

mg/kg



AM

Zinc, Total

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

**Project Number:** 414883 **Report Date:** 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-41
 Date Collected:
 11/13/20 14:09

 Client ID:
 SL3-10 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 79%

Dilution Date Prep Analytical

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Method	Analyst
MCP Total Metals	s - Mansfiel	d Lab									
Antimony, Total	ND		mg/kg	2.0		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Arsenic, Total	5.1		mg/kg	0.63		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Barium, Total	6.7		mg/kg	3.8		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Beryllium, Total	ND		mg/kg	0.38		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.25		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Chromium, Total	8.0		mg/kg	2.5		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Lead, Total	13		mg/kg	0.76		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.086		1	11/30/20 15:55	5 11/30/20 20:00	EPA 7471B	97,7471B	EW
Nickel, Total	11		mg/kg	1.2		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.5		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.63		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.50		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Vanadium, Total	23		mg/kg	1.2		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM
Zinc, Total	21		mg/kg	12		10	11/30/20 15:47	7 12/01/20 14:41	EPA 3050B	97,6020B	AM



11/13/20 12:06

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-42

Client ID: DuP-1 Date Received: 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 85%

Dilution Date Date Prep Analytical

Factor Propaged Analyzed Method Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals	s - Mansfiel	d Lab									
Antimony, Total	2.2		mg/kg	1.8		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Arsenic, Total	10		mg/kg	0.57		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Barium, Total	20		mg/kg	3.4		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Beryllium, Total	0.41		mg/kg	0.34		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.23		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Chromium, Total	17		mg/kg	2.3		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Lead, Total	25		mg/kg	0.68		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.084		1	11/30/20 15:55	11/30/20 20:03	EPA 7471B	97,7471B	EW
Nickel, Total	1000		mg/kg	1.1		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.3		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.57		10	11/30/20 15:47	' 12/01/20 15:07	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.45		10	11/30/20 15:47	12/01/20 15:07	EPA 3050B	97,6020B	AM
Vanadium, Total	6000		mg/kg	5.7		50	11/30/20 15:47	' 12/01/20 15:42	EPA 3050B	97,6020B	AM
Zinc, Total	61		mg/kg	11		10	11/30/20 15:47	' 12/01/20 15:07	EPA 3050B	97,6020B	AM



11/13/20 13:51

Date Collected:

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-43

Client ID: DUP-2 Date Received: 11/13/20
Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 71%

						Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
MCP Total Metals - I	Mansfield	Lab									
Antimony, Total	ND		mg/kg	2.2		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Arsenic, Total	15		mg/kg	0.70		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Barium, Total	14		mg/kg	4.2		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Beryllium, Total	0.51		mg/kg	0.42		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Cadmium, Total	ND		mg/kg	0.28		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Chromium, Total	12		mg/kg	2.8		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Lead, Total	40		mg/kg	0.84		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Mercury, Total	ND		mg/kg	0.100		1	11/30/20 15:55	11/30/20 20:13	EPA 7471B	97,7471B	EW
Nickel, Total	34		mg/kg	1.4		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Selenium, Total	ND		mg/kg	2.8		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Silver, Total	ND		mg/kg	0.70		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Thallium, Total	ND		mg/kg	0.56		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Vanadium, Total	100		mg/kg	1.4		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM
Zinc, Total	66		mg/kg	14		10	11/30/20 15:47	12/01/20 15:12	EPA 3050B	97,6020B	AM



L2050541

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number:

Project Number: 414883 Report Date: 12/04/20

# Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Acid Volatile Sulfide w WG1436715-1	v/Simultaneously Extra	cted Meta	ls - Mans	field La	ab for samp	ole(s): 14,17,24	4,29,34,38 E	Batch:	
Cadmium, Total	ND	umoles/g	0.008897		5	11/21/20 10:44	11/23/20 12:35	1,6020B	AM
Copper, Total	ND	umoles/g	0.078691		5	11/21/20 10:44	11/23/20 12:35	1,6020B	AM
Lead, Total	ND	umoles/g	0.048263		5	11/21/20 10:44	11/23/20 12:35	1,6020B	AM
Nickel, Total	ND	umoles/g	0.170358		5	11/21/20 10:44	11/23/20 12:35	1,6020B	AM
Zinc, Total	ND	umoles/g	0.152975		5	11/21/20 10:44	11/23/20 12:35	5 1,6020B	AM

**Prep Information** 

Digestion Method: 36,-

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals -	- Mansfield Lab for s	ample(s):	01-11	Batch:	WG143877	<b>'</b> 9-1			
Antimony, Dissolved	ND	mg/l	0.0040		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Arsenic, Dissolved	ND	mg/l	0.0005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Barium, Dissolved	ND	mg/l	0.0005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Beryllium, Dissolved	ND	mg/l	0.0005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Cadmium, Dissolved	ND	mg/l	0.0005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Chromium, Dissolved	ND	mg/l	0.0010		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Lead, Dissolved	ND	mg/l	0.0010		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Nickel, Dissolved	ND	mg/l	0.0020		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Selenium, Dissolved	ND	mg/l	0.005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Silver, Dissolved	ND	mg/l	0.0005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Thallium, Dissolved	ND	mg/l	0.0005		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Vanadium, Dissolved	ND	mg/l	0.0050		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM
Zinc, Dissolved	ND	mg/l	0.0100		1	11/30/20 09:22	11/30/20 15:39	97,6020B	AM

**Prep Information** 

Digestion Method: EPA 3005A



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

**Report Date:** 12/04/20

# Method Blank Analysis Batch Quality Control

Parameter	Result Quali	fier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
MCP Dissolved Metals	- Mansfield Lab	for sample(s):	01-11	Batch:	WG1438780	)-1			
Mercury, Dissolved	ND	mg/l	0.0002		1	11/30/20 09:26	11/30/20 14:41	97,7470A	EW

#### **Prep Information**

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - N	Mansfield Lab for samp	le(s): 12-3	31 Bato	h: WG	1438827-1				
Antimony, Total	ND	mg/kg	1.6		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Arsenic, Total	ND	mg/kg	0.50		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Barium, Total	ND	mg/kg	3.0		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Beryllium, Total	ND	mg/kg	0.30		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Cadmium, Total	ND	mg/kg	0.20		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Chromium, Total	ND	mg/kg	2.0		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Lead, Total	ND	mg/kg	0.60		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Nickel, Total	ND	mg/kg	1.0		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Selenium, Total	ND	mg/kg	2.0		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Silver, Total	ND	mg/kg	0.50		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Thallium, Total	ND	mg/kg	0.40		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Vanadium, Total	ND	mg/kg	1.0		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM
Zinc, Total	ND	mg/kg	10		10	12/01/20 15:01	12/01/20 16:59	97,6020B	AM

**Prep Information** 

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared		Analytical Method	
MCP Total Metals - Mai	nsfield Lab for samp	le(s): 12-3	1 Batcl	h: WG	1438828-1				
Mercury, Total	ND	mg/kg	0.083		1	12/01/20 15:19	12/01/20 17:35	97,7471B	VW



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

ENDINIDGE WETWOOTH COMITICESOR

Lab Number:

L2050541

Project Number: 414883

Report Date:

12/04/20

# Method Blank Analysis Batch Quality Control

#### **Prep Information**

Digestion Method: EPA 7471B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mai	nsfield Lab for samp	le(s): 32-4	13 Bato	ch: WG	1438829-1				
Antimony, Total	ND	mg/kg	1.6		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Arsenic, Total	ND	mg/kg	0.50		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Barium, Total	ND	mg/kg	3.0		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Beryllium, Total	ND	mg/kg	0.30		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Cadmium, Total	ND	mg/kg	0.20		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Chromium, Total	ND	mg/kg	2.0		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Lead, Total	ND	mg/kg	0.60		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Nickel, Total	ND	mg/kg	1.0		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Selenium, Total	ND	mg/kg	2.0		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Silver, Total	ND	mg/kg	0.50		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Thallium, Total	ND	mg/kg	0.20		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Vanadium, Total	ND	mg/kg	1.0		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM
Zinc, Total	ND	mg/kg	10		10	11/30/20 15:47	12/01/20 12:49	97,6020B	AM

#### **Prep Information**

Digestion Method: EPA 3050B

Parameter	Result Qualifie	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
MCP Total Metals -	Mansfield Lab for sar	mple(s): 32-4	13 Batc	h: WG	1438830-1				
Mercury, Total	ND	mg/kg	0.083		1	11/30/20 15:55	11/30/20 19:07	97,7471B	EW

**Prep Information** 

Digestion Method: EPA 7471B



36,-

TM

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

**Dilution Date Date** Analytical Method Analyst **Result Qualifier** Units RLMDL **Factor Prepared** Analyzed **Parameter** Acid Volatile Sulfide w/Simultaneously Extracted Metals - Mansfield Lab for sample(s): 14,17,24,29,34,38 Batch: WG1439657-1

**Prep Information** 

Digestion Method: 36,-

0.624

umoles/gm



Sulfide, Acid Volatile

ND

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number:

L2050541

Project Number: 414883

Report Date: 12/04/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual RPD Limits
Acid Volatile Sulfide w/Simultaneously Extracted A2METSPIKE	Metals - Mansf	eld Lab Ass	ociated sample(s	3): 14,17,24,	29,34,38 Batch	n: WG1436715-2	SRM Lot Number:
Cadmium, Total	104		-		80-120	-	20
Copper, Total	102		-		80-120	-	20
Lead, Total	104		-		80-120	-	20
Nickel, Total	104		-		80-120	-	20
Zinc, Total	108		-		80-120	-	20
MCP Dissolved Metals - Mansfield Lab Associat	ed sample(s): 0	1-11 Batch	: WG1438779-2	WG14387	79-3		
Antimony, Dissolved	89		99		80-120	11	20
Arsenic, Dissolved	101		103		80-120	2	20
Barium, Dissolved	101		105		80-120	4	20
Beryllium, Dissolved	99		102		80-120	3	20
Cadmium, Dissolved	111		114		80-120	3	20
Chromium, Dissolved	97		99		80-120	2	20
Lead, Dissolved	99		102		80-120	3	20
Nickel, Dissolved	95		96		80-120	1	20
Selenium, Dissolved	102		106		80-120	4	20
Silver, Dissolved	103		105		80-120	2	20
Thallium, Dissolved	97		99		80-120	2	20
Vanadium, Dissolved	97		95		80-120	2	20
Zinc, Dissolved	110		109		80-120	1	20



### Lab Control Sample Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

**Project Number:** 414883

Lab Number: L2050541

Report Date: 12/04/20

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
ICP Dissolved Metals - Mansfield Lab A	Associated sample(s): 01-11	Batch: WG1438780-2 WG	1438780-3		
Mercury, Dissolved	99	101	80-120	2	20
CP Total Metals - Mansfield Lab Assoc	ciated sample(s): 12-31 Batc	h: WG1438827-2 WG1438	827-3 SRM Lot Number:	D109-540	
Antimony, Total	164	168	19-250	2	30
Arsenic, Total	96	98	70-130	2	30
Barium, Total	100	102	75-125	2	30
Beryllium, Total	106	103	75-125	3	30
Cadmium, Total	102	104	75-125	2	30
Chromium, Total	104	99	70-130	5	30
Lead, Total	92	94	72-128	2	30
Nickel, Total	104	98	70-130	6	30
Selenium, Total	102	98	68-132	4	30
Silver, Total	98	94	68-131	4	30
Thallium, Total	89	100	68-131	12	30
Vanadium, Total	104	96	59-141	8	30
Zinc, Total	95	97	70-130	2	30
CP Total Metals - Mansfield Lab Assoc	ciated sample(s): 12-31 Batc	h: WG1438828-2 WG1438	828-3 SRM Lot Number:	D109-540	
Mercury, Total	100	109	60-140	9	30



12/04/20

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

**Project Number:** 414883 Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Total Metals - Mansfield Lab	Associated sample(s): 32-43	Batch: WG1438829-2	WG1438829-3 SRM Lot Numbe	r: D109-540	
Antimony, Total	172	164	19-250	5	30
Arsenic, Total	115	109	70-130	5	30
Barium, Total	113	109	75-125	4	30
Beryllium, Total	112	106	75-125	6	30
Cadmium, Total	117	102	75-125	14	30
Chromium, Total	110	104	70-130	6	30
Lead, Total	108	108	72-128	0	30
Nickel, Total	108	102	70-130	6	30
Selenium, Total	120	114	68-132	5	30
Silver, Total	119	113	68-131	5	30
Thallium, Total	107	98	68-131	9	30
Vanadium, Total	109	105	59-141	4	30
Zinc, Total	114	108	70-130	5	30
MCP Total Metals - Mansfield Lab	Associated sample(s): 32-43	Batch: WG1438830-2	WG1438830-3 SRM Lot Numbe	r: D109-540	
Mercury, Total	86	94	60-140	9	30
Acid Volatile Sulfide w/Simultaneo	usly Extracted Metals - Mansfie	eld Lab Associated samp	ole(s): 14,17,24,29,34,38 Batch:	WG1439657-	2
Sulfide, Acid Volatile	98	-	80-120	-	20



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number: L2050541

**Report Date:** 12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Acid Volatile Sulfide w/Simu L2050541-14 Client ID: S	•	cted Metals	- Mansfield	Lab Associate	ed sample	e(s): 14,1	7,24,29,34,38	QC Ba	tch ID: WG1	14367′	15-3	QC Sample:
Cadmium, Total	ND	0.042527	0.042193	99		-	-		75-125	-		20
Copper, Total	0.324969	0.150299	0.519762	130	Q	-	-		75-125	-		20
Lead, Total	0.194830	0.230695	1.04860	370	Q	-	-		75-125	-		20
Nickel, Total	0.092356	0.162692	0.269029	108		-	-		75-125	-		20
Zinc, Total	0.567617	0.731222	1.32459	104		-	-		75-125	-		20
MCP Dissolved Metals - Ma SW-9	ansfield Lab Asso	ciated samp	ole(s): 01-11	QC Batch I	D: WG14	38779-4	WG1438779-5	QC S	ample: L205	50541-	09 C	Client ID:
Antimony, Dissolved	ND	0.5	0.5530	111		0.5799	116		75-125	5		20
Arsenic, Dissolved	ND	0.12	0.1358	113		0.1215	101		75-125	11		20
Barium, Dissolved	ND	2	2.105	105		2.052	103		75-125	3		20
Beryllium, Dissolved	ND	0.05	0.0474	95		0.0479	96		75-125	1		20
Cadmium, Dissolved	ND	0.051	0.0551	108		0.0514	101		75-125	7		20
Chromium, Dissolved	ND	0.2	0.2004	100		0.1998	100		75-125	0		20
Lead, Dissolved	ND	0.51	0.5367	105		0.5136	101		75-125	4		20
Nickel, Dissolved	ND	0.5	0.4640	93		0.4307	86		75-125	7		20
Selenium, Dissolved	ND	0.12	0.124	103		0.106	88		75-125	16		20
Silver, Dissolved	ND	0.05	0.0516	103		0.0472	94		75-125	9		20
Thallium, Dissolved	ND	0.12	0.1161	97		0.1039	86		75-125	11		20
Vanadium, Dissolved	ND	0.5	0.5085	102		0.4612	92		75-125	10		20
Zinc, Dissolved	ND	0.5	0.5083	102		0.4672	93		75-125	8		20



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number: L2050541

**Report Date:** 12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Foun		Recovery ry Limits	/ RPD	RPD Limits
MCP Dissolved Metals - N SW-9	Mansfield Lab Asso	ociated sam	ple(s): 01-11	QC Batch I	D: WG1438780	)-4 WG1438780	)-5 QC Sample: L2	050541-09	Client ID:
Mercury, Dissolved	ND	0.005	0.0051	102	0.00	49 99	75-125	3	20
MCP Total Metals - Mans 0-0.5')	field Lab Associate	ed sample(s	): 12-31 Q(	C Batch ID: W	G1438827-4 V	VG1438827-5(	QC Sample: L20505	i41-16 CI	ient ID: SL1
Antimony, Total	2.2	48.3	50	99	52	99	75-125	4	35
Arsenic, Total	13	11.6	27	121	24	91	75-125	12	35
Barium, Total	17	193	240	115	24	0 111	75-125	0	35
Beryllium, Total	0.62	4.83	5.6	103	5.0	99	75-125	0	35
Cadmium, Total	ND	4.93	5.4	110	5.	7 112	75-125	5	35
Chromium, Total	16	19.3	40	124	42	130	Q 75-125	5	35
Lead, Total	47	49.3	100	108	10	0 104	75-125	0	35
Nickel, Total	46	48.3	99	110	88	84	75-125	12	35
Selenium, Total	ND	11.6	12	103	12	100	75-125	0	35
Silver, Total	ND	29	30	103	32	2 106	75-125	6	35
Thallium, Total	ND	11.6	12	103	13	108	75-125	8	35
Vanadium, Total	160	48.3	290	269	Q 20	0 80	75-125	37	Q 35
Zinc, Total	82	48.3	130	99	13	0 96	75-125	0	35

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

**Report Date:** 12/04/20

arameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
MCP Total Metals - Mansfield 0-0.5')	Lab Associate	d sample(s):	12-31	QC Batch ID: W	G1438827-7 WG1	438827-8 QC	Sample: L205054	1-26	Client ID: SL2-5
Antimony, Total	ND	56.9	58	102	57	105	75-125	2	35
Arsenic, Total	16	13.6	32	117	32	123	75-125	0	35
Barium, Total	21	228	250	101	250	106	75-125	0	35
Beryllium, Total	0.60	5.69	6.1	97	5.9	98	75-125	3	35
Cadmium, Total	ND	5.8	6.1	105	5.9	107	75-125	3	35
Chromium, Total	24	22.8	43	84	44	92	75-125	2	35
Lead, Total	580	58	150	0	Q 150	0	Q 75-125	0	35
Nickel, Total	170	56.9	190	35	Q 130	0	Q 75-125	38	Q 35
Selenium, Total	ND	13.6	14	102	14	108	75-125	0	35
Silver, Total	ND	34.1	36	105	34	105	75-125	6	35
Thallium, Total	ND	13.6	14	102	13	100	75-125	7	35
Vanadium, Total	480	56.9	450	0	Q 510	55	Q 75-125	13	35
Zinc, Total	190	56.9	190	0	Q 200	18	Q 75-125	5	35
MCP Total Metals - Mansfield 0-0.5')	Lab Associate	d sample(s):	12-31	QC Batch ID: W	G1438828-4 WG1	438828-5 QC	Sample: L205054	1-16	Client ID: SL1-5
Mercury, Total	ND	0.182	0.244	134	Q 0.244	134	Q 75-125	0	35
MCP Total Metals - Mansfield 0-0.5')	Lab Associate	d sample(s):	12-31	QC Batch ID: W	G1438828-6 WG1	438828-7 QC	Sample: L205054	1-26	Client ID: SL2-5
Mercury, Total	ND	0.215	0.282	131	Q 0.241	133	Q 75-125	16	35

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits RPD	RPD Limits
Acid Volatile Sulfide w/Simultan L2050541-14 Client ID: SL1-3	•	cted Metals	- Mansfield	Lab Associated	sample(s): 14,17	,24,29,34,38	QC Batch ID: WG143965	7-3 QC Sample:
Sulfide, Acid Volatile	ND	2.028	1.60	79	-	-	75-125 -	20



### Lab Duplicate Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number:

L2050541 12/04/20

**Project Number:** 414883

Report Date:

Parameter	Native Sample	e Duplicate Sample	Units	RPD	Qual RP	D Limits
Acid Volatile Sulfide w/Simultaneously Extracted Metals L2050541-14 Client ID: SL1-3 (0-0.5')	- Mansfield Lab	Associated sample(s): 14,17,2	24,29,34,38	QC Batch ID:	WG1436715-4	QC Sample:
Cadmium, Total	ND	ND	umoles/g	NC		20
Copper, Total	0.324969	0.384555	umoles/g	17		20
Lead, Total	0.194830	0.252061	umoles/g	26	Q	20
Nickel, Total	0.092356	0.106661	umoles/g	14		20
Zinc, Total	0.567617	0.632804	umoles/g	11		20
Acid Volatile Sulfide w/Simultaneously Extracted Metals L2050541-14 Client ID: SL1-3 (0-0.5')	- Mansfield Lab	Associated sample(s): 14,17,2	24,29,34,38	QC Batch ID:	WG1439657-4	QC Sample:
Sulfide, Acid Volatile	ND	ND	umoles/gm	NC		20



**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

**Lab Serial Dilution** Analysis
Batch Quality Control

Lab Number:

Report Date:

L2050541 12/04/20

Project Number: 414883

Parameter			Native	Sample	Serial Dilut	ion Units	% D	Qual	RPD Limits
MCP Total Metals -	- Mansfield Lab	Associated sample(s):	12-31	QC Batch ID:	WG1438827-6	QC Sample: L205054	11-16 Clie	ent ID: SL	1-5 (0-0.5')
Lead, Total			•	47	48	mg/kg	2		20
Nickel, Total			•	46	47	mg/kg	2		20
MCP Total Metals -	- Mansfield Lab	Associated sample(s):	12-31	QC Batch ID:	WG1438827-6	QC Sample: L205054	11-16 Clie	ent ID: SL	1-5 (0-0.5')
Vanadium, Total			160		170	mg/kg	6		20
MCP Total Metals -	- Mansfield Lab	Associated sample(s):	12-31	QC Batch ID:	WG1438827-9	QC Sample: L205054	11-26 Clie	ent ID: SL	2-5 (0-0.5')
Lead, Total			5	80	290	mg/kg	50	Q	20
Nickel, Total			170		170	mg/kg	0		20
Vanadium, Total			480		480	mg/kg	0		20

## INORGANICS & MISCELLANEOUS



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-12 Date Collected: 11/13/20 13:00

Client ID: SL1-1 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	73.6		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-13 Date Collected: 11/13/20 11:32

Client ID: SL1-2 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	75.1		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-14 Date Collected: 11/13/20 11:52

Client ID: SL1-3 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mar	nsfield Lab									
Total Organic Carbon (Rep1)	8.52		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Rep2)	10.6		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Average)	9.58		%	0.050		1	-	11/30/20 11:14	13,-	SP
General Chemistry - Westb	orough Lab	)								
Solids, Total	69.3		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-15 Date Collected: 11/13/20 11:45

Client ID: SL1-4 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	76.5		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-16 Date Collected: 11/13/20 11:50

Client ID: SL1-5 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	79.0		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-17 Date Collected: 11/13/20 12:20

Client ID: SL1-6 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth: Matrix: Sediment

Dilution Date Date Analytical **Factor Prepared** Analyzed Method **Parameter** Result **Qualifier Units** RLMDL **Analyst** Total Organic Carbon - Mansfield Lab Total Organic Carbon (Rep1) 10.7 % 0.050 1 11/30/20 11:14 13,-SP Total Organic Carbon (Rep2) 10.3 % 0.050 --1 11/30/20 11:14 13,-SP Total Organic Carbon (Average) 10.5 % 0.050 1 11/30/20 11:14 13,-SP --General Chemistry - Westborough Lab Solids, Total % 0.100 RΙ 83.0 NA 1 11/17/20 09:33 121,2540G



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-18 Date Collected: 11/13/20 12:05

Client ID: SL1-7 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

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	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-19 Date Collected: 11/13/20 12:15

Client ID: SL1-8 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab	)								
Solids, Total	85.0		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-20 Date Collected: 11/13/20 12:30

Client ID: SL1-9 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	· - Westborough Lab									
Solids, Total	84.8		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-21
 Date Collected:
 11/13/20 11:24

 Client ID:
 SL1-10 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	64.2		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-22 Date Collected: 11/13/20 13:05

Client ID: SL2-1 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result (	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	63.4		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-23 Date Collected: 11/13/20 13:45

Client ID: SL2-2 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	56.7		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-24 Date Collected: 11/13/20 14:48

Client ID: SL2-3 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

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Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mar	nsfield Lab									
Total Organic Carbon (Rep1)	8.21		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Rep2)	9.24		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Average)	8.72		%	0.050		1	-	11/30/20 11:14	13,-	SP
General Chemistry - Westb	orough Lab	)								
Solids, Total	56.8		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-25
 Date Collected:
 11/13/20 13:50

 Client ID:
 SL2-4 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	73.1		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-26 Date Collected: 11/13/20 13:35

Client ID: SL2-5 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result (	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	69.6		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-27 Date Collected: 11/13/20 13:35

Client ID: SL2-6 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	67.2		%	0.100	NA	1	-	11/19/20 22:20	121,2540G	TR



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-28 Date Collected: 11/13/20 13:30

Client ID: SL2-7 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result Q	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	78.4		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-29 Date Collected: 11/13/20 14:00

Client ID: SL2-8 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mar	nsfield Lab									
Total Organic Carbon (Rep1)	2.94		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Rep2)	2.87		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Average)	2.90		%	0.050		1	-	11/30/20 11:14	13,-	SP
General Chemistry - Westb	orough Lab	)								
Solids, Total	84.4		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-30 Date Collected: 11/13/20 13:15

Client ID: SL2-9 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

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	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-31
 Date Collected:
 11/13/20 13:11

 Client ID:
 SL2-10 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	72.0		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-32 Date Collected: 11/13/20 14:35

Client ID: SL3-1 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	67.7		%	0.100	NA	1	-	11/17/20 09:33	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-33 Date Collected: 11/13/20 15:30

Client ID: SL3-2 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab	)								
Solids, Total	63.5		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-34 Date Collected: 11/13/20 15:00

Client ID: SL3-3 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mar	nsfield Lab									
Total Organic Carbon (Rep1)	4.48		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Rep2)	4.20		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Average)	4.34		%	0.050		1	-	11/30/20 11:14	13,-	SP
General Chemistry - Westb	orough Lab	)								
Solids, Total	59.8		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-35 Date Collected: 11/13/20 14:55

Client ID: SL3-4 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	· Westborough Lab									
Solids, Total	65.6		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

 Lab ID:
 L2050541-36
 Date Collected:
 11/13/20 14:51

 Client ID:
 SL3-5 (0-0.5')
 Date Received:
 11/13/20

Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	70.9		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-37 Date Collected: 11/13/20 14:40

Client ID: SL3-6 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab									
Solids, Total	54.8		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-38 Date Collected: 11/13/20 15:10

Client ID: SL3-7 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mar	nsfield Lab									
Total Organic Carbon (Rep1)	4.63		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Rep2)	4.14		%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Average)	4.38		%	0.050		1	-	11/30/20 11:14	13,-	SP
General Chemistry - Westb	orough Lab	)								
Solids, Total	59.1		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-39 Date Collected: 11/13/20 14:33

Client ID: SL3-8 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	· Westborough Lab									
Solids, Total	61.8		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-40 Date Collected: 11/13/20 14:11

Client ID: SL3-9 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	· - Westborough Lab									
Solids, Total	68.4		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-41 Date Collected: 11/13/20 14:09

Client ID: SL3-10 (0-0.5') Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

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	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-42 Date Collected: 11/13/20 12:06

Client ID: DUP-1 Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	· Westborough Lab									
Solids, Total	85.1		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

**SAMPLE RESULTS** 

Lab ID: L2050541-43 Date Collected: 11/13/20 13:51

Client ID: DUP-2 Date Received: 11/13/20 Sample Location: 6 BRIDGE STREET, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab									
Solids, Total	70.5		%	0.100	NA	1	-	11/17/20 10:03	121,2540G	RI



Project Name: ENBRIDGE WEYMOUTH COMPRESS( Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Ma	ansfield Lab for samp	ole(s): 14,	17,24,29	,34,38	Batch: Wo	G1437504-1			
Total Organic Carbon (Rep1)	ND	%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Rep2)	ND	%	0.050		1	-	11/30/20 11:14	13,-	SP
Total Organic Carbon (Average)	ND	%	0.050		1	-	11/30/20 11:14	13,-	SP



# Lab Control Sample Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Lab Number: L2050541

**Project Number:** 414883

Report Date: 12/04/20

Parameter	LCS %Recovery	LCSD Qual %Recover	'Y Qual	%Recovery Limits	RPD	Qual RPD Limits	
Total Organic Carbon - Mansfield Lab Ass	ociated sample(s):	14,17,24,29,34,38 E	Batch: WG1437	7504-2			
Total Organic Carbon (Rep1)	121	-		75-125	-	25	
Total Organic Carbon (Rep2)	120	-		75-125	-	25	
Total Organic Carbon (Average)	120	-		75-125	-	25	

# Matrix Spike Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number:

L2050541

Report Date:

12/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	/ Qual	Recovery Limits	RPD	RPD Qual Limits
Total Organic Carbon - Mansfie (0-0.5')	eld Lab Assoc	ciated samp	le(s): 14,17,	24,29,34,38	QC Bat	ch ID: WG	1437504-4	QC Sam	ple: L20505	541-14	Client ID: SL1-3
Total Organic Carbon (Rep1)	8.52	1.61	9.30	48	Q	-	-		75-125	-	25
Total Organic Carbon (Rep2)	10.6	1.21	11.1	41	Q	-	-		75-125	-	25



# Lab Duplicate Analysis Batch Quality Control

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number: L2050541 Report Date: 12/04/20

Parameter	Native Sample	Duplicate Sample	Units I	RPD (	Qual RPD	Limits
General Chemistry - Westborough Lab Assoc 0.5')	ociated sample(s): 12-26,28-32	QC Batch ID: WG1435109-1	QC Sample:	L2050541	-26 Client ID:	SL2-5 (0-
Solids, Total	69.6	68.2	%	2		20
General Chemistry - Westborough Lab Association	ociated sample(s): 33-43 QC Ba	tch ID: WG1435116-1 QC	Sample: L2050	541-33 C	lient ID: SL3-2	(0-0.5')
Solids, Total	63.5	62.4	%	2		20
General Chemistry - Westborough Lab Association	ociated sample(s): 27 QC Batch	ID: WG1436401-1 QC Sar	mple: L2050541	-27 Clien	t ID: SL2-6 (0-0	).5')
Solids, Total	67.2	69.8	%	4		20
Total Organic Carbon - Mansfield Lab Associ (0-0.5')	ciated sample(s): 14,17,24,29,34,	38 QC Batch ID: WG14375	04-3 QC Sam	ple: L205	0541-14 Client	ID: SL1-3
Total Organic Carbon (Rep1)	8.52	8.64	%	1		25
Total Organic Carbon (Rep2)	10.6	7.72	%	31	Q	25
Total Organic Carbon (Average)	9.58	8.18	%	16		25

Project Name: ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Lab Number: L2050541
Report Date: 12/04/20

## Sample Receipt and Container Information

Were project specific reporting limits specified?

**Cooler Information** 

Cooler Custody Seal

A Absent
B Absent
C Absent

Container Info		Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-01A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-01B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-01C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-01X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-BE-6020S-10(180),MCP-PB-6020S-10(180),MCP-7470S-10(28),MCP-SB-6020S-10(180),MCP-TL-6020S-10(180),MCP-SE-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-AS-6020S-10(180),MCP-AS-6020S-10(180),MCP-AS-6020S-10(180),MCP-ZN-6020S-10(180),MCP-V-6020S-10(180),MCP-CR-6020S-10(180),MCP-V-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-02A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-02B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-02C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-02X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-PB-6020S-10(180),MCP-BE-6020S-10(180),MCP-SB-6020S-10(180),MCP-T470S-10(28),MCP-TL-6020S-10(180),MCP-CD-6020S-10(180),MCP-BA-6020S-10(180),MCP-SE-6020S-10(180),MCP-NI-6020S-10(180),MCP-AS-6020S-10(180),MCP-V-6020S-10(180),MCP-ZN-6020S-10(180),MCP-AG-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-03A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-03B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-03C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)



ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883 Report Date: 12/04/20

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-03X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-PB-6020S-10(180),MCP-BE-6020S-10(180),MCP-SB-6020S-10(180),MCP-7470S-10(28),MCP-TL-6020S-10(180),MCP-SE-6020S-10(180),MCP-BE-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-NS-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180)
L2050541-04A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-04B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-04C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-04X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-BE-6020S-10(180),MCP-PB-6020S-10(180),MCP-7470S-10(28),MCP-SB-6020S-10(180),MCP-TL-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-SE-6020S-10(180),MCP-AS-6020S-10(180),MCP-NI-6020S-10(180),MCP-AG-6020S-10(180),MCP-ZN-6020S-10(180),MCP-V-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-05A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-05B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-05C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-05X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-PB-6020S-10(180),MCP-BE-6020S-10(180),MCP-7470S-10(28),MCP-SB-6020S-10(180),MCP-TL-6020S-10(180),MCP-CD-6020S-10(180),MCP-BA-6020S-10(180),MCP-SE-6020S-10(180),MCP-NI-6020S-10(180),MCP-AS-6020S-10(180),MCP-AG-6020S-10(180),MCP-CR-6020S-10(180),MCP-CR-6020S-10(180),MCP-CR-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-06A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-06B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-06C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-06X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-BE-6020S-10(180),MCP-PB-6020S-10(180),MCP-SB-6020S-10(180),MCP-7470S-10(28),MCP-TL-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-SE-6020S-10(180),MCP-AS-6020S-10(180),MCP-NI-6020S-10(180),MCP-V-6020S-10(180),MCP-ZN-6020S-10(180),MCP-AG-6020S-10(180),MCP-ZN-6020S-10(180),MCP-AG-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-07A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-



Project Name:

Lab Number: L2050541

**Report Date:** 12/04/20

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler		рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-07B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-07C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-07X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-PB-6020S-10(180),MCP-BE-6020S-10(180),MCP-7470S-10(28),MCP-SB-6020S-10(180),MCP-TL-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-SE-6020S-10(180),MCP-NI-6020S-10(180),MCP-NI-6020S-10(180),MCP-AS-6020S-10(180),MCP-V-6020S-10(180),MCP-AS-6020S-10(180),MCP-AG-6020S-10(180),MCP-AG-6020S-10(180),MCP-AG-6020S-10(180),MCP-AG-6020S-10(180)
L2050541-08A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-08B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-08C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-08X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-BE-6020S-10(180),MCP-PB-6020S-10(180),MCP-SB-6020S-10(180),MCP-7470S-10(28),MCP-TL-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-SE-6020S-10(180),MCP-AS-6020S-10(180),MCP-NI-6020S-10(180),MCP-AG-6020S-10(180),MCP-ZN-6020S-10(180),MCP-V-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-09A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-09A1	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-09A2	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-09B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-09B1	Glass 250ml/8oz unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-09B2	Glass 250ml/8oz unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-09C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-09C1	Glass 250ml/8oz unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-09C2	Glass 250ml/8oz unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-09X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-PB-6020S-10(180),MCP-BE-6020S-10(180),MCP-SB-6020S-10(180),MCP-7470S-10(28),MCP-TL-6020S-10(180),MCP-SE-6020S-10(180),MCP-CD-6020S-10(180),MCP-BA-6020S-10(180),MCP-NI-6020S-10(180),MCP-AS-6020S-10(180),MCP-AG-6020S-10(180),MCP-V-6020S-10(180),MCP-ZN-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-10A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-



Serial\_No:12042011:31 Lab Number: L2050541

ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Project Name:

**Report Date:** 12/04/20

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler		pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-10B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-10C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-10X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-BE-6020S-10(180),MCP-PB-6020S-10(180),MCP-SB-6020S-10(180),MCP-7470S-10(28),MCP-TL-6020S-10(180),MCP-BA-6020S-10(180),MCP-CD-6020S-10(180),MCP-SE-6020S-10(180),MCP-AG-6020S-10(180),MCP-NI-6020S-10(180),MCP-AG-6020S-10(180),MCP-ZN-6020S-10(180),MCP-V-6020S-10(180),MCP-CR-6020S-10(180),MCP-V-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-11A	Plastic 250ml unpreserved	С	8	8	2.6	Υ	Absent		-
L2050541-11B	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-11C	Amber 250ml unpreserved	С	8	8	2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(7)
L2050541-11X	Plastic 120ml HNO3 preserved Filtrates	С	NA		2.6	Y	Absent		MCP-BE-6020S-10(180),MCP-PB-6020S-10(180),MCP-SB-6020S-10(180),MCP-7470S-10(28),MCP-TL-6020S-10(180),MCP-BA-6020S-10(180),MCP-SE-6020S-10(180),MCP-CD-6020S-10(180),MCP-AS-6020S-10(180),MCP-NI-6020S-10(180),MCP-AG-6020S-10(180),MCP-V-6020S-10(180),MCP-ZN-6020S-10(180),MCP-CR-6020S-10(180)
L2050541-12A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-NH-6020T-10(180),MCP-AS-6020T-10(180),MCP-CD-6020T-10(180),MCP-AS-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-12B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-12C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-13A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-BA-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-13B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-13C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-14A	Plastic 2oz unpreserved for TS	В	NA		2.7	Υ	Absent		TS(7)



**Lab Number:** L2050541

**Report Date:** 12/04/20

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Container Info	Container Information			Final	Temp			Frozen	
Container ID	Container Type	Cooler	Initial pH	pН	•	Pres	Seal	Date/Time	Analysis(*)
L2050541-14B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14)
L2050541-14C	Vial Large Septa unpreserved (4oz)	В	NA		2.7	Υ	Absent		A2-CU-SEM(14),A2-CD-SEM(14),A2- AVS(14),A2-SEM/AVSRATIO(14),A2-PB- SEM(14),A2-NI-SEM(14),A2-ZN-SEM(14)
L2050541-14D	Glass 120ml/4oz unpreserved	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),A2-TOC-LK-2REPS(14),MCP-ZN-6020T-10(180),A2-MCPPAH-8270SIM-10(14),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-15A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-AG-6020T-10(180),MCP-BA-6020T-10(180),MCP-PB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-15B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-15C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-16A	Plastic 2oz unpreserved for TS	В	NA		2.7	Υ	Absent		TS(7)
L2050541-16B	Metals Only-Glass 60mL/2oz unpreserved	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-16C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14)
L2050541-16D	Glass 250ml/8oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-16E	Glass 250ml/8oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-17A	Plastic 2oz unpreserved for TS	В	NA		2.7	Υ	Absent		TS(7)
L2050541-17B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14)
L2050541-17C	Vial Large Septa unpreserved (4oz)	В	NA		2.7	Υ	Absent		A2-CU-SEM(14),A2-CD-SEM(14),A2- SEM/AVSRATIO(14),A2-AVS(14),A2-PB- SEM(14),A2-NI-SEM(14),A2-ZN-SEM(14)



**Lab Number:** L2050541

Report Date: 12/04/20

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Container Info	Container Information			Final	Temp			Frozen	
Container ID	Container Type	Cooler	Initial pH	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-17D	Metals Only-Glass 60mL/2oz unpreserved	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),A2-MCPPAH-8270SIM-10(14),A2-TOC-LK-2REPS(14),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-CD-6020T-10(180),MCP-CD-6020T-10(180),MCP-B-6020T-10(180),MCP-BA-6020T-10(180),MCP-B-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-18A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-T471T-10(28),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-B-6020T-10(180),MCP-B-6020T-10(180),MCP-B-6020T-10(180),MCP-B-6020T-10(180)
L2050541-18B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-18C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-19A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-BE-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180)
L2050541-19B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-19C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-20A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-20B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-20C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)



ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

Project Name:

**Report Date:** 12/04/20

Container Information			Initial	ı Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-21A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-21B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-21C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-22A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-BA-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-22B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-22C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-23A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-23B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-23C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-24A	Plastic 2oz unpreserved for TS	В	NA		2.7	Υ	Absent		TS(7)
L2050541-24B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14)
L2050541-24C	Vial Large Septa unpreserved (4oz)	В	NA		2.7	Υ	Absent		A2-CU-SEM(14),A2-CD-SEM(14),A2- AVS(14),A2-SEM/AVSRATIO(14),A2-NI- SEM(14),A2-ZN-SEM(14),A2-PB-SEM(14)



ENBRIDGE WEYMOUTH COMPRESSOR Lab Number: L2050541

Project Number: 414883

**Report Date:** 12/04/20

Container Info	rmation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler		рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-24D	Glass 120ml/4oz unpreserved	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),A2-MCPPAH-8270SIM-10(14),A2-TOC-LK-2REPS(14),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-B-6020T-10(180),MCP-B-6020T-10(180),MCP-B-6020T-10(180),MCP-B-6020T-10(180)
L2050541-25A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-XN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-25B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-25C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-26A	Plastic 2oz unpreserved for TS	В	NA		2.7	Υ	Absent		TS(7)
L2050541-26B	Metals Only-Glass 60mL/2oz unpreserved	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-XN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-BA-6020T-10(180),MCP-PB-6020T-10(180),MCP-PB-6020T-10(180),MCP-PB-6020T-10(180),MCP-PB-6020T-10(180),MCP-PB-6020T-10(180),MCP-PB-6020T-10(180)
L2050541-26C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14)
L2050541-26D	Glass 250ml/8oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-26E	Glass 250ml/8oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-27A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-27B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-27C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)



Project Name:

ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Project Name:

Lab Number: L2050541 **Report Date:** 12/04/20

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-28A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-SB-6020T-10(180),MCP-PB-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-28B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-28C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-29A	Plastic 2oz unpreserved for TS	В	NA		2.7	Υ	Absent		TS(7)
L2050541-29B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14)
L2050541-29C	Vial Large Septa unpreserved (4oz)	В	NA		2.7	Y	Absent		A2-CU-SEM(14),A2-CD-SEM(14),A2- SEM/AVSRATIO(14),A2-AVS(14),A2-NI- SEM(14),A2-PB-SEM(14),A2-ZN-SEM(14)
L2050541-29D	Glass 120ml/4oz unpreserved	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),A2-MCPPAH-8270SIM-10(14),A2-TOC-LK-2REPS(14),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-AG-6020T-10(180),MCP-SB-6020T-10(180),MCP-B-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-30A	Plastic 2oz unpreserved for TS	В	NA		2.7	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-AG-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-30B	Glass 60mL/2oz unpreserved	В	NA		2.7	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-30C	Glass 120ml/4oz unpreserved	В	NA		2.7	Υ	Absent		EPH-20(14),TS(7)
L2050541-31A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-TL-6020T-10(180),MCP-AS-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-31B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)



Lab Number: L2050541

Report Date: 12/04/20

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Container Info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler		рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-31C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-32A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-G20T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-32B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-32C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-33A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-33B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-33C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-33D	Vial Large Septa unpreserved (4oz)	С	NA		2.6	Υ	Absent		EPH-20(14)
L2050541-34A	Plastic 2oz unpreserved for TS	С	NA		2.6	Υ	Absent		TS(7)
L2050541-34B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14)
L2050541-34C	Glass 120ml/4oz unpreserved	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),A2-CU-SEM(14),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),A2-CD-SEM(14),MCP-ZN-6020T-10(180),A2-MCPPAH-8270SIM-10(14),A2-AVS(14),A2-SEM/AVSRATIO(14),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-SE-6020T-10(180),A2-PB-SEM(14),MCP-BA-6020T-10(180),MCP-SE-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180)
L2050541-34X	Glass 60ml unpreserved split	С	NA		2.6	Υ	Absent		A2-TOC-LK-2REPS(14)



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ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Project Name:

**Report Date:** 12/04/20

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-35A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-BA-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180)
L2050541-35B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-35C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-36A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-T471T-10(28),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-36B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-36C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-37A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-37B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-37C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-38A	Plastic 2oz unpreserved for TS	С	NA		2.6	Υ	Absent		TS(7)
L2050541-38B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14)
L2050541-38C	Vial Large Septa unpreserved (4oz)	С	NA		2.6	Υ	Absent		A2-CU-SEM(14),A2-CD-SEM(14),A2- AVS(14),A2-SEM/AVSRATIO(14),A2-ZN- SEM(14),A2-NI-SEM(14),A2-PB-SEM(14)



Lab Number: L2050541

**Report Date:** 12/04/20

**Project Name:** ENBRIDGE WEYMOUTH COMPRESSOR

Project Number: 414883

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler		рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-38D	Metals Only-Glass 60mL/2oz unpreserved	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),A2-MCPPAH-8270SIM-10(14),MCP-7471T-10(28),MCP-ZN-6020T-10(180),A2-TOC-LK-2REPS(14),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-CD-6020T-10(180),MCP-SB-6020T-10(180),MCP-PB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)
L2050541-39A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-39B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-39C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-40A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-7471T-10(28),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-AG-6020T-10(180),MCP-BG-6020T-10(180),MCP-BG-6020T-10(180),MCP-BG-6020T-10(180),MCP-BG-6020T-10(180),MCP-BG-6020T-10(180),MCP-BG-6020T-10(180),MCP-BG-6020T-10(180)
L2050541-40B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-40C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-41A	Plastic 2oz unpreserved for TS	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-CR-6020T-10(180),MCP-BE-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-AG-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-41B	Glass 60mL/2oz unpreserved	С	NA		2.6	Υ	Absent		A2-MCPPAH-8270SIM-10(14)
L2050541-41C	Glass 120ml/4oz unpreserved	С	NA		2.6	Υ	Absent		EPH-20(14),TS(7)
L2050541-42A	Glass 60ml unpreserved split	С	NA		2.6	Υ	Absent		TS(7)



Lab Number: L2050541

**Report Date:** 12/04/20

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2050541-42B	Glass 250ml/8oz unpreserved	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),A2-MCPPAH-8270SIM-10(14),MCP-7471T-10(28),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-CD-6020T-10(180),MCP-AG-6020T-10(180),MCP-SE-6020T-10(180),MCP-SB-6020T-10(180),MCP-BA-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180),MCP-BB-6020T-10(180)
L2050541-43A	Glass 60ml unpreserved split	С	NA		2.6	Υ	Absent		TS(7)
L2050541-43B	Glass 250ml/8oz unpreserved	С	NA		2.6	Y	Absent		MCP-V-6020T-10(180),MCP-BE-6020T-10(180),MCP-CR-6020T-10(180),MCP-CR-6020T-10(180),MCP-TL-6020T-10(180),MCP-ZN-6020T-10(180),MCP-7471T-10(28),A2-MCPPAH-8270SIM-10(14),MCP-NI-6020T-10(180),MCP-AS-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180),MCP-BA-6020T-10(180)



Project Name:

Project Number: 414883

**ENBRIDGE WEYMOUTH COMPRESSOR** 

**Project Name:** Lab Number: **ENBRIDGE WEYMOUTH COMPRESSOR** L2050541 **Report Date: Project Number:** 414883 12/04/20

### **GLOSSARY**

#### **Acronyms**

LCSD

LOD

MS

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments

from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

**EDL** - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis

of PAHs using Solid-Phase Microextraction (SPME).

Laboratory Control Sample Duplicate: Refer to LCS.

**EMPC** - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case

estimate of the concentration. **EPA** 

Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of

analytes or a material containing known and verified amounts of analytes.

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.

- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content,

where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats

MDI - 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.

> - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated

using the native concentration, including estimated values. MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's

reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile

Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL

includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the

values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the

associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEO - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF

and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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#### **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.

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

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

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a "Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

receipt, if applicable.

- A -Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- 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).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- 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.
- F The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- **ND** Not detected at the reporting limit (RL) for the sample.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report



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#### **Data Qualifiers**

the identification is based on a mass spectral library search.

- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q -The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.

Report Format: Data Usability Report



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## REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

- 13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.
- Draft Analytical Method for Determination of Acid Volatile Sulfide and Selected Simultaneously Extractable Metals in Sediment. PB93-155901, 1991.
- 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.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, December 2019, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, March 1, 2020.

## **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. Facility: Company-wide

Department: Quality Assurance

Title: Certificate/Approval Program Summary

Serial\_No:12042011:31

ID No.:17873 Revision 17

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## Certification Information

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

#### Westborough Facility

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

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: lodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-

Ethyltoluene

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

**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

## **Mansfield Facility**

**SM 2540D:** TSS

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

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**EPA TO-12** Non-methane organics

EPA 3C Fixed gases

Biological Tissue Matrix: EPA 3050B

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

#### Westborough Facility:

## **Drinking Water**

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE,

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

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

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

#### Non-Potable Water

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

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

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

## Mansfield Facility:

## **Drinking Water**

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522.

## Non-Potable Water

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

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

EPA 245.1 Hg.

SM2340B

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

Pre-Qualtrax Document ID: 08-113 Document Type: Form

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4	CHAIN OF	CUSTODY	PAGE FOF 6		Name of Street	Rec'd in	To Table 1 November 1	THE REAL PROPERTY.	3/	STATE OF THE PERSON NAMED IN							22050541
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Client Information	on	Project Location: 6 Bridge St	reet, Weymouth, MA	Α .	NOAA	Fed Pro	ogram						Criteri	ON UNION	narine o	chronic	awqc
Client: TRC		Project #: 414883					201	斯里	E. 10			371.50	. 4				
Address: 650 Suffo	lk Street	Project Manager: Jim Dohen	y				7										
Lowell, MA 01854		ALPHA Quote #:				V-00000	_					_		_		_	
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(Lab Use Only)		Date Time	Matrix Ini	itials	MCP	PAHs											Sample Specific Comments
50541-01	SW-1	11/12/20 [100	Water 5	H		$\boxtimes$											
-02	SW-2	11/12/20 [108	Water		$\boxtimes$	$\boxtimes$											
-05	SW-3	11/12/20	Water		$\boxtimes$	$\boxtimes$											
-04	SW-4	11/12/20 1237	Water														
-05	SW-5	11/12/20 1240	Water														
-06	SW-6	11/12/20 1244	Water				Ц			닏	Ц	ᆜ	닏	브	닏	ᆜ	
-07	SW-7	11/12/20 12-48	Water				님		님	무				닏	님		
-08	SW-8	11/12/20 1318	Water					무	님	님			H	부	님	님	ME (MAC)
-01	SW-9	11/12/20 1322	Water						H	片	Η	H	片	ዙ	H	H	M5/7080
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CHAIN O	F CUSTODY	PAGE ZOF 6	Date	Rec'd i	n Lab:	le	1131	2		Table 1	ALP	HA Jo	ob #:	12	,5054
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TEL 508-898-9220 TEL 508-822-9300 FAX: 508-898-9193 FAX: 508-822-3288	11 11 11 11 11 11 11 11 11 11 11 11 11			ulato		quire	ments	/Rep	ort L	imits	Celton			100NG	
Client Information	Project Location: 6 Bridge St	reet, Weymouth, MA	NOA	/Fed Pr	ogram						Criteri	V	narine o	chronic	awqc
Client: TRC	Project #: 414883														
Address: 650 Suffolk Street	Project Manager: Jim Dohert	у			1										
Lowell, MA 01854	ALPHA Quote #:							_	_					_	T
Phone: 978-970-5600	Turn-Around Time		ANA	ALYS	S										SAMPLE HANDLING T
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Email: jdoherty@trccompanies.com															□ Not Needed #
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ALPHA Lab ID Sample ID	Collection	Sample Sampler's	1 4	PAHs via											
(Lab Use Only)	Date Time	Matrix Initials	MCP	P. P.											Sample Specific Comments
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Page 230 of 234						1				8					

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ALPHA		Project Inform	nation			Rep	ort Ir	nform	ation	Data	Deli	verab	les			forma			
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Westborough, MA M	lansfield, MA	Project Name: F	abridas We	- th Co-	AMBEL WE		ADEx			□ A	dd'I De	liverabl	les						
	EL: 508-822-9300 AX: 508-822-3288	Project Name: E	nbridge vve	ymouth Comp	ressor	Reg	ulato	ry Re	quire	ment	s/Rep	ort L	imits	Hill			103		30
Client Information	ACCRECATE AND ADDRESS OF THE PARTY OF THE PA	Project Location	: 6 Bridge S	treet, Weymo	uth, MA	_State	VFed P	rogram						Criteri	a RTS - E	ER-I			
Client: TRC		Project #: 41488	13				議	<b>副</b>	320		e e		YAR					A STATE OF THE STATE OF	201
Address: 650 Suffol	k Street	Project Manage	r: Jim Doher	ty							NII SE				100				
Lowell, MA 01854		ALPHA Quote #							11100										-
Phone: 978-970-560	00	Turn-Around	Time			ANA	ALYS	IS							_				T O T
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	ecific Requirements/Commer	nts/Detection Limit	3063356	<u> </u>		-												Preservation  Lab to do	0 T T L
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ALPHA Lab ID	Sample ID	Colle	ection	Sample	Sampler's	4	Fracs	PAHs via SIM		AVS/SEM									100
(Lab Use Only)	03-77118-072-03-	Date	Time	Matrix	Initials	MCP	EPH	PAH	TOC	AVS								Sample Specific Comments	
50541-12	SL1-1 (0-0.5')	11/12/20	1300	Sediment	SH														
-15	SL1-2 (0-0.5')	11/12/20	1132	Sediment	90	×	M	$\boxtimes$											
-17	SL1-3 (0-0.5')	11/12/20	1152	Sediment	BH	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$									
-15	SL1-4 (0-0.5')	11/12/20	1145	Sediment	GP	$\boxtimes$	$\boxtimes$	$\boxtimes$											
-16	SL1-5 (0-0.5')	11/12/20	1150	Sediment	SH	$\boxtimes$	$\boxtimes$	$\boxtimes$										MS/MSD	
-17	SL1-6 (0-0.5')	11/12/20	1220	Sediment	5H	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$									
18	SL1-7 (0-0.5')	11/12/20	1205	Sediment	GP	$\boxtimes$	$\boxtimes$	$\boxtimes$											
-19	SL1-8 (0-0.5')	11/12/20	1215	Sediment	ET	$\boxtimes$	$\boxtimes$	$\boxtimes$											
-2	SL1-9 (0-0.5')	11/12/20	1230	Sediment	JP5		$\boxtimes$	$\boxtimes$											
72/	SL1-10 (0-0.5')	11/12/20	1124	Sediment	90	$\boxtimes$		$\boxtimes$											
•				Cor	ntainer Type		(4)		2	3	. 67		20	~ <u>~</u>	12	2	7.		
					reservative		*		-	•	•	1	•		*	*		Please print clearly, legible and completely. Samples	ily s can
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	EL: 508-822-9300 AX: 508-822-3288	Project Name, t	Inbridge vve	ymouth Com	pressor	Reg	gulato	ry Re	quire	ment	s/Rep	ort L	imits					
Client Informatio	ALL STATES	Project Location	n: 6 Bridge Si	reet, Weymo	outh, MA	_State	e/Fed P	rogram						Criter	RTS - E	R.I	_	
Client: TRC		Project #: 41488	33			ill.				Harri Harri		No.	Sale)	-				
Address: 650 Suffoli	k Street	Project Manage	r: Jim Doher	ty			41555											
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ALPHA Lab ID	Sample ID	Colle	ection	Sample	Sampler's	4	Fracs	s via		AVS/SEM								
(Lab Use Only)	27200702.12	Date	Time	Matrix	Initials	MCP	EPH	PAHs via SIM	700	AVS								Sample Specific Comments
50541-22	SL2-1 (0-0.5')	11/12/20	1305	Sediment	GP	$\boxtimes$	×											
-23	SL2-2 (0-0.5')	11/12/20	1345	Sediment	GP	$\boxtimes$	$\boxtimes$											
-24	SL2-3 (0-0.5')	11/12/20	1448	Sediment	SH		$\boxtimes$		$\boxtimes$	$\boxtimes$								
-25	SL2-4 (0-0.5')	11/12/20	1350	Sediment	6P	$\boxtimes$	$\boxtimes$	$\boxtimes$										
-26	SL2-5 (0-0.5')	11/12/20	1385	Sediment	TP5	$\boxtimes$	$\boxtimes$	$\boxtimes$										M5/M5D
-27	SL2-6 (0-0.5')	11/12/20	1335	Sediment	GP		$\boxtimes$	$\boxtimes$										
-20	SL2-7 (0-0.5')	11/12/20	1330	Sediment	GP	$\boxtimes$	$\boxtimes$	$\boxtimes$										
-29	SL2-8 (0-0.5')	11/12/20	1400	Sediment	SH	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$								
-30	SL2-9 (0-0.5')	11/12/20	1315	Sediment	GR		$\boxtimes$	$\boxtimes$										
-3/	SL2-10 (0-0.5')	11/12/20	1311	Sediment	GP	$\boxtimes$												
				Co	ntainer Type	2	¥3.	***	्र	9	+	Ţ.		÷.	G.	-		
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CHAIN OF CUSTODY PAGE 5 OF 6 Project Information				6	Date	Rec'd	in Lab:	W	13	120		MIN.	ALP	HA J	ob #:	LD	150541		
ALPHA		Project Inform	nation	No. No.		Rep	ort Ir	iform	ation	Data	Deli	verab				forma			ISS.
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	EL: 508-822-9300	Project Name: 6	nbridge We	ymouth Comp	pressor	Reg	ulato	ry Re	quire	ment	s/Re	oort L	imits	1 32	100	and the	Nova Even	Market Services	-
Client Information	FAX: 508-822-3288	Project Location	: 6 Bridge S	treet Weymo	uth MA	State	VFed P	rogram	<u> </u>					Criteri	100 mm	Page 10 III			
Client: TRC		Project #: 41488		act, ricymo	our, mrs	NOA	A	Car.		N. GA		2015	200	SQUII	RTS - E	-R-L	0250	Bernstein Lea	Balls
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ALPHA Lab ID (Lab Use Only)	Sample ID	443,442,413	ection	Sample Matrix	Sampler's Initials	MCP	EPH	PAHS	700	AVS/SEM								Sample Specific	100
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50881-32	SL3-1 (0-0.5')	11/12/20	1435	Sediment	JP5	$\boxtimes$		$\boxtimes$											
-33	SL3-2 (0-0.5')	11/12/20	1530	Sediment	MG		$\boxtimes$	$\boxtimes$	Ш						ᆜ		П	1	
-39	SL3-3 (0-0.5')	11/12/20	1500	Sediment	GP		$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$									
-5)	SL3-4 (0-0.5')	11/12/20	1455	Sediment	GP		$\boxtimes$	$\boxtimes$	Ц	ᆜ		Ц	Ц	Ц	旦	닏			
-36	SL3-5 (0-0.5')	11/12/20	1451	Sediment	90		$\boxtimes$	X				Ц					Ц		
-37	SL3-6 (0-0.5')	11/12/20	1500	Sediment	GR		$\boxtimes$	$\boxtimes$		Ш		Ц		Ц	Ц	Ц			
-38	SL3-7 (0-0.5')	11/12/20	1510	Sediment	SH						ᆜ	Ц					Ц		
-19	SL3-8 (0-0.5')	11/12/20	1433	Sediment	68				ᆜ	ᆜ		Ц			브	닏			
-10	SL3-9 (0-0.5')	11/12/20	1916	Sediment	GP				ᆜ			Ц		Ц	Ц	닏			
-91	SL3-10 (0-0.5')	11/12/20	1409	Sediment	GP	M	M	M	Ш	Ш	Ц	Ш		П	Ш	Ш	П		
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TEL: 506-898-9220 TEI	nsfield, MA L: 508-822-9300	Project Name:	Enbridge We	eymouth Comp	pressor		ADEX	ry Re	quire	□ Adments	-	-	-				800	
Client Information	X. 508-822-3288	Project Locatio	n: 6 Bridge S	Street, Weymon	uth, MA	100000000000000000000000000000000000000	/Fed Pi			-		esconii e rea		Criteri	a RTS - m	arine o	hronic	awac
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Lowell, MA 01854	-57	ALPHA Quote	#:			-											_	-
Phone: 978-970-5600	)	Turn-Around	l Time		Salon 64	_AN	ALYS	S									-	SAMPLE HANDLING T
Fax:		Standard	□ Ru	ish (ONLY IF PRE	-APPROVED)					1								Filtration A L
Email: jdoherty@trcc	ompanies.com																	□ Done □ Not Needed
	en Previously analyzed by Alpha	Due Date:	Time															☐ Lab to do B Preservation O
The state of the s	cific Requirements/Commer	nts/Detection Lim	its:	772														Lab to do
						14 Metals	via SIM											3
ALPHA Lab ID (Lab Use Only)	Sample ID	Co Date	llection Time	Sample Matrix	Sampler's Initials	MCP 14	PAHs v											Sample Specific Comments
50541-42	ICSWI-DUP-1	14/14/28	91206	- Water	GP	X												
WELLINE WES	LCSW-2	-11/11/20		Water		1000	X-											
-43	LCSW-3	11/11/20		Water		X	图											
	DUP-2		1351	SED	GP	M	X	닏			님	ᆜ		무	님	片	片	
						片	H	님			님	무	님	무	님	님	片	
			-	-	-	H	H	H	님	님	님	屵	Η	님	H	뷰	片	
1 0 2 2 2 2 2 2 2				-		H	H	片	H	님	님	Η	H	H	금	금	片	
			-	+	_	片	H	H	H	H	뉘	금	H	౼	H	片	H	
			1			H	H	H			H	늄	Ħ	ō			i	
				Co	ntainer Type		-		2	-			-	4				University of the second
					Preservative							1.5	•		*	•		Please print clearly, legibly and completely. Samples ca
			Reli	inquished By:		D	ate/Tim	ie			Receiy	ed By:				ate/Tir	ne	not be logged in and turnaround time clock will not
		1	with 1	Len		11-13	-20/	1715	0	W	1	-9	-AZ	- (	1(3			start until any ambiguities are resolved. All samples submitted are subject to
FORM NO. 01-01(I-NJ) (ex. 5-JAN-12)		0	ICC.	-4HL	ille	300	1000 00		M	They	04	n	-		13-1		The second second	Alpha's Payment Terms.
per SUNITY PAZIO AAR			13-16	2200	30	1	un	M	m	1		1111	)   L	22.5	ľ.			



#### ANALYTICAL REPORT

Lab Number: L2057799

Client: TRC Environmental Consultants

Wannalancit Mills 650 Suffolk Street

Lowell, MA 01854

ATTN: David Sullivan Phone: (978) 656-3565

Project Name: ENBRIDGE
Project Number: 414883 4
Report Date: 01/08/21

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: ENBRIDGE
Project Number: 414883 4

 Lab Number:
 L2057799

 Report Date:
 01/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2057799-01	DUP1	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 12:40	12/29/20
L2057799-02	DUP2	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 13:20	12/29/20
L2057799-03	SL1-8R 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 13:30	12/29/20
L2057799-04	SL1-8-N2 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 13:33	12/29/20
L2057799-05	SL1-8-S2 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 13:35	12/29/20
L2057799-06	SL1-8-E2 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 13:40	12/29/20
L2057799-07	SL1-8-W2 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 13:45	12/29/20
L2057799-08	SL2-10-S5 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:20	12/29/20
L2057799-09	SL2-10-S10 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:25	12/29/20
L2057799-10	SL2-10-S15 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:28	12/29/20
L2057799-11	SL2-10-W5 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:30	12/29/20
L2057799-12	SL2-10-W10 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:33	12/29/20
L2057799-13	SL2-10-W15 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:35	12/29/20
L2057799-14	SL2-10-E5 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:40	12/29/20
L2057799-15	SL2-10-E10 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:45	12/29/20
L2057799-16	SL2-10-N5 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:50	12/29/20
L2057799-17	SL2-10-N10 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 14:55	12/29/20
L2057799-18	SL2-10-N15 0-0.5'	SOIL	KINGS COVE, WEYMOUTH, MA	12/28/20 15:00	12/29/20



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

#### **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 af	firmative response to questions A through F is required for "Presumptive Certainty" status	
Α	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
В	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
С	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A re	sponse to questions G, H and I is required for "Presumptive Certainty" status	
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
Н	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

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



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

#### **Case Narrative**

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.	



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

#### **Case Narrative (continued)**

#### Report Revision

January 08, 2021: At the client's request, the Total Arsenic recoveries have been removed from the WG1450489-4/-5 MS/MSD and the Total Chromium recoveries have been removed from the WG1450489-7/-8 MS/MSD.

January 05, 2021: This report has been amended to incude the serial dilution analysis for Chromium on sample L2057799-07 and Arsenic on L2057799-14.

#### MCP Related Narratives

**Total Metals** 

In reference to question H:

The WG1450489-5 MSD recovery, performed on L2057799-07, is outside the acceptance criteria for chromium (51%). Re-analysis of the MSD yielded an unacceptable recovery for chromium in the range of 30-74% or >125%. The LCS recovery is acceptable; therefore, no further action was taken.

The WG1450489-8 MSD recovery, performed on L2057799-14, is outside the acceptance criteria for arsenic (337%). Re-analysis of the MSD yielded an unacceptable recovery for arsenic in the range of 30-74% or >125%. The LCS recovery is acceptable; therefore, no further action was taken.

The WG1450489-7/-8 MS/MSD RPD for arsenic (72%), performed on L2057799-14, is above the acceptance criteria.

In reference to question I:

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

Hexavalent Chromium

LCS/LCSD SRM Lot#: ERA D107-921

In reference to question H:

The WG1450432-8 MSD recovery, performed on L2057799-07, is outside the acceptance criteria for chromium, hexavalent (67%); however, the associated LCS recovery and MS recovery are within criteria. Post analytical spike had a recovery of 102%. No further action was taken.



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

#### **Case Narrative (continued)**

The WG1450432-7/-8 MS/MSD RPD (45%), performed on L2057799-07, is above the acceptance criteria. WG1450432: A soluble digestion spike was performed with a recovery of 4%.

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:

Title: Technical Director/Representative Date: 01/08/21

(609 Show Kelly Stenstrom

### **QC OUTLIER SUMMARY REPORT**

Project Name: ENBRIDGE

Lab Number:

L2057799

Project Number: 414883 4

Report Date:

01/08/21

					Recovery/RP	D QC Limits	Associated	Data Quality
Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	(%)	(%)	Samples	Assessment
MCP Total I	Metals - Mansfield Lab							
6010D	Batch QC (L2057799-07)	WG1450489-5	Chromium, Total	MSD	51	75-125	01- 02,04,06- 08,11,14,16	potential low bias
6010D	Batch QC (L2057799-14)	WG1450489-8	Arsenic, Total	MSD	72	35	01- 02,04,06- 08,11,14,16	non-directional bias
6010D	Batch QC (L2057799-14)	WG1450489-8	Arsenic, Total	MSD	337	75-125	01- 02,04,06- 08,11,14,16	potential high bias
MCP Gener	ral Chemistry - Westborough Lab							
7196A	Batch QC (L2057799-07)	WG1450432-8	Chromium, Hexavalent	MSD	45	35	01,04,06-07	non-directional bias
7196A	Batch QC (L2057799-07)	WG1450432-8	Chromium, Hexavalent	MSD	67	75-125	01,04,06-07	potential low bias



## **METALS**



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

 Lab ID:
 L2057799-01
 Date Collected:
 12/28/20 12:40

 Client ID:
 DUP1
 Date Received:
 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil Percent Solids: 86%

Prep **Analytical** Dilution Date Date Method Factor Prepared **Parameter** Result Qualifier Units RL MDL Analyzed Method **Analyst** 

MCP Total Metals - Mansfield Lab

Chromium, Total 16.4 mg/kg 0.436 -- 1 12/31/20 07:45 01/05/21 11:35 EPA 3050B 97,6010D GD



**Project Name:** Lab Number: L2057799 **ENBRIDGE Project Number:** 

414883 4 **Report Date:**  01/08/21

**SAMPLE RESULTS** 

Date Collected: L2057799-02 12/28/20 13:20 Client ID: DUP2 Date Received: 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Lab ID:

Matrix: Soil 69% Percent Solids:

Prep **Analytical** Dilution Date Date Method **Factor** Prepared Analyzed Method

**Parameter** Result Qualifier Units RL MDL **Analyst** MCP Total Metals - Mansfield Lab 97,6010D Arsenic, Total 24.4 mg/kg 0.558 1 12/31/20 07:45 01/05/21 11:40 EPA 3050B GD



**Project Name:** Lab Number: **ENBRIDGE** L2057799 **Project Number:** 414883 4 **Report Date:** 

01/08/21

**SAMPLE RESULTS** 

Date Collected:

12/28/20 13:33

Client ID: SL1-8-N2 0-0.5' Date Received:

12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA

L2057799-04

Field Prep:

Not Specified

GD

Sample Depth:

Matrix:

**Parameter** 

Lab ID:

Soil

84% Percent Solids:

Prep **Analytical** Dilution Date Date Method **Factor** Result Qualifier Units RL MDL Prepared Analyzed Method **Analyst** 

MCP Total Metals - Mansfield Lab

97,6010D Chromium, Total 13.2 mg/kg 0.467 1 12/31/20 07:45 01/05/21 11:44 EPA 3050B



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

 Lab ID:
 L2057799-06
 Date Collected:
 12/28/20 13:40

 Client ID:
 SL1-8-E2 0-0.5'
 Date Received:
 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil Percent Solids: 86%

Prep **Analytical** Dilution Date Date Method **Factor Parameter** Result Qualifier Units RL MDL Prepared Analyzed Method **Analyst** 

 Parameter
 Result
 Qualifier
 Units
 RL
 MDL
 1 actor
 Frepared
 Analyse

 MCP Total Metals - Mansfield Lab

 Chromium, Total
 28.7
 mg/kg
 0.451
 - 1
 12/31/20 07:45 01/05/21 11:49 EPA 3050B
 97,6010D
 GD



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

 Lab ID:
 L2057799-07
 Date Collected:
 12/28/20 13:45

 Client ID:
 SL1-8-W2 0-0.5'
 Date Received:
 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil Percent Solids: 84%

Prep **Analytical** Dilution Date Date Method **Factor Parameter** Result Qualifier Units RL MDL Prepared Analyzed Method

Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analyst

MCP Total Metals - Mansfield Lab

Chromium, Total 18.4 mg/kg 0.460 -- 1 12/31/20 07:45 01/05/21 10:29 EPA 3050B 97,6010D GD



**Project Name:** Lab Number: **ENBRIDGE** L2057799 **Project Number:** 414883 4 **Report Date:** 

**SAMPLE RESULTS** 

01/08/21

Lab ID: Date Collected: L2057799-08 12/28/20 14:20 Client ID:

SL2-10-S5 0-0.5' Date Received: 12/29/20 Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil 65% Percent Solids:

Prep **Analytical** Dilution Date Date Method **Factor** Prepared Analyzed Method

**Parameter** Result Qualifier Units RL MDL **Analyst** MCP Total Metals - Mansfield Lab 97,6010D Arsenic, Total 16.3 mg/kg 0.602 1 12/31/20 07:45 01/05/21 11:54 EPA 3050B GD



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

 Lab ID:
 L2057799-11
 Date Collected:
 12/28/20 14:30

 Client ID:
 SL2-10-W5 0-0.5'
 Date Received:
 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil Percent Solids: 74%

Dilution Date Date Prep Analytical
Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analysi

Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analyst

MCP Total Metals - Mansfield Lab

Arsenic, Total 17.8 mg/kg 0.513 -- 1 12/31/20 07:45 01/05/21 12:20 EPA 3050B 97,6010D GD



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

 Lab ID:
 L2057799-14
 Date Collected:
 12/28/20 14:40

 Client ID:
 SL2-10-E5 0-0.5'
 Date Received:
 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil Percent Solids: 71%

Dilution Date Date Prep Analytical
Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analyst

Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analyst

MCP Total Metals - Mansfield Lab

Arsenic, Total 14.9 mg/kg 0.549 -- 1 12/31/20 07:45 01/05/21 11:11 EPA 3050B 97,6010D GD



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

 Lab ID:
 L2057799-16
 Date Collected:
 12/28/20 14:50

 Client ID:
 SL2-10-N5 0-0.5'
 Date Received:
 12/29/20

Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Matrix: Soil Percent Solids: 70%

Prep **Analytical** Dilution Date Date Method **Factor** Prepared **Parameter** Result Qualifier Units RL MDL Analyzed Method

Parameter Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analyst

MCP Total Metals - Mansfield Lab

Arsenic, Total 77.6 mg/kg 2.43 -- 1 12/31/20 07:45 01/05/21 12:25 EPA 3050B 97,6010D GD



**Project Name:** Lab Number: **ENBRIDGE** L2057799 Project Number: 414883 4 **Report Date:** 01/08/21

**Method Blank Analysis Batch Quality Control** 

Parameter	Result Qualific	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals -	Mansfield Lab for sa	mple(s): 01-0	2,04,06	-08,11,1	14,16 Batch	n: WG145048	9-1		
Arsenic, Total	ND	mg/kg	0.400		1	12/31/20 07:45	01/05/21 10:15	97,6010D	GD
Chromium, Total	ND	mg/kg	0.400		1	12/31/20 07:45	01/05/21 10:15	97,6010D	GD

**Prep Information** 

Digestion Method: EPA 3050B



# Lab Control Sample Analysis Batch Quality Control

Project Name: ENBRIDGE
Project Number: 414883 4

Lab Number:

L2057799

Report Date:

01/08/21

Parameter	LCS %Recovery (	LCSD Qual %Recovery	%Recovery Qual Limits	RPD	Qual RPD Limits	
MCP Total Metals - Mansfield Lab Associate	d sample(s): 01-02,04	,06-08,11,14,16 Batch:	WG1450489-2 WG1450489-	3 SRM Lot N	Number: D109-540	
Arsenic, Total	97	84	70-130	14	30	
Chromium, Total	96	90	70-130	6	30	

### Matrix Spike Analysis Batch Quality Control

Project Name: ENBRIDGE
Project Number: 414883 4

Lab Number:

L2057799

Report Date:

01/08/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recover Limits	,	Qual	RPD Limits
MCP Total Metals - Mansfield La Client ID: SL1-8-W2 0-0.5'	ab Associate	d sample(s):	: 01-02,04,0	06-08,11,14,16	QC E	Batch ID:	WG1450489-4	WG145	0489-5	QC Samp	le: L20	57799-07
Chromium, Total	18.4	17.9	34.4	89		27.6	51	Q	75-125	22		35
MCP Total Metals - Mansfield La Client ID: SL2-10-E5 0-0.5'	ab Associate	d sample(s):	: 01-02,04,0	06-08,11,14,16	QC E	Batch ID:	WG1450489-7	WG145	0489-8	QC Samp	le: L20	57799-14
Arsenic, Total	14.9	13.2	28.1	100		59.9	337	Q	75-125	72	Q	35



**Lab Serial Dilution** Analysis
Batch Quality Control

**Project Name: ENBRIDGE** Project Number: 414883 4

L2057799 01/08/21

Report Date:

Lab Number:

Parameter			Native Sample	Serial Dilution	n Units	% D	Qual R	PD Limits
MCP Total Metals -   SL1-8-W2 0-0.5'	Mansfield Lab	Associated sample(s):	01-02,04,06-08,11,14,16	QC Batch ID:	WG1450489-6	QC Sample:	L2057799-07	Client ID:
Chromium, Total			18.4	21.0	mg/kg	14		20
MCP Total Metals -   SL2-10-E5 0-0.5'	Mansfield Lab	Associated sample(s):	01-02,04,06-08,11,14,16	QC Batch ID:	WG1450489-9	QC Sample:	L2057799-14	Client ID:
Arsenic, Total			14.9	17.3	mg/kg	16		20



# INORGANICS & MISCELLANEOUS



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

**SAMPLE RESULTS** 

Lab ID: L2057799-01 Date Collected: 12/28/20 12:40

Client ID: DUP1 Date Received: 12/29/20 Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry -	Westboroug	gh Lab								
Chromium, Hexavalent	1.54		mg/kg	0.927		1	12/30/20 15:58	01/04/21 19:15	97,7196A	NA
General Chemistry - Westl	oorough Lat	)								
Solids, Total	86.3		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR
pH (H)	8.0		SU	-	NA	1	-	12/29/20 12:06	1,9045D	JA
Oxidation/Reduction Potential	190		mv	-	NA	1	-	12/29/20 11:56	68,1498	JA



**Project Name:** Lab Number: **ENBRIDGE** L2057799 Project Number: 414883 4

Report Date: 01/08/21

**SAMPLE RESULTS** 

Lab ID: Date Collected: L2057799-02 12/28/20 13:20

Client ID: DUP2 Date Received: 12/29/20 Not Specified Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep:

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab	)								
Solids, Total	69.4		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

**SAMPLE RESULTS** 

Lab ID: L2057799-04 Date Collected: 12/28/20 13:33

Client ID: SL1-8-N2 0-0.5' Date Received: 12/29/20 Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry -	Westboroug	jh Lab								
Chromium, Hexavalent	ND		mg/kg	0.957		1	12/30/20 15:58	01/04/21 19:15	97,7196A	NA
General Chemistry - Westb	oorough Lat	)								
Solids, Total	83.6		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR
pH (H)	8.1		SU	-	NA	1	-	12/29/20 12:06	1,9045D	JA
Oxidation/Reduction Potential	190		mv	-	NA	1	-	12/29/20 11:56	68,1498	JA



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

**SAMPLE RESULTS** 

Lab ID: L2057799-06 Date Collected: 12/28/20 13:40

Client ID: SL1-8-E2 0-0.5' Date Received: 12/29/20 Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

,

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - \	Nestboroug	gh Lab								
Chromium, Hexavalent	ND		mg/kg	0.932		1	12/30/20 15:58	01/04/21 19:15	97,7196A	NA
General Chemistry - Westb	orough Lab	)								
Solids, Total	85.8		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR
pH (H)	8.1		SU	-	NA	1	-	12/29/20 12:06	1,9045D	JA
Oxidation/Reduction Potential	190		mv	-	NA	1	-	12/29/20 11:56	68,1498	JA



Project Name:ENBRIDGELab Number:L2057799Project Number:414883 4Report Date:01/08/21

SAMPLE RESULTS

Lab ID: L2057799-07 Date Collected: 12/28/20 13:45

Client ID: SL1-8-W2 0-0.5' Date Received: 12/29/20 Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry -	Westboroug	gh Lab								
Chromium, Hexavalent	ND		mg/kg	0.951		1	12/30/20 15:58	01/04/21 19:15	97,7196A	NA
General Chemistry - Westl	borough Lat	)								
Solids, Total	84.1		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR
pH (H)	8.0		SU	-	NA	1	-	12/29/20 12:06	1,9045D	JA
Oxidation/Reduction Potential	190		mv	-	NA	1	-	12/29/20 11:56	68,1498	JA



**Project Name:** Lab Number: **ENBRIDGE** L2057799 Project Number: 414883 4

Report Date: 01/08/21

**SAMPLE RESULTS** 

Lab ID: Date Collected: L2057799-08 12/28/20 14:20

Client ID: SL2-10-S5 0-0.5' Date Received: 12/29/20 Not Specified Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep:

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	· Westborough Lab									
Solids, Total	64.9		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR



**Project Name:** Lab Number: **ENBRIDGE** L2057799 Report Date: Project Number: 414883 4 01/08/21

**SAMPLE RESULTS** 

Lab ID: L2057799-11 Client ID:

SL2-10-W5 0-0.5' Sample Location: KINGS COVE, WEYMOUTH, MA 12/28/20 14:30

Date Received: Field Prep:

Date Collected:

12/29/20

Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab	•								
Solids, Total	73.8		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR



**Project Name:** Lab Number: **ENBRIDGE** L2057799 Report Date: Project Number: 01/08/21 414883 4

**SAMPLE RESULTS** 

Lab ID: Date Collected: L2057799-14 12/28/20 14:40 Client ID: SL2-10-E5 0-0.5' Date Received: 12/29/20

Not Specified Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep:

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - \	Westborough Lab	)								
Solids, Total	70.5		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR



**Project Name:** Lab Number: **ENBRIDGE** L2057799 Report Date: Project Number: 01/08/21 414883 4

**SAMPLE RESULTS** 

Lab ID: L2057799-16 Client ID: SL2-10-N5 0-0.5' Date Collected: Date Received: 12/28/20 14:50

Sample Location: KINGS COVE, WEYMOUTH, MA

Field Prep:

12/29/20 Not Specified

Sample Depth:

Matrix:

Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab	)								
Solids, Total	70.2		%	0.100	NA	1	-	12/29/20 09:46	121,2540G	PR



Project Name: ENBRIDGE
Project Number: 414883 4

Lab Number: L20

L2057799

**Report Date:** 01/08/21

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry	- Westborough Lab	for sample(s)	: 01,04	4,06-07	Batch: V	VG1450432-1			
Chromium, Hexavalent	ND	mg/kg	0.800		1	12/30/20 15:58	01/04/21 19:15	97,7196A	NA



# Lab Control Sample Analysis Batch Quality Control

Project Name: ENBRIDGE

Lab Number:

L2057799

Project Number: 414883 4

Report Date:

01/08/21

Parameter	LCS %Recovery		LCSD Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab A	associated sample(s)	: 01,04,06-07	Batch: WO	G1449871-1				
рН	100		-		99-101	-		
General Chemistry - Westborough Lab A	associated sample(s)	: 01,04,06-07	Batch: WO	G1449872-1				
Oxidation/Reduction Potential	102		-		90-110	-		20
MCP General Chemistry - Westborough	Lab Associated sam	ple(s): 01,04,0	6-07 Bato	h: WG14504	32-2 WG14504	32-3		
Chromium, Hexavalent	91		98		70-129	7		20

# Matrix Spike Analysis Batch Quality Control

Project Name: ENBRIDGE
Project Number: 414883 4

Lab Number:

L2057799

Report Date:

01/08/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits		Qual	RPD Limits
MCP General Chemistry - V Client ID: SL1-8-W2 0-0.5'		Associated	sample(s):	01,04,06-07	QC Bat	ch ID: WG	1450432-7 W	G14504	132-8 QC (	Sample:	L2057	799-07
Chromium, Hexavalent	ND	927	981	106		947	67	Q	75-125	45	Q	35

L2057799

# Lab Duplicate Analysis Batch Quality Control

Project Name: ENBRIDGE
Project Number: 414883 4

Lab Number:

**Report Date:** 01/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD Q	ual RPD Limits
General Chemistry - Westborough Lab Assoc SL2-10-E5 0-0.5'	ciated sample(s): 01-02,04,06-0	8,11,14,16 QC Batch ID: \	WG1449809-1	QC Sample:	L2057799-14 Client ID:
Solids, Total	70.5	72.3	%	3	20
General Chemistry - Westborough Lab Assoc 0-0.5'	ciated sample(s): 01,04,06-07	QC Batch ID: WG1449871-	-2 QC Sample:	L2057799-0	7 Client ID: SL1-8-W2
pH (H)	8.0	7.8	SU	3	5
General Chemistry - Westborough Lab Assoc 0-0.5'	ciated sample(s): 01,04,06-07	QC Batch ID: WG1449872-	-2 QC Sample:	L2057799-0	7 Client ID: SL1-8-W2
Oxidation/Reduction Potential	190	190	mv	0	20



Project Name: **ENBRIDGE Lab Number:** L2057799 Project Number: 414883 4

Report Date: 01/08/21

## Sample Receipt and Container Information

YES Were project specific reporting limits specified?

**Cooler Information** 

**Custody Seal** Cooler

Α Absent

Container Info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2057799-01A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		MCP-CR-6010T-10(180)
L2057799-01B	Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),TS(7),PH-9045(1)
L2057799-01C	Glass 120ml/4oz unpreserved/No Headspace	Α	NA		3.2	Υ	Absent		MCP-HEXCR7196-10(30)
L2057799-02A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-02B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)
L2057799-03A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-03B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-03C	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-03D	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-03E	Glass 120ml/4oz unpreserved/No Headspace	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-04A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-04B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-CR-6010T-10(180)
L2057799-04C	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)
L2057799-04D	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)
L2057799-04E	Glass 120ml/4oz unpreserved/No Headspace	Α	NA		3.2	Υ	Absent		MCP-HEXCR7196-10(30)
L2057799-05A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-05B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-05C	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-05D	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-05E	Glass 120ml/4oz unpreserved/No Headspace	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-06A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-06B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-CR-6010T-10(180)
L2057799-06C	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)



Lab Number: L2057799

Report Date: 01/08/21

**Project Name:** ENBRIDGE **Project Number:** 414883 4

Container Info	rmation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2057799-06D	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)
L2057799-06E	Glass 120ml/4oz unpreserved/No Headspace	Α	NA		3.2	Υ	Absent		MCP-HEXCR7196-10(30)
L2057799-07A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-07A1	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-07B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-CR-6010T-10(180)
L2057799-07B1	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-CR-6010T-10(180)
L2057799-07C	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)
L2057799-07C1	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)
L2057799-07D	Glass 120ml/4oz unpreserved	Α	NA		3.2	Υ	Absent		ORP-9045(1),PH-9045(1)
L2057799-07E	Glass 120ml/4oz unpreserved/No Headspace	Α	NA		3.2	Υ	Absent		MCP-HEXCR7196-10(30)
L2057799-08A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-08B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)
L2057799-09A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-09B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-10A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-10B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-11A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-11B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)
L2057799-12A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-12B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-13A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-13B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-13B1	Glass 60ml unpreserved split	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-14A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-14A1	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-14B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)
L2057799-14B1	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)
L2057799-14B2	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)



**Lab Number:** L2057799

Report Date: 01/08/21

Project Name:ENBRIDGEProject Number:414883 4

Container Info	rmation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2057799-15A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-15B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-16A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)
L2057799-16B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)
L2057799-17A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-17B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)
L2057799-18A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		HOLD-WETCHEM()
L2057799-18B	Metals Only-Glass 60mL/2oz unpreserved	Α	NA		3.2	Υ	Absent		HOLD-METAL(180)



**Project Name:** Lab Number: **ENBRIDGE** L2057799 **Project Number:** 414883 4 **Report Date:** 01/08/21

#### GLOSSARY

#### **Acronyms**

**EDL** 

LOQ

MS

NP

RPD

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

**EMPC** - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

**EPA** Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats

MDI - 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.

- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

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.

- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEO - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.



#### **Footnotes**

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

#### **Terms**

1

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

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

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

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a "Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

receipt, if applicable.

- A -Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte was 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).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- ${\bf E} \qquad \hbox{-Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.}$
- F The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- **ND** Not detected at the reporting limit (RL) for the sample.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where



#### **Data Qualifiers**

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.



#### **REFERENCES**

- Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I VI, 2018.
- Annual Book of ASTM (American Society for Testing and Materials) Standards following extraction by SW-846 EPA Method 9045C under the requirements of MADEP BWSC, WSC-CAM-VIB. August 2004.
- 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.
- 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. Facility: Company-wide

Department: Quality Assurance

Title: Certificate/Approval Program Summary

Serial\_No:01082111:30

ID No.:17873 Revision 17

Published Date: 4/28/2020 9:42:21 AM

Page 1 of 1

#### Certification Information

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

#### Westborough Facility

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

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: lodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene

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

**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

## **Mansfield Facility**

**SM 2540D:** TSS

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

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**EPA TO-12** Non-methane organics

EPA 3C Fixed gases

Biological Tissue Matrix: EPA 3050B

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

#### Westborough Facility:

#### **Drinking Water**

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE,

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

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

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

#### Non-Potable Water

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

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

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

#### Mansfield Facility:

#### **Drinking Water**

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522.

#### Non-Potable Water

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

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

EPA 245.1 Hg.

SM2340B

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

Document Type: Form

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-05	SLI - 8-52 0-05'	11	n	13:35	N <sub>L</sub>	μ								14	н		н		$\top$		5
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Container Type P= Plastic A= Amber glass V= Vial G= Glass	Preservative A= None B= HCI C= HNO <sub>3</sub> D= H <sub>2</sub> SO <sub>4</sub>				The state of the s	ainer Type eservative								A	A	A	PA		-		
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-16	512-10-NS 0-0	5'	41	14:50	**	w				$\top$				1	1					7
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Container Type P= Plastic	Preservative A= None				Conta	iner Type								A	P			$\forall$		
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B= Bacteria cup C= Cube O= Other E= Encore D= BOD Bottle Page 45 of 45	E= NaOH F= MaOH G= NaHSOs H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> I= Ascorbic Acid J= NH <sub>2</sub> CI K= Zn Acetate O= Other	Relinquis	hed By:		30,000	n/Time		(	Rece	ived E		92			ate/Ti	ime 1o7	45 A	pha's Te ee rever	es submitted are s erms and Conditio se side.	ns.



#### ANALYTICAL REPORT

Lab Number: L2100350

Client: TRC Environmental Consultants

Wannalancit Mills 650 Suffolk Street

Lowell, MA 01854

ATTN: David Sullivan Phone: (978) 656-3565

Project Name: ENBRIDGE
Project Number: 414883 4
Report Date: 01/06/21

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



**Project Name:** ENBRIDGE **Project Number:** 414883 4

**Lab Number:** L2100350 **Report Date:** 01/06/21

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

L2100350-01 SL2-10-N10 0-0.5' SOIL KINGS COVE, WEYMOUTH, MA 12/28/20 14:55 12/29/20



#### **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.

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
В	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
С	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A res	sponse to questions G, H and I is required for "Presumptive Certainty" status	
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
Н	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
ı	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

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



#### **Case Narrative**

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.	



Project Name:ENBRIDGELab Number:L2100350Project Number:414883 4Report Date:01/06/21

#### **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.

**Total Metals** 

In reference to question I:

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

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

Authorized Signature:

Title: Technical Director/Representative Date: 01/06/21

600, Shawor Kelly Stenstrom

# **QC OUTLIER SUMMARY REPORT**

Lab Number: **Project Name: ENBRIDGE** L2100350 Project Number: 414883 4

**Report Date:** 01/06/21

Recovery/RPD QC Limits Associated Data Quality QC Type (%) (%) **Samples** Assessment Client ID (Native ID) Lab ID **Parameter** Method

There are no QC Outliers associated with this report.



# **METALS**



**Project Name:** Lab Number: **ENBRIDGE** L2100350 **Project Number:** 414883 4 01/06/21

**Report Date:** 

**SAMPLE RESULTS** 

L2100350-01

Date Collected:

12/28/20 14:55

GD

Client ID: SL2-10-N10 0-0.5' Date Received:

12/29/20

Sample Location:

KINGS COVE, WEYMOUTH, MA

Field Prep: Not Specified

Sample Depth:

Matrix:

Lab ID:

Soil

82% Percent Solids:

Prep **Analytical** Dilution Date Date Method **Factor** Prepared **Parameter** Result Qualifier Units RL MDL Analyzed Method **Analyst** 

MCP Total Metals - Mansfield Lab

8.79 97,6010D Arsenic, Total mg/kg 0.464 1 01/06/21 08:20 01/06/21 13:18 EPA 3050B



**Project Name:** Lab Number: **ENBRIDGE** L2100350 Project Number: 414883 4 **Report Date:** 01/06/21

**Method Blank Analysis Batch Quality Control** 

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
MCP Total Metals -	Mansfield Lab for samp	le(s): 01	Batch:	WG145	1816-1				
Arsenic, Total	ND	mg/kg	0.400		1	01/06/21 08:20	01/06/21 13:05	97,6010D	GD

**Prep Information** 

Digestion Method: EPA 3050B



# Lab Control Sample Analysis Batch Quality Control

**Project Name: ENBRIDGE** Project Number: 414883 4

Lab Number:

L2100350

Report Date:

01/06/21

Parameter	LCS %Recovery Qua	LCSD al %Recovery	%Recovery Qual Limits	RPD	Qual RPD Limits	
MCP Total Metals - Mansfield Lab Associa	ated sample(s): 01 Batch: '	WG1451816-2 WG1451	816-3 SRM Lot Number: D	109-540		
Arsenic, Total	105	99	70-130	6	30	



# INORGANICS & MISCELLANEOUS



**Project Name:** Lab Number: **ENBRIDGE** L2100350 Project Number: 414883 4

Report Date: 01/06/21

**SAMPLE RESULTS** 

Lab ID: Date Collected: L2100350-01 12/28/20 14:55

Client ID: SL2-10-N10 0-0.5' Date Received: 12/29/20 Not Specified Sample Location: KINGS COVE, WEYMOUTH, MA Field Prep:

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - \	Westborough Lab	)								
Solids, Total	81.9		%	0.100	NA	1	-	01/05/21 23:02	121,2540G	TR



Lab Number: L2100350

Report Date: 01/06/21

## Sample Receipt and Container Information

Were project specific reporting limits specified?

**ENBRIDGE** 

**Cooler Information** 

Project Name:

Cooler Custody Seal

A Absent

Project Number: 414883 4

Container Info	ormation		Initial	Final	Temp			Frozen			
Container ID	Container Type	Cooler		рН	deg C	Pres	Seal	Date/Time	Analysis(*)		
L2100350-01A	Plastic 2oz unpreserved for TS	Α	NA		3.2	Υ	Absent		TS(7)		
L2100350-01B	Metals Only-Glass 60ml /2oz unpreserved	Α	NA		3.2	Υ	Absent		MCP-AS-6010T-10(180)		



#### **GLOSSARY**

#### **Acronyms**

**EDL** 

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

 Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis

of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of

analytes or a material containing known and verified amounts of analytes.LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content,

where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

MS

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.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile

Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL

includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the

values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the

associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.



#### **Footnotes**

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

#### **Terms**

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

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

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

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

Initial pH: As it pertains to Sample Receipt & Container Information section of the report. Initial pH reflects pH of container determined up

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.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benza(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a "Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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 Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- 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 concentrations of the analyte at less than ten times (10x) the concentrations of the analyte was 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).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- 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.
- F The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- **ND** Not detected at the reporting limit (RL) for the sample.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where



#### **Data Qualifiers**

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.



Project Name: ENBRIDGE Lab Number: L2100350
Project Number: 414883 4 Report Date: 01/06/21

#### REFERENCES

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.

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. Facility: Company-wide

Department: Quality Assurance

Title: Certificate/Approval Program Summary

ID No.:17873

Revision 17

Published Date: 4/28/2020 9:42:21 AM

Page 1 of 1

#### Certification Information

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

#### Westborough Facility

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

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: lodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene

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

**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

## **Mansfield Facility**

**SM 2540D:** TSS

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

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**EPA TO-12** Non-methane organics

EPA 3C Fixed gases

Biological Tissue Matrix: EPA 3050B

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

#### Westborough Facility:

#### **Drinking Water**

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

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

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

#### Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. **EPA 624.1**: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

#### Mansfield Facility:

#### **Drinking Water**

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522.

#### Non-Potable Water

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

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

EPA 245.1 Hg.

SM2340B

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

Pre-Qualtrax Document ID: 08-113 Document Type: Form

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# APPENDIX C DATA USABILITY ASSESSMENT



## Sediment Sampling 90 Bridge Street Weymouth, MA

Data Usability Assessment Prepared: January 11, 2021

#### A. Overall Summary

The data associated with sediment samples collected on November 13, 2020 and December 28, 2020 were reviewed. In general, data are usable for project decisions based on a review of accuracy, precision, and sensitivity of the data. The data are valid as reported and may be used for decision-making purposes without any cautions or limitations.

#### **Samples Included in the Data Usability Assessment:**

SL1-01 (0-0.5)	SL1-02 (0-0.5)	SL1-03 (0-0.5)	SL1-04 (0-0.5)
SL1-05 (0-0.5)	SL1-06 (0-0.5)	SL1-07 (0-0.5)	DUP-1 (11-13-20)
SL1-08 (0-0.5)	SL1-08-E2 (0-0.5)	SL1-08-N2 (0-0.5)	DUP-1 (12-28-20)
SL1-08-W (0-0.5)	SL1-09 (0-0.5)	SL1-10 (0-0.5)	SL2-01 (0-0.5)
SL2-02 (0-0.5)	SL2-03 (0-0.5)	SL2-04 (0-0.5)	DUP-2 (11-13-20)
SL2-05 (0-0.5)	SL2-06 (0-0.5)	SL2-07 (0-0.5)	SL2-08 (0-0.5)
SL2-09 (0-0.5)	SL2-10 (0-0.5)	SL2-10-E5 (0-0.5)	SL2-10-N5 (0-0.5)
SL2-10-N10 (0-0.5)	SL2-10-S5 (0-0.5)	DUP-2 (12-28-20)	SL2-10-W5 (0-0.5)
SL3-04 (0-0.5)	SL3-05 (0-0.5)	SL3-06 (0-0.5)	SL3-07 (0-0.5)
SL3-08 (0-0.5)	SL3-09 (0-0.5)	SL3-10 (0-0.5)	

#### **Field Duplicates:**

SL1-07 (0-0.5)/DUP-1 (11-13-20) (EPH, PAHs by SIM, metals) SL1-08-N2 (0-0.5)/DUP-1 (12-28-20) (Chromium)

SL2-04 (0-0.5)/DUP-2 (11-13-20) (EPH, PAHs by SIM, metals)

SL2-10-S5 (0-0.5)/DUP-2 (12-28-20) (Arsenic)

#### MS/MSDs:

SL1-05 (0-0.5) EPH, PAHs by SIM, metals

SL2-05 (0-0.5) EPH, PAHs by SIM, metals

SL1-08-W2 (0-0.5) Total chromium, hexavalent chromium

SL-2-10-E5 (0-0.5) Arsenic

**Soil Analyses Performed:** (EPH, PAHs/SIM, metals)

#### **Laboratory Data Packages:**

L2050541, L2057799, L2100350 (Alpha Analytical, Westborough and Mansfield, MA)

#### **Criteria Reviewed:**

Holding times/sample preparation, blanks, surrogates, laboratory control sample (LCS), LCS duplicates (LCSDs), matrix spike (MS), MS duplicates (MSDs), serial dilution results, field duplicate results, reporting limits (RLs)



#### **B. Sensitivity Evaluation**

Sensitivity was acceptable for the all analyses of soil samples (i.e., the RLs for nondetect results were below the Massachusetts Contingency Plan [MCP] Method 1 S-1/GW-3 standards).

#### C. Evaluation of Accuracy and Precision

No biases were associated with the EPH analyses of the samples. Biases and uncertainty associated with the PAH SIM and metals analyses of the samples are discussed below.

#### C-1. Low-Biased Results

Potential low bias exists for select results due to various QC nonconformances. In general, the overall data usability and decision-making process were not affected by these QC nonconformances, as shown in the table below.

Samples Affected	Analytes Affected	Reason for Low Bias	Reason Data Usability or Decision- making Process Not Affected
SL2-05 (0-0.5), SL3-04 (0-0.5), SL3-05 (0-0.5), SL3-06 (0-0.5), SL3-07 (0-0.5), SL3-08 (0-0.5), SL3-09 (0-0.5), SL3-10 (0-0.5), DUP-1 (11-13-20), DUP-2 (11-13-20)	Naphthalene	Low recoveries in LCS and LCSD	Results for naphthalene significantly below project action levels in affected samples.
SL1-05 (0-0.5)	Naphthalene, Phenanthrene	Low recovery in MSD	Results for the affected analytes significantly below project action levels in affected sample.
SL1-01 (0-0.5), SL1-02 (0-0.5), SL1-03 (0-0.5), SL1-04 (0-0.5), SL1-05 (0-0.5), SL1-06 (0-0.5), SL1-07 (0-0.5), DUP-1 (11-13-20), SL1-08 (0-0.5), SL1-09 (0-0.5), SL1-10 (0-0.5), SL2-01 (0-0.5), SL2-02 (0-0.5), SL2-03 (0-0.5), SL2-04 (0-0.5), SL2-04 (0-0.5), SL2-07 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-05 (0-0.5), SL3-06 (0-0.5), SL3-06 (0-0.5), SL3-06 (0-0.5),	Chromium	Low recoveries in MS/MSD	Results for chromium significantly below project action levels in affected samples.



Samples Affected	Analytes Affected	Reason for Low Bias	Reason Data Usability or Decision- making Process Not Affected	
SL3-08 (0-0.5), SL3-09 (0-0.5),				
SL3-10 (0-0.5), SL3-10 (0-0.5)				
SL1-01 (0-0.5),				
SL1-01 (0-0.5), SL1-02 (0-0.5),				
SL1-02 (0-0.5), SL1-03 (0-0.5),				
SL1-04 (0-0.5),				
SL1-06 (0-0.5),				
SL1-07 (0-0.5),				
DUP-1 (11-13-20),				
SL1-08 (0-0.5),				
SL1-09 (0-0.5),				
SL1-10 (0-0.5),				
SL2-01 (0-0.5),				
SL2-02 (0-0.5),	0-0.5), 0-0.5), 0-0.5), 7inc			
SL2-03 (0-0.5),			Dlt fii-fitl h-l	
SL2-04 (0-0.5),		Low recoveries in MS/MSD	Results for zinc significantly below project action levels in affected	
DUP-2 (11-13-20),			samples.	
SL2-05 (0-0.5),			samples.	
SL2-06 (0-0.5),				
SL2-07 (0-0.5),				
SL2-08 (0-0.5),				
SL2-09 (0-0.5),				
SL2-10 (0-0.5),				
SL3-04 (0-0.5),				
SL3-05 (0-0.5),				
SL3-06 (0-0.5),				
SL3-07 (0-0.5),				
SL3-08 (0-0.5),				
SL3-09 (0-0.5),				
SL3-10 (0-0.5)		+		
SL1-08-E2 (0-0.5),			B 1. 6 1	
SL1-08-N2 (0-0.5),	Ch	Low recovery	Results for chromium significantly	
DUP-1 (12-28-20),	Chromium	in MSD	below project action levels in affected	
SL1-08-W (0-0.5)			samples.	

#### C-2. High-Biased Results

Potential high bias exists for select results due to various QC nonconformances. In general, the overall data usability and decision-making process were not affected by these QC nonconformances, as shown in the table below.

Samples Affected	Analytes Affected	Reason for High Bias	Reason Data Usability or Decision- making Process Not Affected
SL1-01 (0-0.5), SL1- 02 (0-0.5), SL1-03 (0-0.5), SL1-04 (0- 0.5), SL1-05 (0-0.5), SL1-06 (0-0.5), SL1- 07 (0-0.5), DUP-1 (11-13-20), SL1-08 (0-0.5), SL1-09 (0- 0.5), SL1-10 (0-0.5), SL2-01 (0-0.5), SL2- 02 (0-0.5), SL2-03 (0-0.5), SL2-04 (0-	Mercury	High recoveries in MS/MSD	Results for mercury significantly below project action levels in affected samples.



Samples Affected	Analytes Affected	Reason for High Bias	Reason Data Usability or Decision- making Process Not Affected
0.5), DUP-2 (11-13-			
20), SL2-05 (0-0.5),			
SL2-06 (0-0.5), SL2-			
07 (0-0.5), SL2-08			
(0-0.5), SL2-09 (0-			
0.5), SL2-10 (0-0.5),			
SL3-04 (0-0.5), SL3-			
05 (0-0.5), SL3-06			
(0-0.5), SL3-07 (0-			
0.5), SL3-08 (0-0.5),			
SL3-09 (0-0.5), SL3-			
10 (0-0.5)			
SL2-10 (0-0.5), SL2-			
10-E5 (0-0.5), SL2-			
10-N5 (0-0.5), SL2-		TT' 1 .	Results for arsenic significantly above or
10-N10 (0-0.5), SL2-	Arsenic	High recovery in	below project action levels in affected
10-S5 (0-0.5), DUP-		MSD	samples.
2 (12-28-20), SL2-			
10-W5 (0-0.5)			

### C-3. Potential Uncertainty

Potential uncertainty exists for select results due to various QC nonconformances. In general, the overall data usability and decision-making process were not affected by these QC nonconformances, as shown in the table below.

Samples Affected	Analytes Affected	Reason for Uncertainty	Reason Data Usability or Decision- making Process Not Affected
SL1-01 (0-0.5), SL1-02 (0-0.5), SL1-03 (0-0.5), SL1-04 (0-0.5), SL1-05 (0-0.5), SL1-06 (0-0.5), SL1-07 (0-0.5), SL1-08 (0-0.5), SL1-09 (0-0.5), SL1-10 (0-0.5), SL2-01 (0-0.5), SL2-01 (0-0.5), SL2-03 (0-0.5), SL2-04 (0-0.5), SL2-05 (0-0.5), SL2-06 (0-0.5), SL2-07 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-04 (0-0.5), SL3-04 (0-0.5), SL3-05 (0-0.5), SL3-06 (0-0.5), SL3-07 (0-0.5), SL3-08 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5),	Vanadium	MS/MSD variability	Results for vanadium significantly above or below project action levels in affected samples.



Samples Affected	Analytes Affected	Reason for Uncertainty	Reason Data Usability or Decision- making Process Not Affected			
SL1-01 (0-0.5), SL1-02 (0-0.5), SL1-03 (0-0.5), SL1-04 (0-0.5), SL1-06 (0-0.5), SL1-07 (0-0.5), SL1-08 (0-0.5), SL1-09 (0-0.5), SL1-10 (0-0.5), SL2-01 (0-0.5), SL2-01 (0-0.5), SL2-03 (0-0.5), SL2-04 (0-0.5), SL2-05 (0-0.5), SL2-06 (0-0.5), SL2-08 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-04 (0-0.5), SL3-05 (0-0.5), SL3-06 (0-0.5), SL3-06 (0-0.5), SL3-07 (0-0.5), SL3-08 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5), SL3-09 (0-0.5),	Lead	Serial dilution variability	Results for lead significantly above or below project action levels in affected samples.			
SL1-07 (0-0.5)	Naphthalene, 2- methylnaphthalene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene	Field duplicate variability	Results for the affected analytes significantly below project action levels in affected sample.			
SL1-01 (0-0.5), SL1-02 (0-0.5), SL1-03 (0-0.5), SL1-04 (0-0.5), SL1-05 (0-0.5), SL1-06 (0-0.5), SL1-07 (0-0.5), DUP-1 (11-13-20), SL1-09 (0-0.5), SL1-10 (0-0.5), SL2-01 (0-0.5), SL2-01 (0-0.5), SL2-03 (0-0.5), SL2-03 (0-0.5), SL2-05 (0-0.5), SL2-06 (0-0.5), SL2-07 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5), SL2-09 (0-0.5),	Arsenic, chromium, nickel, vanadium	Field duplicate variability	Results for the affected analytes significantly above or below project action levels in affected samples.			



Samples Affected	Analytes Affected	Reason for Uncertainty	Reason Data Usability or Decision- making Process Not Affected
SL3-06 (0-0.5), SL3-07 (0-0.5),			
SL3-07 (0-0.5), SL3-08 (0-0.5),			
SL3-09 (0-0.5),			
SL3-10 (0-0.5)			
SL2-04 (0-0.5)	Pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3- cd)pyrene, benzo(ghi)perylene	Field duplicate variability	Results for the affected analytes significantly below project action levels in affected sample.

### **APPENDIX D**

## IMMINENT HAZARD EVALUATION FOR ARSENIC AND CHROMIUM IN SEDIMENT



# IMMINENT HAZARD EVALUATION FOR ARSENIC AND CHROMIUM IN SEDIMENT

Kings Cove Conservation Area 90 Bridge Street Weymouth, Massachusetts

Release Tracking Number (RTN) 4-28615

#### Prepared for:



**Algonquin Gas Transmission, LLC** 890 Winter Street, Suite 300 Waltham, Massachusetts 02451

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February 2021

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#### IMMINENT HAZARD EVALUATION FOR ARSENIC AND CHROMIUM IN SEDIMENT 90 BRIDGE STREET WEYMOUTH, MASSACHUSETTS

TRC Environmental Corporation (TRC) has prepared this Imminent Hazard (IH) Evaluation report for Algonquin Gas Transmission, LLC (Algonquin) regarding arsenic and total chromium detected in surficial sediment on the shoreline of the Kings Cove Conservation Area at 90 Bridge Street in Weymouth, Massachusetts (Kings Cove). This IH Evaluation is one of the Immediate Response Action (IRA) activities initiated in response to the detection of arsenic and total chromium in sediment on December 8, 2020.

In accordance with the Massachusetts Contingency Plan (MCP), specifically 310 CMR 40.0953, the IH Evaluation evaluates actual or likely exposures under current site conditions, and considers an appropriately short period of time (five years or less). The levels of oil and/or hazardous material in the top twelve inches of sediment are considered in the IH Evaluation.

MCP Method 3 has been used for this IH Evaluation. This IH Evaluation has been conducted consistent with the MCP and the requirements of 310 CMR 40.0426, 310 CMR 40.0951 through 40.0955, and MassDEP's Guidance for Disposal Site Risk Characterization (MassDEP, 1995 and updates).

An MCP Method 3 IH Evaluation includes four steps as described in Section 10.0 of MassDEP's Guidance for Disposal Site Risk Characterization (MassDEP, 1995): (1) Identification of Contaminants of Potential Concern (COPCs); (2) Exposure Assessment; (3) Dose-Response Assessment; and (4) Risk Characterization. The following sections describe how those steps were performed and the conclusions of the IH Evaluation.

Supplemental information for this IH Evaluation is included in Attachment 1 (Sediment Data), Attachment 2 (ProUCL Output), and Attachment 3 (Risk Calculation Shortform).

A Data Usability Assessment (DUA) for the sediment data that is the subject of this IH Evaluation is included in Appendix C of the IRA Completion Report.

## 1.0 IDENTIFICATION OF CONTAMINANTS OF POTENTIAL CONCERN AND HOT SPOT EVALUATION

#### 1.1 DATA REVIEW

Twenty-nine 0 to 0.5-foot sediment samples (SL1-01 through SL1-10, SL2-01 through SL2-10, and SL3-04 through SL3-10, plus field duplicates at SL1-07 and SL2-04) were collected from Kings Cove on November 13, 2020 (see Figure 1). Total chromium was detected in one sediment sample and arsenic was detected in another at concentrations exceeding the notification thresholds specified at 310 CMR 40.0321(2)(b).

Additional sediment samples were collected on December 28, 2020 (see Figure 1) to determine the vertical extent of arsenic-impacted sediment at location SL2-10 and to determine the distribution of total chromium and hexavalent chromium in the vicinity of location SL1-08. The sediment sampling data are presented in Attachment 1, Table 1.

The hexavalent chromium data collected from the vicinity of sampling location SL1-08 were used to develop a site-specific, percentage of hexavalent chromium. Based on the detected hexavalent chromium concentration (1.54 mg/kg) and the total chromium concentration (16.4 mg/kg) at sampling location SL1-8-N2 DUP-1, TRC has estimated that 9.4 percent of the total chromium at sampling location SL1-08 (i.e., 23.5 mg/kg of the 250 mg/kg detected) is in the hexavalent form. The 23.5 mg/kg concentration was used in the risk characterization to evaluate the contribution to risk of hexavalent chromium. In the risk characterization, the total chromium concentration of 250 mg/kg was assumed to be trivalent chromium without subtracting the 23.5 mg/kg estimated to be hexavalent chromium. Accordingly, the risk calculations relating to hexavalent chromium and total chromium are quite conservative.

Data from sediment sampling locations SL1-01, SL1-02, SL1-05, SL2-01, SL2-04, SL2-08, SL2-09, SL3-04 through SL3-06, SL3-08 through SL3-10, SL2-10-E5, SL2-10-W5, and SL2-10-N10 were excluded from the quantitative evaluation because these data indicate substantially lower contaminant concentrations than the data from the other sampling locations (i.e., consistent with MassDEP natural soil background concentrations for metals and polycyclic aromatic hydrocarbons [PAHs]). Therefore, TRC has concluded that the excluded locations are outside the area of impacts evaluated in the IH Evaluation. The excluded samples are highlighted in green in Attachment 1, Table 1. Excluding samples with lower contaminant concentrations from the risk characterization data set results in a conservative data set. The locations of samples utilized or excluded are illustrated in the Extent of Site Addressed By IRA (outlined in orange on Figure 1).

#### 1.2 IDENTIFICATION OF COPCs

All contaminants detected at concentrations higher than the laboratory reporting limits were retained as Contaminants of Potential Concern (COPCs) for the IH Evaluation unless the maximum detected concentration of a contaminant was less than the MCP

Method 1 S-1/GW-3 soil standards. The sediment data are presented in Appendix 1, Table 1. Based on the above criteria, arsenic, chromium, lead, nickel, and vanadium were identified as COPCs for the 0 to 0.5-foot sediment interval. The risk characterization sediment data set is presented in Appendix 1, Table 2.

#### 1.3 Hot Spot Evaluation

The data for sediment samples obtained from the 0 to 0.5-foot depth interval (see Appendix 1, Table 2) were evaluated to rule out the possibility of a hot spot. No hot spots were identified.

A hot spot is defined in 310 CMR 40.0006 of the MCP as a discrete area where the chemical concentrations are substantially higher than those present in the surrounding area. A discrete area in which an average contaminant concentration within the area is greater than ten times but less than one hundred times the average concentration in the immediate surrounding area is a hot spot unless there is no evidence of a greater exposure potential associated with the discrete area. A discrete area in which the average contaminant concentration is greater than one hundred times the average concentration in the immediate surrounding area is considered a hot spot. Hot spot identification is performed to address the possibility that the risk associated with significantly elevated contaminant concentrations will be diluted by averaging those elevated concentrations with lower contaminant concentrations in the area.

The MCP specifies, at 310 CMR 40.0006, that contaminant concentrations equal to or less than an applicable MCP Method 1 standard are never indicative of a hot spot. Though not applicable to sediment, MCP Method 1 S-1/GW-3 soil standards were conservatively applied to determine the contaminants to be considered in the hot spot evaluation. As a result, the metals arsenic, chromium, lead, nickel, and vanadium (Table 1) were included in the hot spot evaluation. Any other contaminants detected in the sediment samples were present at concentrations less than MCP Method 1 S-1/GW-3 soil standards. Hexavalent chromium was not included in the hot spot analysis because the maximum concentration of chromium, based on both total chromium and chromium speciation data, was less than the MCP Method 1 S-1/GW-3 soil standard.

The following tables show the maximum detected concentration, average concentration, and variance between the maximum concentration and the average concentration for each metal evaluated in the hot spot evaluation.

Chemical	Maximum Concentration (mg/kg)	Average Concentration Excluding Maximum (mg/kg)	Variance (Maximum versus Average Excluding Maximum)				
0 to 0.5-Foot Sediment Data Set							
Arsenic	77.6	21.8	3.6-fold				
Chromium	250	22.4	11.2-fold				

Chemical	Maximum Concentration (mg/kg)	Average Concentration Excluding Maximum (mg/kg)	Variance (Maximum versus Average Excluding Maximum)
Lead	580	57.8	10.0-fold
Nickel	6,100	67.3	90.6-fold
Vanadium	13,000	453	28.7-fold

None of these metals were detected in a discrete area at an average concentration greater than 100 times the average concentration in the immediate surrounding area and there is no evidence of a greater exposure potential associated with the contaminant concentrations in any discrete area. Accordingly, no hot spots were identified.

#### 2.0 EXPOSURE ASSESSMENT

The Exposure Assessment identifies the individuals who might be exposed to the COPCs in the area that is the subject of the IH Evaluation, otherwise known as receptors. This section discusses the potential pathways of exposure for the identified receptors, exposure assumptions used for each receptor, estimates of the frequency and intensity of the potential exposure, the medium-specific exposure point concentrations, and the resulting concentrations of a COPC to which specific receptors may be exposed.

#### 2.1 Current Activities and Uses

This IH Evaluation is applicable to the Kings Cove shore (see Figure 1). The Kings Cove shore has the potential to be used recreationally, primarily for wading and walking (during low tide).

#### 2.2 Receptors and Exposure Pathways

This IH Evaluation characterizes cumulative risks to recreational visitors who may be exposed to surficial sediments where elevated concentrations of COPCs in the 0 to 0.5-foot interval have been detected.

These recreational visitors could potentially be exposed to surficial sediment primarily through incidental ingestion (i.e., a result of hand-to-mouth activity) and dermal contact.

The risk characterization sediment data set is presented in Attachment 1, Table 2. The sediment data summarized in Table 1 were used to estimate exposures to park visitors.

#### 2.3 Exposure Assumptions

Only a young child recreational visitor (1 to 6-year old) is evaluated in an IH Evaluation because the exposure period for the IH Evaluation is limited to five years. Outdoor exposures to COPCs in sediment are assumed to occur for 30 days/year (1 day/week for

30 weeks/year). The exposure duration for non-cancer endpoints of toxicity was averaged over 30 weeks. The average weight of the child was assumed to be 14.6 kilograms. Incidental ingestion of sediment was set at 100 milligrams/day for the child. Dermal contact with COPCs in sediment was evaluated using a sediment adherence factor of 1 mg/cm² which assumes exposure via the face, hands, forearms, lower legs, and feet (2,231 cm²). MassDEP's Park Visitor IH Shortform was used to evaluate this scenario, with applicable modification for sediment. The Shortform for the ingestion and dermal contact pathways is presented in Attachment 3.

#### 2.4 Exposure Point Concentrations

Exposure Point Concentrations (EPCs) represent the COPC concentrations that a receptor may come in contact with at the exposure point. EPCs for this risk characterization were derived from the sediment analytical data tabulated in Attachment 1, Table 2.

For the COPCs 95% Upper Confidence Limits on the arithmetic mean concentration have been used as EPCs, except for hexavalent chromium for which the maximum estimated concentration was used as the EPC. The Upper Confidence Limits were calculated using EPA's software program "ProUCL Statistical Software." ProUCL tests for normality, lognormality, and gamma distribution of a data set, and computes a conservative and stable Upper Confidence Limit of the population mean. Based on the data distribution, ProUCL computes the Upper Confidence Limit of the population mean using appropriate statistical methods. ProUCL outputs are provided in Attachment 2. Table 1 presents the COPC EPCs and the statistical test used by ProUCL to determine the value.

#### 2.5 Estimation of Chemical Intake

To evaluate the risk of harm to recreational visitors, the intake of each COPC must be estimated, a process which involves assessing the amount of material in contact with the receptor and the amount actually available for absorption by the body. This assessment is achieved through the calculation of an average daily dose (ADD) for each COPC and for each route of exposure. Compound-specific and exposure route-specific Relative Absorption Factors (RAFs) are used in the ADD equations to convert an exposure (amount) to a dose (amount per unit body weight).

The general ADD equation is as follows and is consistent with that provided in MassDEP, 1995:

ADD = <u>Total Amount of Chemical Taken In</u> (Body Weight) \* (Averaging Period) The specific ADD equations for the various exposure pathways evaluated are provided below:

**Incidental Ingestion of Sediment** 

ADD = (EPC)\*(Ingestion Rate)\*(Exposure Frequency)\*(Exposure Period)\*RAF (Body Weight)\*(Averaging Period)

**Dermal Contact with Sediment** 

ADD = (EPC)\*(Surface Area)\*(Exposure Frequency)\*(Exposure Period)\*(Adherence Factor)\*RAF (Body Weight)\*(Averaging Period)

Exposure assumptions and the specific equations used to calculate ADDs are provided in the Shortform included in Attachment 3. The ADD values calculated for subchronic exposures were compared to the toxicity values (e.g., RfDs, RfCs, and SFs) discussed in Section 3. This comparison provides a numerical estimate of the levels of risk and the potential for adverse health effects to occur due to exposure to COPCs, as described in Section 3.

#### 3.0 DOSE-RESPONSE ASSESSMENT

The Dose-Response Assessment utilizes published literature describing epidemiological (i.e., human) or toxicological (i.e., laboratory animal) studies to evaluate the potential non-carcinogenic and carcinogenic responses associated with exposure to doses of the selected COPCs. The information from the Dose-Response Assessment is used in conjunction with information from the Exposure Assessment (Section 2) to estimate the risk and hazard generated by each COPC from an exposure (Section 4).

#### 3.1 Non-Carcinogenic Dose-Response Assessment

The toxicity values used in this Dose-Response Assessment of COPCs are the Reference Doses (RfDs) for oral and dermal exposures. RfD values provide an estimate of the daily dose of the COPC to which an individual may be exposed without an appreciable risk of adverse non-cancer health effects (including organ damage or reproductive effects) appearing during their lifetime. RfD values assume that a threshold dose exists below which there will be minimal risk for adverse effects to occur.

The subchronic RfD values used for IH Evaluations are based on defined, less than lifetime exposures, and are approximate doses derived from an available No Observed Adverse Effect Level (NOAEL) or the Lowest Observed Adverse Effect Level (LOAEL). Subchronic toxicity values are appropriate for use in evaluating risks to recreational visitors for an IH situation, who are assumed to be exposed for a maximum of five years rather than their entire lifetime.

RAFs are used to account for differences between the method of administration in the study on which the RfD is based and the applicable routes of exposure. These values vary with the medium and route of exposure.

The RfD values used in this IH Evaluation are those values used by MassDEP in the 2015 Shortforms (MassDEP, 2015). Subchronic RfDs and medium-specific RAFs are listed in the Shortform documentation (Attachment 3).

#### 3.2 Carcinogenic Dose-Response Assessment

The U.S. EPA has developed a system for classifying chemicals according to the likelihood that the compound is a human carcinogen. This system groups contaminants into five classes based upon the weight-of-evidence (of carcinogenicity) of the available data. Per MassDEP risk characterization guidelines (Section 10.2.3 of MassDEP, 1995), class A, B, and C carcinogens are evaluated in a Method 3 risk characterization. The oral slope factors (SFs) used in this risk characterization are those values used by MassDEP in the 2015 Shortforms (MassDEP, 2015). Carcinogenic toxicity values (SFs) are presented in the Shortform documentation (Attachment 3).

#### 4.0 RISK CHARACTERIZATION

To characterize the risk of harm to human health from potential exposures to sediment, carcinogenic and non-carcinogenic risks were calculated for the young child recreational visitor, and the cumulative receptor risk values were compared to the MassDEP IH Risk Limits to assess whether an IH exists.

To estimate non-carcinogenic hazards, the Hazard Quotient was calculated by dividing the ADD computed in the Exposure Assessment (Section 2) by the RfD or RfC identified in the Dose-Response Assessment (Section 3). The cumulative Hazard Index (HI) was subsequently calculated by summing the hazard quotients for the exposure pathways applicable to the receptor. The HI for the COPCs is compared to the MCP Non-Carcinogenic Risk Limit of 1 for compounds with the potential to cause serious effects (e.g., lead) and to an HI of 10 for all other COPCs (310 CMR 40.0955(2)(c)) to establish whether an IH exists.

To calculate the Excess Lifetime Cancer Risk (ELCR), the Lifetime Average Daily Dose (LADD) estimated in the Exposure Assessment is multiplied by the SF or UR identified in the Dose-Response Assessment. The Total Cancer Risk for the receptor is subsequently computed by summing the ELCR values for the exposure pathways applicable to the receptor. The Total Cancer Risk is then compared to the Total Cancer Risk Limit of 1E-05 (310 CMR 40.0955(2)(b)) to establish whether an IH exists.

Table 2 presents a summary of the total risks and hazards for the recreational visitor. Individual COPC, pathway and route-specific HQs and ELCRs are shown in Attachment 3. As shown on Table 2 and in Attachment 3, HIs and ELCRs for the recreational visitor do not exceed MassDEP Risk Limits for an IH. The total ELCR is less than 1E-05, the total HI is less than 10, and the lead HI is less than 1.

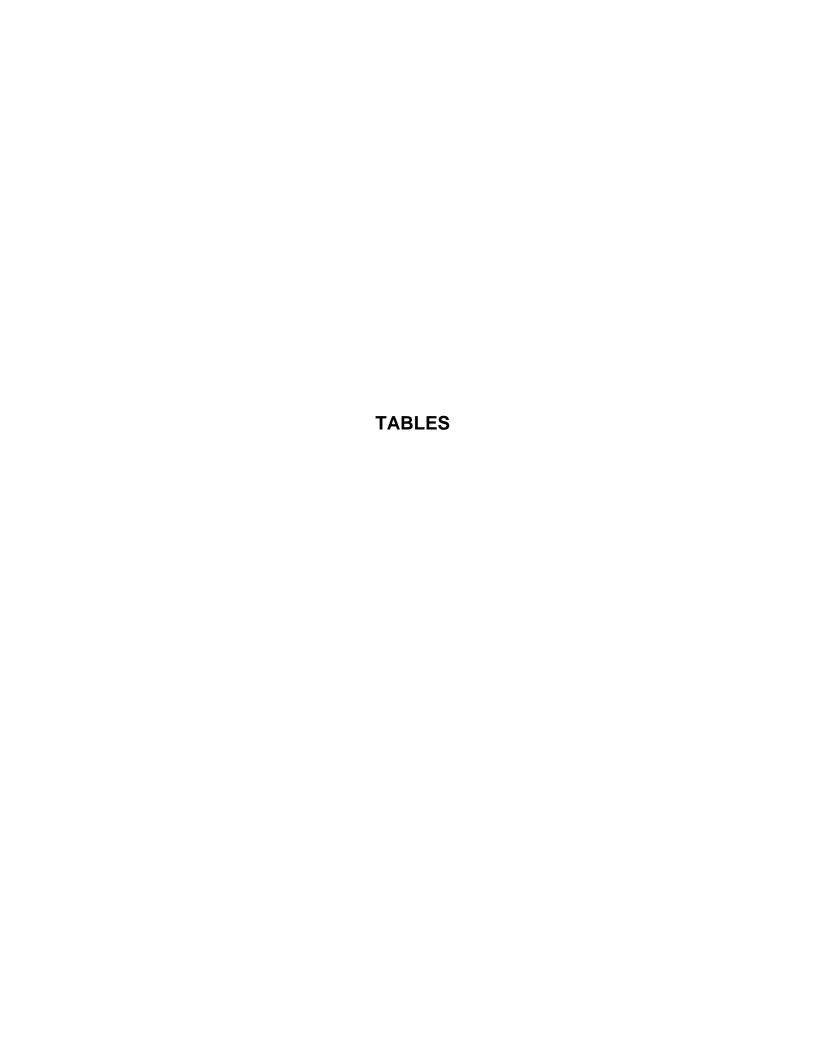
#### 5.0 IMMINENT HAZARD EVALUATION CONCLUSIONS

HIs and ELCRs for the recreational visitor do not exceed the MassDEP Risk Limits for an IH. The total ELCR is less than 1E-05, the total HI is less than 10, and the lead HI is less than 1. Therefore, the concentrations of the COPCs detected in Kings Cove sediment do not present an IH.

The IH Evaluation was conducted in a manner consistent with the MCP, including as specified at 310 CMR 40.0426, 310 CMR 40.0951 through 40.0955, and in MassDEP's Guidance for Disposal Site Risk Characterization (MassDEP, 1995 and updates).

#### 6.0 REFERENCES

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#### Table 1 **Sediment Exposure Point Concentrations** 90 Bridge Street Weymouth, Massachusetts

				# of Samples	# of Detects	Freq. of Detects	Min. of Detects (mg/kg)	Max. of Detects (mg/kg)	Location of Max. Detected	Min. of Non-Detects (mg/kg)	Max. of Non-Detects (mg/kg)	Mean Concentration (mg/kg)	EPC (mg/kg)	EPC Rationale
Analysis	Analyte	Unit	S-1/GW-3				, , ,	, o		ŷ	, 6 6,	, 6 6	, 6 6,	
Metals,	total													
	Arsenic	mg/kg	20	16	16	100.0%	11	77.6	SL2-10-N5			2.5E+01	3.3E+01	95% Modified-t UCL
	Chromium	mg/kg	1,000	14	14	100.0%	11	250	SL1-08			3.9E+01	5.9E+01	95% H-UCL
	Chromium, Hexavalent	mg/kg	100	1	1	100.0%	23.5	23.5	SL1-08			2.4E+01	2.4E+01	Maximum of Detects
	Lead	mg/kg	200	14	14	100.0%	30	580	SL2-05			9.5E+01	1.4E+02	95% H-UCL
	Nickel	mg/kg	600	14	14	100.0%	21	6100	SL1-07			6.4E+02	5.1E+03	99% Chebyshev (Mean, Sd) UCL
	Vanadium	mg/kg	400	14	14	100.0%	97	13000	SL1-07			1.8E+03	6.1E+03	95% Chebyshev (Mean, Sd) UCL

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

EPC - Exposure point concentration.

Values shown in bold and shaded type exceed the listed sediment Screening Value.

UCL - Upper Confidence Limit.

Table 2 Summary of Risks and Hazards 90 Bridge Street Weymouth, Massachusetts

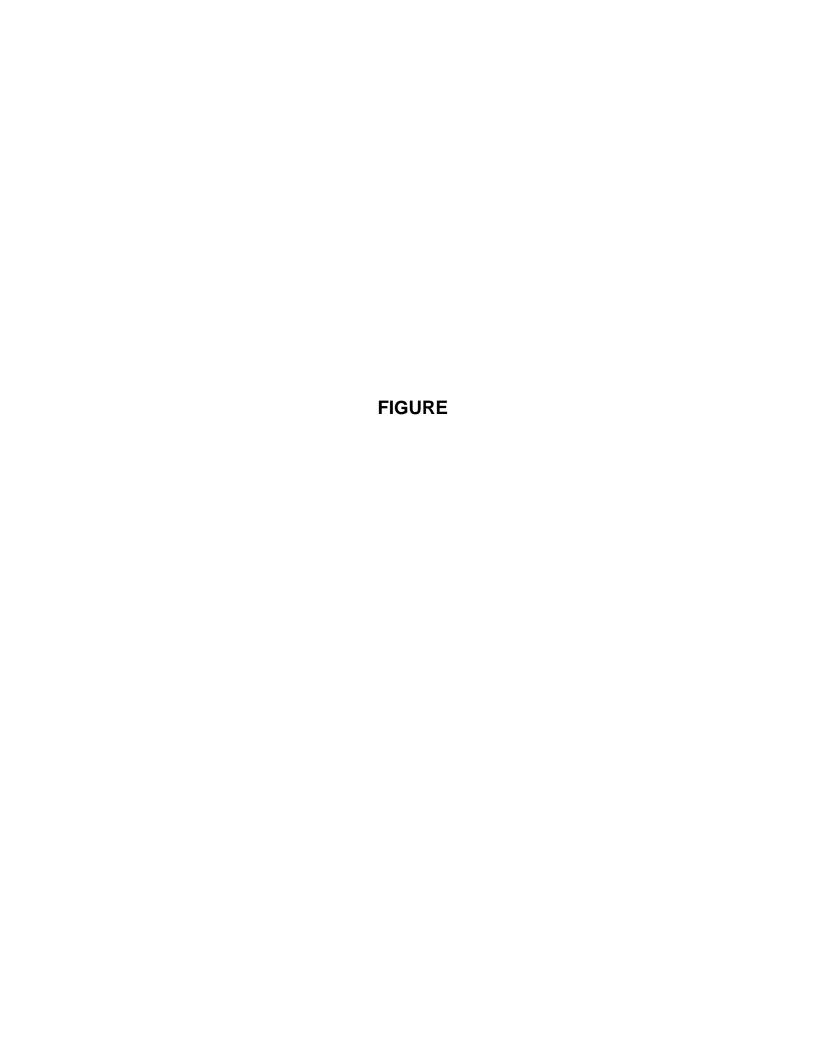
	HI	ELCR
	RECREATION (0 to 0.5-fo	NAL VISITOR ot interval)
Sediment:		
Incidental Ingestion	1E+00	1E-06
Dermal Contact	3E+00	1E-06
Total*	4E+00	2E-06

#### Notes:

HI - Hazard Index; compared to total HI of 10.

ELCR - Excess Lifetime Cancer Risk; compared to total ELCR of 1E-05.

\* The lead HI is less than 1.







EXTENT OF SITE ADDRESSED BY IMMEDIATE RESPONSE ACTION.

- - - MEAN HIGH WATER

SEDIMENT SAMPLE LOCATION

SEDIMENT SAMPLE LOCATION NOT SUBMITTED FOR LABORATORY ANALYSIS.



ROJECT:

90 Bridge Street

Weymouth, Massachusetts

TITLE

#### SEDIMENT SAMPLING LOCATION MAP

DRAWN BY:	MAN	PROJ NO.:	414883
CHECKED BY:	GP		
APPROVED BY:	JD	FIGURE 1	
DATE:	JAN. 2021	]	



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sediment\_sampling\_2021\_01\_11.dw



# ATTACHMENT 1 SEDIMENT DATA

### Table 1. Summary of Analytical Results for Sediment Samples 90 Bridge Street Weymouth, Massachusetts

		San	nple Location:	SL1-01	SL1-02	SL1-03	SL1-04	SL1-05	SL1-06	SL	1-07	SL1-08	SL1-08-E2	SL1-	-8-N2	SL1-8-W2	SL1-09	SL1-10	SL2-01	SL2-02	SL2-03	SI	L2-04	SL2-05	SL2-06
		5	Sample Name:	SL1-1 (0-0.5)	SL1-2 (0-0.5)	SL1-3 (0-0.5)	SL1-4 (0-0.5)	SL1-5 (0-0.5)	SL1-6 (0-0.5)	SL1-7 (0-0.5)	DUP-1	SL1-8 (0-0.5)	SL1-8-E2 0-0.5	SL1-8-N2 0-0.5	DUP1	SL1-8-W2 0-0.:	SL1-9 (0-0.5)	SL1-10 (0-0.5)	SL2-1 (0-0.5)	SL2-2 (0-0.5)	SL2-3 (0-0.5)	SL2-4 (0-0.5)	DUP-2	SL2-5 (0-0.5)	SL2-6 (0-0.5)
		L	ab Sample ID:	L2050541-12	L2050541-13	L2050541-14	L2050541-15	L2050541-16	L2050541-17	L2050541-18	L2050541-42	L2050541-19	L2057799-06	L2057799-04	L2057799-01	L2057799-07	L2050541-20	L2050541-21	L2050541-22	L2050541-23	L2050541-24	L2050541-25	L2050541-43	L2050541-26	L2050541-27
		S	Sample Depth:	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date:	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020
Analysis	Analyte	Unit	S-1/GW-3								Field Dup				Field Dup								Field Dup		
EPH																									
	C9-C18 Aliphatics	mg/kg	1,000	8.95 U	8.58 U	9.38 U	8.52 U	8.16 U	7.90 U	8.11 U	NA	7.50 U	NA	NA	NA	NA	7.57 U	10.1 U	10.4 U	11.6 U	11.6 U	8.57 U	NA	9.35 U	9.78 U
	C19-C36 Aliphatics	mg/kg	3,000	8.95 U	8.58 U	9.38 U	8.52 U	8.16 U	7.90 U	8.11 U	NA	7.50 U	NA	NA	NA	NA	7.57 U	10.1 U	27.6	14.8	11.6 U	8.57 U	NA	9.35 U	9.78 U
	C11-C22 Aromatics	mg/kg	1,000	14.5	8.58 U	14.4	14.0	8.16 U	7.90 U	9.62	NA	7.50 U	NA	NA	NA	NA	7.57 U	62.2	34.1	30.9	11.6 U	8.57 U	NA	9.35 U	18.5
PAHs																									
	Naphthalene	mg/kg	500	0.0418	0.00525	0.0102	0.0147	0.0229	0.0320	0.0168	0.0287	0.0154	NA	NA	NA	NA	0.0152	0.0156	0.0400	0.0383	0.0453	0.00702	0.00530 U	0.0127	0.0209
	2-Methylnaphthalene	mg/kg	300	0.0295	0.00686	0.0198	0.0349	0.0286	0.0205	0.0301	0.0614	0.0279	NA	NA	NA	NA	0.0330	0.0236	0.1	0.0753	0.0684	0.0111	0.00744	0.0162	0.0297
	Acenaphthylene	mg/kg	10	0.0516	0.0497	0.0654	0.0156	0.0233	0.00922	0.00770	0.00947	0.00604	NA	NA	NA	NA	0.00467 U	0.0128	0.14	0.0316	0.0198	0.00524 U	0.00852	0.0148	0.0777
	Acenaphthene	mg/kg	1,000	0.0716	0.00525 U	0.00548 U	0.00502 U	0.0235	0.00742	0.00577	0.00937	0.00443 U	NA	NA	NA	NA	0.00467 U	0.00593 U	0.0166	0.0133	0.0156	0.00524 U	0.00530 U	0.00651	0.0267
	Fluorene	mg/kg	1,000	0.0545	0.00525 U	0.00966	0.00502 U	0.0197	0.00552	0.00630	0.00614	0.00443 U	NA	NA	NA	NA	0.00467 U	0.00593 U	0.0193	0.0139	0.0157	0.00524 U	0.00530 U	0.00652	0.0478
	Phenanthrene	mg/kg	500	0.466	0.0826	0.153	0.106	0.142	0.0869	0.126	0.223	0.0542	NA	NA	NA	NA	0.0822	0.0864	0.392	0.186	0.22	0.0239	0.0269	0.0483	0.611
	Anthracene	mg/kg	1,000	0.134	0.0387	0.0594	0.0183	0.0479	0.0259	0.0144	0.0268	0.00886	NA	NA	NA	NA	0.00796	0.0182	0.134	0.0628	0.0540	0.00524 U	0.00752	0.0144	0.147
	Fluoranthene	mg/kg	1,000	0.829	0.305	0.386	0.103	0.238	0.122	0.114	0.268	0.0412	NA	NA	NA	NA	0.0495	0.128	1.21	0.418	0.241	0.0274	0.0585	0.0904	0.995
	Pyrene	mg/kg	1,000	0.62	0.241	0.317	0.108	0.193	0.0968	0.101	0.251	0.0372	NA	NA	NA	NA	0.0627	0.104	0.989	0.321	0.207	0.0240	0.0491	0.0811	0.812
	Benzo(a)anthracene	mg/kg	7	0.422	0.186	0.235	0.0626	0.128	0.0757	0.0662	0.146	0.0261	NA	NA	NA	NA	0.0369	0.0613	0.669	0.199	0.127	0.0153	0.0332	0.0508	0.457
	Chrysene	mg/kg	70	0.43	0.182	0.256	0.0983	0.16	0.103	0.116	0.157	0.0507	NA	NA	NA	NA	0.0661	0.103	0.84	0.293	0.179	0.0248	0.0379	0.0647	0.501
	Benzo(b)fluoranthene	mg/kg	7	0.404	0.166	0.213	0.0726	0.167	0.0974	0.0955	0.152	0.0391	NA	NA	NA	NA	0.0500	0.0967	0.846	0.321	0.139	0.0223	0.0512	0.0851	0.396
	Benzo(k)fluoranthene	mg/kg	70	0.32	0.149	0.192	0.0475	0.132	0.0566	0.0506	0.0994	0.0205	NA	NA	NA	NA	0.0224	0.0685	0.633	0.185	0.107	0.0149	0.0274	0.0472	0.283
	Benzo(a)pyrene	mg/kg	2	0.403	0.18	0.23	0.0672	0.152	0.0617	0.0698	0.122	0.0265	NA	NA	NA	NA	0.0381	0.0777	0.789	0.249	0.13	0.0175	0.0351	0.0643	0.389
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	0.298	0.123	0.145	0.0501	0.133	0.0491	0.0626	0.0996	0.0208	NA	NA	NA	NA	0.0314	0.0736	0.658	0.215	0.104	0.0163	0.0324	0.0622	0.274
	Dibenzo(a,h)anthracene	mg/kg	0.7	0.0860	0.0280	0.0376	0.0170	0.0394	0.0136	0.0178	0.0253	0.00783	NA	NA	NA	NA	0.0144	0.0179	0.147	0.0506	0.0319	0.00524 U	0.00825	0.0179	0.0697
	Benzo(ghi)perylene	mg/kg	1,000	0.256	0.114	0.141	0.0596	0.127	0.0477	0.0674	0.101	0.0253	NA	NA	NA	NA	0.0360	0.0855	0.632	0.209	0.108	0.0170	0.0333	0.0622	0.263
Metals,	total																								
	Antimony	mg/kg	20	2.1 U	2.1 U	2.3 U	2.4	2.2	1.9 U	1.9 U	2.2	1.8 U	NA	NA	NA	NA	1.8 U	2.5 U	2.4 U	2.7 U	2.7 0	2.1 U	2.2 U	2.3 U	2.3 U
	Arsenic	mg/kg	20	11	14	22	30	13	11	18	10	15	NA	NA	NA	NA	18	24	14	15	22	19	15	16	24
	Barium	mg/kg	1,000	14	14	12	9.8	17	17	16	20	30	NA	NA	NA	NA	20	17	18	29	40	13	14	21	23
	Beryllium	mg/kg	90	0.39 U	0.76	0.60	0.59	0.62	0.58	0.45	0.41	0.54	NA	NA	NA	NA	0.59	0.78	0.60	0.62	0.89	0.42	0.51	0.60	0.72
-	Cadmium	mg/kg	70	0.26 U	0.26 U	0.28 U	0.25 U	0.25 U	0.23 U	0.24 U	0.23 U	0.23 U	NA	NA	NA	NA	0.22 U	0.31 U	0.30 U	0.34 U		0.26 U	0.28 U	0.29 U	0.29 U
	Chromium (III)	mg/kg	1,000	13	20	11	11	16	18	30	17	250	28.7	13.2	16.4	18.4	13	21	18	32	43	14	12	24	24
	Chromium (VI)	mg/kg	100	NA 51	NA 40	NA	NA 50	NA 45	NA TO	NA	NA 25	23.5	NA	NA	NA	NA	NA 54	NA .	NA 45	NA TO	NA 100	NA	NA	NA	NA 100
	Lead	mg/kg	200	51	48	33	50	47	58	30	25	53	NA	NA	NA	NA	54	67	47	78	100	57	40	580	100
	Mercury	mg/kg	20	0.107 U	0.096 U	0.102 U	0.098 U	0.103 U	0.081 U	0.083 U	0.084 U	0.088 U	NA	NA	NA	NA	0.084 U	0.100 U	0.126 U	0.198	0.221	0.103 U	0.100 U	0.098 U	0.174
	Nickel	mg/kg	600	13	47	21	100	46	77	6,100	1,000	2,100	NA	NA	NA	NA	60	24	41	93	64	28	34	170	94
-	Selenium	mg/kg	400	2.6 U	2.6 U	2.8 U	2.5 U	2.5 U	2.3 U	2.4 U	2.3 U	2.3 U	NA NA	NA NA	NA	NA	2.2 U	3.1 U	3.0 U	3.4 U	3.4 U	2.6 U	2.8 U	2.9 U	2.9 U
	Silver	mg/kg	100	0.65 U	0.65 U	0.71 U	0.63 U 0.50 U	0.63 U	0.58 U	0.59 U	0.57 U 0.45 U	0.58 U	NA NA	NA NA	NA NA	NA NA	0.56 U	0.77 U	0.75 U	0.84 U	0.85 U	0.65 U	0.70 U	0.72 U	0.72 U 0.58 U
-	Thallium	mg/kg	8	0.52 U	0.52 U 300	0.57 U 230		0.50 U	0.47 U	0.47 U		0.46 U	NA NA	NA NA	NA NA	NA NA	0.45 U 450	0.62 U	0.60 U	0.67 U	0.68 U 220	0.52 U	0.56 U	0.29 U	
	Vanadium	mg/kg	400	48			630		1,100	13,000	6,000	7,200	NA NA		NA					1,400	130	61	100	480	410
-	Zinc	mg/kg	1,000	48	84	50	47	82	59	80	61	72	NA	NA	NA	NA	81	110	73	110	130	53	66	190	110
Genera	Chemistry		100		,				,				0.022 *-	0.075		0.671				,					<del>  , </del>
	Chromium (VI)	mg/kg	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.932 U	0.957 U	1.54	0.951 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

umoles/g - micromhos per gram.

NA - Sample not analyzed for the listed analyte.

VI - Analyte not analyzed to the instead analyze.

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 the listed sediment Screening Value.

EPH - Extractable Petroleum Hydrocarbons.

PAHs - Polycyclic Aromatic Hydrocarbons. Contaminant of Potential Concern.
Beyond Site boundary.

### Table 1. Summary of Analytical Results for Sediment Samples 90 Bridge Street Weymouth, Massachusetts

		Ç <sub>0</sub>	mple Location:	SL2-07	SL2-08	SL2-09	SL2-10	SL2-10-E5	SL2-10-N5	SL2-10-N10	SI 2	-10-S5	SL2-10-W5	SL3-01	SL3-02	SL3-03	SL3-04	SL3-05	SL3-0	SL3-07	SL3-08	SL3-09	SL3-10
			Sample Name:	SL2-07 SL2-7 (0-0.5)	SL2-8 (0-0.5)	SL2-9 (0-0.5)	SL2-10 SL2-10 (0-0.5	08L2-10-E5 0-0	SL2-10-113 SL2-10-N5 0-0.	.L2-10-N10 0-0	SL2-10-S5 0-0.	DUP2	L2-10-W5 0-0		SL3-2 (0-0.5	SL3-3 (0-0.5)	SL3-4 (0-0.5)	SL3-5 (0-0.5)	SL3-6 (0-			SL3-9 (0-0.5)	SL3-10 (0-0.5
			Lab Sample ID:	L2050541-28	L2050541-29	L2050541-30	L2050541-31	,	L2057799-16	L2100350-01	L2057799-08	L2057799-0		L2050541-32	L2050541-33	L2050541-34	L2050541-35	L2050541-36	L205054	,	,		L2050541-4
			Sample Depth:	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 f			0-0.5 ft	0-0.5 ft
			Sample Date:	11/13/2020	11/13/2020	11/13/2020	11/13/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020	12/28/2020		11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/20			11/13/2020	11/13/2020
Analysis	Analyte	Unit	S-1/GW-3	11/13/2020	11/13/2020	11/13/2020	11/13/2020	12/20/2020	12/26/2020	12/20/2020	12/26/2020	Field Dup		11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/20	20 11/13/202	11/13/2020	11/13/2020	11/13/2020
EPH	· many te	Cint	5 1/0 1/ 5							Ì		Tield Bup										+	
EFII	C9-C18 Aliphatics	mg/kg	1,000	8.35 U	7.86 U	8.70 U	8.72 U	NA	NA	NA	NA	NA	NA	9.63 U	28.6 U	28.8 U	10.1 U	8.92 U	32.9	U 63.8	10.5 U	27.7 U	8.46 U
	C19-C36 Aliphatics	mg/kg	3.000	8.35 U	7.86 U	8.70 U	8.72 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	51.2	43.5	28.8 U	13.6	8.92 U	32.9	U 31.1	U 13.9	27.7 U	8.46 U
	C11-C22 Aromatics	mg/kg	1,000	8.35 U	7.86 U	8.70 U	38.5	NA NA	NA NA	NA NA	NA NA	NA	NA NA	9.63 U	77.4	75.1	18.3	8.92 U	32.9	U 31.1	U 15.7	46.0	8.46 U
PAHs	C11-C22 Aromatics	mg/kg	1,000	0.55	7.80 0	8.70	36.3	11/1	IIA	IVA	INA	IIA	IVA	7.03	77.4	73.1	10.5	0.72 0	32.7	0 31.1	0 13.7	40.0	0.40 0
	Naphthalene	/	500	0.00900	0.0176	0.0104	0.00745	NA	NA	NA	NA	NA	NA	0.0307	0.104	0.0297	0.0170	0.00662	0.0292	0.0156	0.0188	0.0454	0.0109
	2-Methylnaphthalene	mg/kg	300	01007 00	0.0176	0.0104	0.00745	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0307	0.104	0.0297	0.0170	0.00662	0.0292	0.0156	0.0188	0.0454	0.0109
	Acenaphthylene	mg/kg	10	0.0147 0.00514	0.0326	0.0126 0.00520 U	0.00708 0.00553 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0483	0.122	0.0607	0.0332	0.0110 0.00551 U	0.0343	0.0233	0.0339		0.0146
	Acenaphthene	mg/kg mg/kg	1,000	0.00514 0.00497 U	0.0135 0.00461 U	0.00520 U	0.00553 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0687	0.0941	0.0310	0.0174	0.00551 U	0.0343	0.0154	0.0306	0.0142 0.0152	0.00637 0.00482 U
	Fluorene	mg/kg mg/kg	1,000	0.00497 U	0.00461 U	0.00520 U	0.00553 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0262	0.17	0.0119	0.0105	0.00551 U	0.0101	0.00675	0.00931	0.0152	0.00482 U
	Phenanthrene	mg/kg	500	0.00497 0	0.0510	0.00320	0.00333 0	NA NA	NA NA	NA NA	NA NA	NA	NA NA	0.0294	1.2	0.0100	0.182	0.00331 0	0.0164	0.00325	0.183	0.0135	0.0497
	Anthracene	mg/kg	1,000	0.00697	0.0176	0.00667	0.00553 U	NA NA	NA	NA	NA	NA	NA NA	0.148	0.336	0.0550	0.162	0.00694	0.0465	0.0272	0.0515	0.0336	0.0136
	Fluoranthene	mg/kg	1,000	0.0541	0.0922	0.0616	0.0372	NA	NA	NA	NA	NA	NA	1.5	2.46	0.597	0.372	0.0625	0.502	0.262	0.393	0.435	0.0130
	Pyrene	mg/kg	1,000	0.0425	0.0828	0.0497	0.0323	NA	NA	NA	NA	NA	NA	1.16	1.8	0.464	0.275	0.0489	0.373	0.201	0.314	0.347	0.0686
	Benzo(a)anthracene	mg/kg	7	0.0286	0.0550	0.0307	0.0214	NA	NA	NA	NA	NA	NA	0.842	1.05	0.318	0.183	0.0373	0.251	0.133	0.228	0.178	0.0472
	Chrysene	mg/kg	70	0.0403	0.0713	0.0393	0.0300	NA	NA	NA	NA	NA	NA	0.936	1.29	0.321	0.176	0.0428	0.266	0.143	0.237	0.232	0.0554
	Benzo(b)fluoranthene	mg/kg	7	0.0443	0.0742	0.0436	0.0308	NA	NA	NA	NA	NA	NA	1.13	1,27	0.392	0.193	0.0482	0.327	0.189	0.338	0.198	0.0686
	Benzo(k)fluoranthene	mg/kg	70	0.0249	0.0463	0.0302	0.0216	NA	NA	NA	NA	NA	NA	0.621	1.09	0.242	0.102	0.0328	0.178	0.116	0.176	0.14	0.0404
	Benzo(a)pyrene	mg/kg	2	0.0340	0.0612	0.0357	0.0248	NA	NA	NA	NA	NA	NA	0.898	1.09	0.28	0.132	0.0336	0.22	0.131	0.229	0.139	0.0444
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	0.0301	0.0545	0.0328	0.0228	NA	NA	NA	NA	NA	NA	0.762	1.01	0.231	0.0989	0.0292	0.193	0.115	0.198	0.11	0.0408
	Dibenzo(a,h)anthracene	mg/kg	0.7	0.00736	0.0146	0.00721	0.00553	NA	NA	NA	NA	NA	NA	0.169	0.248	0.0587	0.0260	0.00690	0.0497	0.0255	0.0471	0.0303	0.0104
	Benzo(ghi)perylene	mg/kg	1,000	0.0312	0.0570	0.0327	0.0237	NA	NA	NA	NA	NA	NA	0.726	0.969	0.245	0.101	0.0304	0.197	0.119	0.194	0.109	0.0399
Metals, t	otal																						
	Antimony	mg/kg	20	2.0 U	2.1	2.1 U	2.1 U	NA	NA	NA	NA	NA	NA	2.3 U	2.4 U	2.7 U	2.3 U	2.2 U	2.8	U 2.6	U 2.5 U	2.2 U	2.0 U
	Arsenic	mg/kg	20	23	20	8.0	43	14.9	77.6	8.79	16.3	24.4	17.8	10	9.0	10	10	9.9	15	21	12	12	5.1
	Barium	mg/kg	1,000	14	19	6.3	13	NA	NA	NA	NA	NA	NA	21	28	16	17	11	31	30	32	18	6.7
	Beryllium	mg/kg	90	0.54	0.55	0.39 U	0.59	NA	NA	NA	NA	NA	NA	0.44 U	0.56	0.51	0.52	0.48	0.77	0.77	0.58	0.45	0.38 U
	Cadmium	mg/kg	70	0.25 U	0.23 U	0.26 U	0.27 U	NA	NA	NA	NA	NA	NA	0.29 U	0.30 U	0.33 U	0.29 U	0.27 U	0.35	U 0.33	U 0.31 U	0.28 U	0.25 U
	Chromium (III)	mg/kg	1,000	14	28	10	13	NA	NA	NA	NA	NA	NA	38	23	22	20	13	40	37	37	18	8.0
	Chromium (VI)	mg/kg	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	mg/kg	200	31	40	22	42	NA	NA	NA	NA	NA	NA	50	47	30	29	29	74	55	52	37	13
	Mercury	mg/kg	20	0.095 U	0.076 U	0.110 U	0.100 U	NA	NA	NA	NA	NA	NA	0.106 U	0.120	0.120	0.107 U	0.092 U	0.206	0.167	0.191	0.101 U	0.086 U
	Nickel	mg/kg	600	32	40	17	45	NA	NA	NA	NA	NA	NA	45	32	25	40	78	46	28	24	19	11
	Selenium	mg/kg	400	2.5 U	2.3 U	2.6 U	2.7 U	NA	NA	NA	NA	NA	NA	2.9 U	3.0 U	3.3 U	2.9 U	2.7 U	3.5			2.8 U	2.5 U
	Silver	mg/kg	100	0.62 U	0.58 U	0.65 U	0.67 U	NA	NA	NA	NA	NA	NA	0.73 U	0.76 U	0.83 U	0.72 U	0.68 U	0.88	U 0.82		0.70 U	0.63 U
	Thallium	mg/kg	8	0.50 U	0.46 U	0.52 U	0.54 U	NA	NA	NA	NA	NA	NA	0.58 U	0.61 U	0.67 U	0.57 U	0.54 U	0.70	0.00	U 0.63 U	0.56 U	0.50 U
	Vanadium	mg/kg	400	200	110	49	97	NA	NA	NA	NA	NA	NA	110	100	130	140	310	180	100	120	80	23
	Zinc	mg/kg	1,000	74	120	81	150	NA	NA	NA	NA	NA	NA	110	92	70	59	63	84	84	81	52	21
General	Chemistry																						
	Chromium (VI)	mg/kg	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

umoles/g - micromhos per gram.

NA - Sample not analyzed for the listed analyte.

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 the listed sediment Screening Value.

EPH - Extractable Petroleum Hydrocarbons.

PAHs - Polycyclic Aromatic Hydrocarbons.

Contaminant of Potential Concern.
Beyond Site boundary.

#### Table 2. Sediment Risk Characterization Data Set 90 Bridge Street Weymouth, Massachusetts

	Sa	ample Location:	SL1-03	SL1-04	SL1-06	SL1-07	SL1-08	SL1-09	SL1-10	SL2-02	SL2-03	SL2-05	SL2-06	SL2-07	SL2-10	SL2-10-N5	SL2-10-S5	SL3-07
		Sample Name:	SL1-3 (0-0.5)	SL1-4 (0-0.5)	SL1-6 (0-0.5)	SL1-7 (0-0.5)	SL1-8 (0-0.5)	SL1-9 (0-0.5)	SL1-10 (0-0.5)	SL2-2 (0-0.5)	SL2-3 (0-0.5)	SL2-5 (0-0.5)	SL2-6 (0-0.5)	SL2-7 (0-0.5)	SL2-10 (0-0.5)	SL2-10-N5 0-0.	SL2-10-S5 0-0.:	SL3-7 (0-0.5)
	1	Lab Sample ID:	L2050541-14	L2050541-15	L2050541-17	L2050541-18	L2050541-19	L2050541-20	L2050541-21	L2050541-23	L2050541-24	L2050541-26	L2050541-27	L2050541-28	L2050541-31	L2057799-16	L2057799-08	L2050541-38
		Sample Depth:	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft						
		Sample Date:	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	12/28/2020	12/28/2020	11/13/2020
Analysis Analyte	Unit	S-1/GW-3				combo											combo	
Metals, total																		
Arsenic	mg/kg	20	22	30	11	18	15	18	24	15	22	16	24	23	43	77.6	24.4	21
Chromium (III)	mg/kg	1,000	11	11	18	30	250	13	21	32	43	24	24	14	13	NA	NA	37
Chromium (VI)	mg/kg	100	NA	NA	NA	NA	23.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/kg	200	33	50	58	30	53	54	67	78	100	580	100	31	42	NA	NA	55
Nickel	mg/kg	600	21	100	77	6,100	2,100	60	24	93	64	170	94	32	45	NA	NA	28
Vanadium	mg/kg	400	230	630	1,100	13,000	7,200	450	120	1,400	220	480	410	200	97	NA	NA	100

Motes:

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

NA - Sample not analyzed for the listed analyte.

Values in bold indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed standard.

# ATTACHMENT 2 PROUCL OUTPUT

	Α	В	С	D	E	F	G	Н	I	J	K	L
1					UCL Statis	tics for Data	Sets with No	n-Detects				
2				T-								
3			ected Options									
4	Da	te/Time of C		ProUCL 5.1		24:55 AM						
5			From File	ProUCL_imp	oort.xls							
6			III Precision	OFF								
7		Confidence		95%								
8	Number	of Bootstrap	Operations	2000								
9												
10												
11	Arsenic											
12						0	Otatiatian					
13			<b>-</b>	N 1 10			Statistics			(D) 11 10		10
14			lotal	Number of O	bservations	16				r of Distinct O		12
15									Numbei	r of Missing O		0
16					Minimum	11					Mean	25.25
17					Maximum	77.6					Median	22
18					SD	15.77				Std. Ei	rror of Mean	3.942
19				Coefficient	of Variation	0.625					Skewness	2.767
20												
21							GOF Test					
22				hapiro Wilk T		0.667			·-	lk GOF Test		
23			5% S	napiro Wilk C		0.887		Data No		5% Significan	ce Level	
24					est Statistic	0.334				GOF Test		
25			5	% Lilliefors C		0.213			ot Normal at	5% Significan	ce Level	
26					Data Not	Normal at 5	5% Significan	ce Level				
27												
28					As	suming Nor	mal Distribution					
29			95% No	rmal UCL						sted for Skew	<u>-</u>	
30				95% Stud	dent's-t UCL	32.16			-	ed-CLT UCL (	·	34.65
31									95% Modifi	ed-t UCL (Joh	nnson-1978)	32.62
32												
33							GOF Test					
34					est Statistic	1.036			_	Gamma GOF		
35					ritical Value	0.742	D:			ted at 5% Sign		/el
36					est Statistic	0.278				v Gamma GC		
37					ritical Value	0.216				ted at 5% Sigi	nificance Lev	/el
38				Dai	ia not Gamr	na טופורוbut	ed at 5% Sigr	IIIICance Lev	rei			
39							04-41-41					
40					L L / A 11 = 1		Statistics			-1 /! !		0.050
41					k hat (MLE)	4.445				star (bias corr	,	3.653
42					a hat (MLE)	5.681			I heta	star (bias con	,	6.912
43					u hat (MLE)	142.2				nu star (bia		116.9
44			M	E Mean (bia	s corrected)	25.25				MLE Sd (bia		13.21
45										Chi Square		92.93
46			Adjus	ted Level of	Significance	0.0335			Ad	djusted Chi So	quare Value	90.5
47												
48							nma Distributi					
49	9	95% Approxi	mate Gamma	UCL (use w	hen n>=50))	31.76		95% Ad	ljusted Gamı	ma UCL (use	when n<50)	32.61
50												

	Α	В	Тс	D	E	F	G	Н	1 1	J	K	<del></del>	
51	A			<u> </u>		•	GOF Test		<u> </u>		1 1		
52			S	hapiro Wilk	Γest Statistic	0.892		Shap	iro Wilk Logn	ormal GO	F Test		
53			5% SI	napiro Wilk (	Critical Value	0.887		Data appea	r Lognormal a	at 5% Sign	ificance Lev	el	
54				Lilliefors	Γest Statistic	0.241		Lill	iefors Lognori	mal GOF	Гest		
55			5	% Lilliefors (	Critical Value	0.213		Data Not I	_ognormal at	5% Signifi	cance Level		
56				Data a	ppear Appro	ximate Logn	ormal at 5%	Significance	Level			-	
57													
58						Lognorma	l Statistics						
59				Minimum of	Logged Data	2.398				Mean c	of logged Da	ta 3.1	12
60			N	Maximum of	Logged Data	4.352				SD o	f logged Da	ta 0.4	56
61							I						
62					Assı	ıming Logno	rmal Distribu	ition					
63					95% H-UCL	31.56			90% C	hebyshev	(MVUE) UC	L 33.4	43
64			95%	Chebyshev (	MVUE) UCL	37.36			97.5% C	hebyshev	(MVUE) UC	L 42.8	82
65			99%	Chebyshev (	MVUE) UCL	53.54							
66													
67					•		ion Free UCI						
68				Data appea	r to follow a [	Discernible D	istribution at	5% Significa	ance Level				
69													
70							ribution Free	UCLs					
71					5% CLT UCL	31.73					ackknife UC		16
72					ootstrap UCL	31.57					otstrap-t UC		
73					otstrap UCL	63.92			95% P	ercentile E	Bootstrap UC	CL 32.0	09
74					otstrap UCL	35.21							
75					an, Sd) UCL	37.08					ean, Sd) UC		
76			97.5% Ch	ebyshev(Me	an, Sd) UCL	49.87			99% Che	byshev(M	ean, Sd) UC	CL 64.4	48
77													
78						Suggested	UCL to Use						
79					dent's-t UCL	32.16				or 95% N	lodified-t UC	L 32.6	32
80				or	95% H-UCL	31.56							
81													
82		Note: Sugge	estions regard					·			oriate 95% U	CL.	
83		<b>T</b> 1				·			and skewness		11 (665	<u> </u>	
84			mmendations		•				-		•	,	
85	Ho	wever, simu	ulations result	s will not cov	er all Real W	orld data se	ts; tor additio	onal insight th	ne user may w	vant to cor	sult a statis	ician.	
86				101									
87		11							I reasons only				
88		H-statistic	often results		-	-			· ·	e Technic	al Guide.		
89					recommende						_ 40. • 9 • •		
90	Us	e ot nonpar	ametric meth	oas are pref	errea to comp	oute UCL95	ror skewed d	ata sets whic	n ao not follo	w a gamm	a distributio	1.	
91													

	А	В	С	D	E	F	G	Н		J	K	L
1					UCL Statis	tics for Data	Sets with No	n-Detects				
2		11- 0 1	-1-10 ::	1								
3	<u> </u>		cted Options		10/0/0000 10	) FO 40 DN4						
4	Dat	e/Time of C	omputation	ProUCL 5.1		2:52:10 PM						
5		F.	From File	ProUCL_imp	port.xis							
6			Coefficient	95%								
7			Operations	2000								
8	Number o	г Бооіѕпар	Operations	2000								
9	Chromium											
10	Cilionilani											
11						General	Statistics					
12			Total	Number of C	)bservations	14			Numbe	r of Distinct C	)bservations	11
13				- Transcrot	, book valions	1-7				of Missing C		
14					Minimum	11			Turibo	- Or Wildoning C	Mean	
15					Maximum	250					Median	
16					SD	61.66				Std F	rror of Mean	
17				Coefficient	of Variation	1.596				Ota. E	Skewness	
18												
19						Normal	GOF Test					
20			S	hapiro Wilk T	est Statistic	0.443			Shapiro Wi	lk GOF Test		
21				hapiro Wilk C		0.874		Data No	•	5% Significar	nce Level	
22				· ·	est Statistic	0.4				GOF Test		
23			5	% Lilliefors C		0.226		Data No		5% Significar	nce Level	
24							 i% Significan			- · · · · · · · · · · · · · · · · · · ·		
25 26												
27					As	suming Nor	mal Distribution	on				
28			95% No	ormal UCL					UCLs (Adju	sted for Skev	vness)	
29				95% Stud	dent's-t UCL	67.83				ed-CLT UCL		82.56
30									95% Modifi	ed-t UCL (Jo	hnson-1978)	70.45
31												
32						Gamma	GOF Test					
33				A-D T	est Statistic	1.635		Ande	rson-Darling	Gamma GOI	F Test	
34				5% A-D C	ritical Value	0.756	Da	ata Not Gam	nma Distribut	ed at 5% Sig	nificance Le	vel
35				K-S T	est Statistic	0.264		Kolmog	orov-Smirno	v Gamma Go	OF Test	
36				5% K-S C	ritical Value	0.234	Da	ata Not Gan	nma Distribut	ed at 5% Sig	nificance Le	vel
37				Da	ta Not Gamn	na Distribute	ed at 5% Sign	ificance Lev	rel .			
38												
39						Gamma	Statistics					
40					k hat (MLE)	1.209			k	star (bias cor	rected MLE)	0.998
41				Thet	ta hat (MLE)	31.96			Theta	star (bias cor	rected MLE)	38.74
42				n	u hat (MLE)	33.85				nu star (bia	as corrected)	27.93
43			М	LE Mean (bia	s corrected)	38.64				MLE Sd (bia	as corrected)	38.69
44									Approximate	Chi Square	Value (0.05)	16.87
45			Adjus	sted Level of	Significance	0.0312			Ad	djusted Chi S	quare Value	15.74
46												•
47					Ass	suming Gan	nma Distributi	on				
48	9:	5% Approxi	mate Gamma	a UCL (use w	hen n>=50))	63.96		95% Ac	ljusted Gamı	ma UCL (use	when n<50)	68.56
49												
50						Lognorma	I GOF Test					

F4	Α	В	C	D Shapiro Wilk	E Test Statistic	F 0.813	G	H Shar	piro Wilk Loc	J Inormal GOF	K Test	L
51					Critical Value	0.874		•		at 5% Signific		
52					Test Statistic	0.167			J	ormal GOF T		
53			5	5% Lilliefors (	Critical Value	0.226			-		ficance Level	
54 55				Data a	ppear Appro	 ximate Logn	ormal at 5%					
56												
57						Lognorma	I Statistics					
58				Minimum of	Logged Data	2.398				Mean of	logged Data	3.187
59					Logged Data						logged Data	0.809
60												
61					Assı	ıming Logno	rmal Distribu	ition				
62					95% H-UCL	58.76			90%	Chebyshev (	(MVUE) UCL	55.12
63			95%	Chebyshev (	(MVUE) UCL	65.32			97.5%	Chebyshev (	MVUE) UCL	79.47
64			99%	Chebyshev (	(MVUE) UCL	107.3						
65												
66					Nonparame	tric Distribut	ion Free UCI	L Statistics				
67				Data appea	r to follow a [	Discernible D	istribution at	5% Signific	ance Level			
68												
69					Nonpa	rametric Dist	ribution Free	UCLs				
70				95	5% CLT UCL	65.75				95% Ja	ckknife UCL	67.83
71			95%	Standard Bo	ootstrap UCL	64.27				95% Boo	otstrap-t UCL	177.5
72			9	95% Hall's Bo	ootstrap UCL	174.8			95%	Percentile Bo	ootstrap UCL	70.64
73				95% BCA Bo	ootstrap UCL	87						
74			90% Cł	nebyshev(Me	an, Sd) UCL	88.08			95% CI	nebyshev(Me	an, Sd) UCL	110.5
75			97.5% Ch	nebyshev(Me	an, Sd) UCL	141.6			99% CI	nebyshev(Me	an, Sd) UCL	202.6
76												
77						Suggested	UCL to Use					
78					95% H-UCL	58.76						
79						I	1					
80		Note: Sugge	estions regard	ding the selec	ction of a 95%	6 UCL are pr	ovided to he	lp the user to	select the	most appropr	riate 95% UCL	
81			F	Recommenda	ations are ba	sed upon da	ta size, data	distribution,	and skewne	SS.		
82		These reco	mmendation	s are based	upon the resu	ılts of the sin	nulation studi	ies summari	zed in Singh	, Maichle, an	d Lee (2006).	
83		However, sim	ulations resul	ts will not cov	ver all Real W	orld data se	ts; for additio	onal insight t	he user may	want to cons	sult a statistici	an.
84												
85				•	es and outpu							
86		H-statistic	c often results		•				•		I Guide.	
87					recommende							
88		Use of nonpar	rametric meth	ods are pref	erred to comp	oute UCL95	for skewed d	ata sets which	ch do not fol	low a gamma	distribution.	
89												
90												
91 Lea	nd											
92												
93						General	Statistics				- · · · · ·	
94			Total	Number of (	Observations	14					Observations	13
95									Numbe	r of Missing (	Observations	0
96					Minimum	30					Mean	95.07
97					Maximum	580					Median	54.5
98					SD	141.4				Std. E	rror of Mean	37.78
99				Coefficien	t of Variation	1.487					Skewness	3.582
100												

	Α	В	С		D	1	E	F	G	<u> </u>	Н		1	T	J	T	K	I	
101				I		-1			GOF Test				•					<u> </u>	-
102				Sha	piro Wilk	Test	Statistic	0.438				Sha	piro W	/ilk G	OF Test	(			
103			5	% Sha	piro Wilk	Critic	al Value	0.874			Data N	lot Nor	mal at	t 5%	Significa	ince Lo	evel		
104					Lilliefors	Test	Statistic	0.415				Li	lliefors	s GO	F Test				
105				5%	Lilliefors	Critic	al Value	0.226			Data N	lot Nor	mal at	t 5%	Significa	ince Lo	evel		
106						I	Data Not	Normal at 5	% Signific	ance	Level								
107																			
108							As	suming Norn	nal Distrib	ution									
109			959	% Norn	nal UCL						959	% UCL	s (Adjı	usted	l for Ske	wness	;)		
110					95% St	tudent	t's-t UCL	162				95%	Adjust	ted-C	LT UCL	(Cher	า-1995)	195.	.9
111												95%	Modi	fied-t	UCL (Jo	hnsor	า-1978)	168	
112								11											
113								Gamma (	GOF Test										
114					A-D	) Test	Statistic	1.837			Ande	erson-l	Darling	g Gar	mma GC	F Tes	t		
115					5% A-D	Critic	al Value	0.753		Data	Not Ga	mma [	Distribu	uted a	at 5% Si	gnifica	ince Le	vel	
116					K-S	Test	Statistic	0.294			Kolmo	gorov-	Smirn	ov G	amma G	OF Te	est		
117					5% K-S	Critic	al Value	0.233		Data	Not Ga	mma [	Distribu	uted a	at 5% Si	gnifica	ince Le	vel	
118						Data N	lot Gamr	na Distribute	d at 5% S	Signific	cance Le	evel							
119																			
120								Gamma	Statistics										
121							at (MLE)	1.388							(bias co		,		138
122					Th	neta ha	at (MLE)	68.48					Theta		(bias co				
123							at (MLE)	38.87							ı star (bi			31.	
124				MLE	Mean (b	oias co	orrected)	95.07							.E Sd (bi		•		
125												Appr			i Square				
126			A	Adjuste	d Level c	of Sigr	nificance	0.0312					P	Adjus	ted Chi	Square	e Value	18.	73
127																			
128								suming Gam	ma Distrib	oution									
129	9	5% Approxii	mate Ga	ımma U	ICL (use	when	n>=50))	151.7			95% A	Adjuste	d Gan	nma l	UCL (us	e wher	n n<50)	161.	.8
130									00E T										
131				01	. 14711	<del>-</del> .	0	Lognormal	GOFIES	st	01		ru ı			<b></b>			
132					piro Wilk			0.784				•		•	mal GOF				
133			5	% Sna	piro Wilk			0.874			Data No						Level		
134				E0/	Lilliefors Lilliefors			0.2					_		al GOF T				
135				5%				0.226 ximate Logno	ormal at E		ata appe			ai at t	5% Signi	псапс	e Levei		
136					Data	appe	аг Аррго	ximate Logni	omiai at s	170 SIĘ	Jillicario	e reve	<del>2</del> 1						
137								Lognorma	l Statistics	•									
138				Mi	nimum o	flogo	and Data		Juliane	•					Mean o	flogge	nd Data	1.	153
139					ximum of												ed Data		743
140				IVIC	Allilulii O	Loge	jeu Data	0.303							300	liogge	,u Data	0.7	745
141							Δοει	uming Logno	rmal Dietr	ibutio	n								
142						95%	H-UCL	137.3	1000	.54110	••		90%	6 Che	ebyshev	(M\/I I	F) LICI	133.	3
143			(	95% Ch	nebyshev			156.6							ebyshev	•	•		
144					nebyshev	•	,	252.5					57.57	J 5110	, 01101	,	_, 55L		
145					. 55 y 51 10 V	(	JE, 50L	202.0										<u> </u>	
146						Nο	nparame	etric Distribut	ion Free I	JCL S	tatistics								
147				ח	ata anne			Discernible D				cance	Level						
148								000/////////	.5	. 4. 0	- Oigiiiii	Jul 100	_5,01						
149							Nonna	rametric Dist	ribution F	ree l l	CLs								
150							Horipai	amound Dist		.000	-LJ								

4= .	Α	В	С		D 9!	E 5% CLT UCL	F 157.2	G	Н	I	J 95% Ja	K ckknife UCL	L 162
151			959	% Sta		ootstrap UCL						tstrap-t UCL	439.1
152						ootstrap UCL				95% I	Percentile Bo	•	168.4
153						ootstrap UCL						'	
154			90% (			ean, Sd) UCL				95% Ch	ebyshev(Me	an, Sd) UCL	259.7
155 156					` `	ean, Sd) UCL					ebyshev(Me		471
157					` `	. ,					, ,	,	
158							Suggested	UCL to Use					
159						95% H-UCL	137.3						
160													
161		Note: Sugge	estions rega	rding	the sele	ction of a 95%	% UCL are p	provided to he	lp the user to	select the r	nost appropri	ate 95% UCL	
162				Rec	ommenda	ations are ba	sed upon da	ata size, data	distribution,	and skewne	SS.		
163		These reco	mmendatio	ns ar	e based	upon the resu	ults of the si	mulation studi	ies summari	zed in Singh	Maichle, and	d Lee (2006).	
164		However, simu	ılations resu	ults w	rill not co	ver all Real V	Vorld data se	ets; for addition	nal insight t	he user may	want to cons	ult a statistici	an.
165													
166			Pr	oUCI	L comput	es and outpu	ts H-statistic	c based UCLs	for historica	al reasons or	ly.		
167		H-statistic	often resul	ts in	unstable	(both high ar	nd low) value	es of UCL95 a	s shown in e	examples in	the Technical	Guide.	
168				It is t	herefore	recommende	ed to avoid t	he use of H-s	tatistic base	d 95% UCLs	•		
169		Use of nonpara	ametric me	thods	are pref	erred to com	pute UCL95	for skewed d	ata sets which	ch do not foll	ow a gamma	distribution.	
170													
171													
172	Nickel												
173													
174							General	Statistics					
175			Tot	al Nu	mber of (	Observations	14			Numbe	of Distinct C	bservations	14
176										Number	of Missing C	bservations	0
177						Minimum	21					Mean	643.4
178						Maximum	6100					Median	70.5
179						SD	1662				Std. E	rror of Mean	444.1
180				C	Coefficien	t of Variation	2.583					Skewness	3.192
181													
182								GOF Test					
183						Test Statistic				•	k GOF Test		
184			5%			Critical Value			Data No		5% Significan	ice Level	
185						Test Statistic					GOF Test		
186				5% L	_illiefors (	Critical Value				ot Normal at !	5% Significan	ice Level	
187						Data Not	t Normal at 5	5% Significan	ce Level				
188								151.11.1					
189						As	suming Nor	mal Distribution					
190			95% r	Norma	al UCL		1.100				sted for Skew	•	4770
191					95% Stu	ıdent's-t UCL	1430				d-CLT UCL (	·	1779
192										95% Modific	ed-t UCL (Joh	nnson-1978)	1493
193							•	0057					
194					4.5	T		GOF Test		B"	0	· T	
195						Test Statistic					Gamma GOF		al .
196						Critical Value		D				nificance Lev	el
197						Test Statistic					v Gamma GC		-1
198						Critical Value					ed at 5% Sig	nificance Lev	el
199					Da	ata Not Gami	ma Distribute	ed at 5% Sigr	inicance Lev	'el			
200													

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201	^		1 (	<u> </u>	1	ט	1		•	Statistics	П		J	J	^	1 -
202							k ha	at (MLE)	0.361				k s	tar (bias co	rrected MLE	0.331
203						The	eta ha	at (MLE)	1781			The	eta s	tar (bias co	rrected MLI	E) 1941
204							nu ha	at (MLE)	10.11					nu star (bi	as corrected	d) 9.28
205				MI	LE Me	ean (bi	as co	rrected)	643.4					MLE Sd (bi	as corrected	d) 1118
206												Approxim	nate	Chi Square	Value (0.0	5) 3.497
207				Adjus	sted L	evel of	f Sign	ificance	0.0312				Adj	justed Chi	Square Valu	ie 3.041
208																
209								As	suming Gan	nma Distribut	ion					
210	9	95% Approxii	mate G	amma	a UCL	(use v	when	n>=50))	1707		95% A	djusted G	amm	na UCL (us	e when n<5	0) 1963
211									I	-1						
212									Lognorma	I GOF Test						-
213				S	Shapir	o Wilk	Test	Statistic	0.784		Sha	piro Wilk	Logn	ormal GOF	Test	-
214				5% SI	hapiro	o Wilk (	Critica	al Value	0.874		Data Not	Lognorm	al at	5% Signific	cance Level	-
215					Lil	liefors	Test	Statistic	0.288		Li	lliefors Lo	gnor	mal GOF 1	est	
216				5	5% Lill	iefors (	Critica	al Value	0.226		Data Not	Lognorm	al at	5% Signific	cance Level	
217							Da	ta Not L	ognormal at	5% Significa	nce Level					
218																
219									Lognorma	al Statistics						
220								ed Data							f logged Da	
221				N	Maxim	num of	Logg	ed Data	8.716					SD o	f logged Da	ta 1.641
222																
223									uming Logno	ormal Distribu	ıtion					
224								H-UCL	2357						(MVUE) UC	
225						-	•	JE) UCL	1022			97.	5% C	Chebyshev	(MVUE) UC	L 1324
226				99%	Cheb	yshev	(MVL	JE) UCL	1919							
227																
228								•		tion Free UC						
229							Data	do not f	ollow a Disc	ernible Distri	bution (0.05)	)				
230																
231								-		tribution Free	UCLs					
232				050/				LT UCL							ackknife UC	
233								rap UCL	1373			0.5	-0/ D		otstrap-t UC	
234								ap UCL	11581			95	)% P	ercentile B	ootstrap UC	L 1375
235								rap UCL	1934			050/			0 1) 110	0570
236						`		Sd) UCL	1976					` `	ean, Sd) UC	
237			97.3	5% Cn	nebysi	nev(ivie	ean, s	Sd) UCL	3417			99%	Cne	ebysnev(ivi	ean, Sd) UC	CL 5062
238									Suggested	UCL to Use						
239			00	)% Ch	ahvah	16\/ (N/I-	aan C	Sd) UCL	5062	UCL IO USE						
240				76 CIII	ebysi	iev (ivie	zaii, c	ou) UCL	3002							
241		Note: Suggo	etione	renard	dina th	ne selo	ction	of a 050	6 IICI aran	rovided to he	In the user t	n select ti	he m	nst annron	riate 95% II	CI
242		. toto. Gagge	,3u0i13						·	ta size, data	<u> </u>				11ato 95 /6 U	<u></u>
243		These reco	mmend						•	nulation stud					nd I ee (200	6)
244	H						-			ets; for addition			-		-	*
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246																
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			-	-						_		1 -				1, 1	
251	Α	В	C To	otal N	 Numb		E Observa		F 14	G	Н	l l Numl	per of	J Distind	t Obser	K vations	14
252										Number of Missing Observations			0				
							Mini	mum	97							Mean	1831
253							Maxi	mum	13000							Median	430
254 255								SD	3703					Std	. Error c	of Mean	989.6
256					Coe	fficien	t of Vari	ation	2.022						Ske	ewness	2.669
257																	
258									Normal (	GOF Test							
259				Sh	apiro	Wilk	Test Sta	atistic	0.526			Shapiro \	Wilk G	OF Te	st		
260			5%	% Sha	apiro	Wilk (	Critical \	/alue	0.874		Data No	ot Normal a	at 5% :	Signifi	cance L	evel	
261					Lillie	efors <sup>-</sup>	Test Sta	tistic	0.403			Lilliefo	rs GOI	F Test			
262				5%	6 Lilli€	efors (	Critical \	/alue	0.226		Data No	ot Normal a	at 5% :	Signifi	cance L	evel	
263							Dat	a Not	Normal at 5	⊥ 5% Significar	nce Level						
264																	
265								As	suming Non	mal Distribut	ion						
266			95%	6 Nor	mal U	JCL					95%	UCLs (Ad	ljusted	l for SI	kewness	5)	
267					95	% Stu	ident's-t	UCL	3584			95% Adju	sted-C	LT UC	CL (Cher	n-1995)	4213
268												95% Mod	lified-t	UCL (	Johnson	n-1978)	3701
269																-	
270	Gamma GOF Test																
271						A-D	Test Sta	tistic	1.408		Ande	rson-Darlir	ng Gar	nma G	OF Tes	it	
272					5%	A-D (	Critical \	/alue	0.793		ata Not Gan	nma Distrik	outed a	at 5% :	Significa	ance Lev	el
273						K-S	Test Sta	tistic	0.272		Kolmog	gorov-Smir	nov G	amma	GOF Te	est	
274					5%	K-S (	Critical \	/alue	0.242	С	ata Not Gan	nma Distrik	outed a	at 5% :	Significa	ance Lev	el
275						Da	ata Not	Gamr	na Distribute	dat 5% Sig	nificance Lev	vel					
276																	
277									Gamma	Statistics							
278							k hat (l	MLE)	0.501				k star	(bias	correcte	d MLE)	0.441
279						The	eta hat (l	MLE)	3653			Thet	a star	(bias	correcte	d MLE)	4148
280						ı	nu hat (l	MLE)	14.03				nı	ı star (	bias cor	rected)	12.36
281				MLI	E Mea	an (bia	as corre	cted)	1831				ML	E Sd (	bias cor	rrected)	2756
282												Approxima	ate Ch	i Squa	re Value	e (0.05)	5.466
283			A	djust	ed Le	vel of	Signific	ance	0.0312				Adjus	ted Ch	i Square	e Value	4.87
284																	
285								As	suming Gam	nma Distribut	tion						
286	95	5% Approxir	mate Gan	nma	UCL (	(use w	vhen n>	=50))	4141		95% Ad	djusted Ga	mma l	JCL (ι	ise whe	n n<50)	4648
287																	
288									Lognorma	I GOF Test							
289				Sh	apiro	Wilk	Test Sta	tistic	0.895		Sha	piro Wilk L	ognori	mal G	OF Test		
290			5%	% Sha	apiro	Wilk (	Critical \	/alue	0.874		Data appea	ar Lognorm	nal at 5	5% Sig	nificano	e Level	
291					Lillie	efors	Test Sta	tistic	0.162		Li	lliefors Log	norma	al GOF	Test		
292				5%	6 Lilli€	efors (	Critical \	/alue	0.226		Data appea	ar Lognorm	nal at 5	5% Sig	nificano	e Level	
293							Data a	ppear	Lognormal	at 5% Signifi	icance Level						
294																	
295									Lognorma	al Statistics							
296				M	linimı	ım of	Logged	Data	4.575					Mean	of logge	ed Data	6.246
297				Ma	aximı	ım of	Logged	Data	9.473					SD	of logge	ed Data	1.492
298																	
298								Assı	ıming Logno	ormal Distrib	ution						
							95% H					90	% Che	byshe	v (MVU	E) UCL	3201
300														,	,	,	-

	Α	В	С	D	Е	F	G	Н	I	J	K	L
301			95%	Chebyshev (	MVUE) UCL	4034			97.5%	Chebyshev	(MVUE) UCL	5189
302			99%	Chebyshev (	MVUE) UCL	7459						
303						1						
304	Nonparametric Distribution Free UCL Statistics											
305	Data appear to follow a Discernible Distribution at 5% Significance Level											
306												
307	Nonparametric Distribution Free UCLs											
308				95	5% CLT UCL	3459				95% J	ackknife UCL	3584
309			95%	Standard Bo	ootstrap UCL	3344		95% Bootstrap-t UCL 152				15246
310			Ç	95% Hall's Bo	otstrap UCL	11799	95% Percentile Bootstrap UCL 3512				3512	
311				95% BCA Bo	ootstrap UCL	4516						
312			90% CI	nebyshev(Me	an, Sd) UCL	4800		95% Chebyshev(Mean, Sd) UCL 61				6145
313			97.5% CI	nebyshev(Me	an, Sd) UCL	8011	99% Chebyshev(Mean, Sd) UCL 11678				11678	
314						11						
315						Suggested	UCL to Use					
316			95% Ch	ebyshev (Me	an, Sd) UCL	6145						
317						-						
318		Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.										
319		Recommendations are based upon data size, data distribution, and skewness.										
320		These recor	mmendation	s are based	upon the resu	ılts of the si	mulation studi	es summariz	zed in Singh	, Maichle, a	nd Lee (2006)	
321	Но	wever, simu	lations resul	ts will not cov	er all Real V	orld data s	ets; for additio	nal insight th	ne user may	want to cor	sult a statistic	ian.
322												

# ATTACHMENT 3 RISK CALCULATION SHORTFORM

Park Visitor - Sediment Imminent Hazard Evaluation: Table PSIH-1 Exposure Point Concentration (EPC)

Based on Visitor Ages 1-6 (Cancer) and 1-2 (Noncancer)

ShortForm Version 10-12 Vlookup Version v0315

ELCR (all chemicals) = 2.3E-06 Subchronic HI (all chemicals) = 4.2E+00

#### \*\*Do not insert or delete any rows\*\*

Click on empty cell below and select OHM using arrow.

Oil or	EPC					Subchronic	
Hazardous Material	(mg/kg)	<b>ELCR</b> <sub>ingestion</sub>	ELCR <sub>dermal</sub>	ELCR <sub>total</sub>	<b>HQ</b> <sub>ing</sub>	HQ <sub>derm</sub>	HQ <sub>total</sub>
ARSENIC	3.26E+01	9.8E-07	1.3E-06	2.3E-06	7.3E-02	7.3E-02	1.5E-01
CHROMIUM(III)	5.9E+01				5.2E-05	8.7E-05	1.4E-04
CHROMIUM(VI)	2.4E+01				1.6E-03	2.6E-03	4.2E-03
LEAD	1.4E+02				1.2E-01	2.4E-02	1.5E-01
NICKEL	5.1E+03				3.4E-01	1.1E+00	1.5E+00
VANADIUM	6.1E+03				9.1E-01	1.5E+00	2.4E+00

Note! Cr(VI) limit is 200 mg/kg due to contact dermititis. Note! Lead IH HQ limit is 1, not 10.

MassDEP ORS Contact: Lydia Thompson Lydia.Thompson@state.ma.us 617-556-1165

1 of 6 Sheet: EPCs

## Park Visitor - Sediment: Table PSIH-2 Equations to Calculate Cancer Risk for Visitor (Age 1-6 years)

Vlookup Version v0315

Parameter	Value	Units
CSF	OHM specific	(mg/kg-day) <sup>-1</sup>
LADD	age/OHM specific	mg/kg-day
[OHM] <sub>soil</sub>	OHM specific	mg/kg
IR	100	mg/day
$RAF_{c-ing}$	OHM specific	dimensionless
$RAF_{c\text{-derm}}$	OHM specific	dimensionless
$EF_{ing,derm}$	0.082	event/day
ED	1	day/event
EP	5	years
С	0.000001	kg/mg
BW	14.6	kg
AP <sub>(lifetime)</sub>	70	years
SA	2231	cm²/day
SAF	1	mg/cm <sup>2</sup>

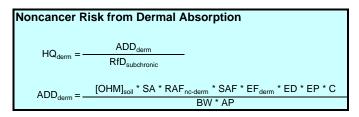
2 of 6 Sheet: C Eq

#### Park Visitor - Sediment: Table PSIH-3

Equations to Calculate Noncancer Risk for Visitor (Age 1-2 years)

Vlookup Version v0315

Noncancer Risk from Ingestion						
HQ <sub>ing</sub> =	ADD <sub>ing</sub> RfD <sub>subchronic</sub>					
ADD <sub>ing</sub> =	[OHM] <sub>soil</sub> * IR * RAF <sub>nc-ing</sub> * EF <sub>ing</sub> * ED * EP * C BW * AP					



Parameter	Value	Units
RfD	OHM specific	mg/kg-day
ADD	OHM specific	mg/kg-day
[OHM] <sub>soil</sub>	OHM specific	mg/kg
IR	100	mg/day
RAF <sub>nc-ing</sub>	OHM specific	dimensionless
RAF <sub>nc-derm</sub>	OHM specific	dimensionless
EF <sub>ing,derm</sub>	0.143	event/day
ED	1	day/event
EP	0.577	years
С	0.000001	lea/m a
BW	10.7	kg/mg
	-	kg
AP	0.577	year
SA	1670	cm <sup>2</sup> /day
SAF	1	mg/cm <sup>2</sup>

#### Vlookup Version v0315

## Park Visitor - Sediment: Table PSIH-4 Definitions and Exposure Factors

Parameter	Value	Units	Notes
ELCR - Excess Lifetime Cancer Risk	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal)
CSF - Cancer Slope Factor	chemical specific	(mg/kg-day) <sup>-1</sup>	see Table PSIH-5.
LADD - Lifetime Average Daily Dose	chemical specific	mg/kg-day	Pathway specific - see Table PSIH-2.
HQ - Hazard Quotient	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal) - see Table PSIH-3.
RfD - Reference Dose	chemical specific	mg/kg-day	see Table PSIH-5.
ADD - Average Daily Dose	chemical specific	mg/kg-day	Pathway specific
EPC - Exposure Point Concentration	chemical specific	mg/kg	
IR - Soil Ingestion Rate	100	mg/day	MADEP. 1995. Guidance for Disposal Site Risk Characterization. Appendix Table B-3.
RAF <sub>c</sub> - Relative Absorption Factor for Cancer Effects	chemical specific	dimensionless	Adjusts estimated dose to conform to the revelant CSF. See Table PS-6
RAF <sub>NC</sub> - Relative Absorption Factor for non-Cancer Effects	chemical specific	dimensionless	Adjusts estimated dose to conform to the revelant RfD. See Table PS-6
EF <sub>subchronic</sub> - Exposure Frequency for subchronic exposure	0.143	event/day	1 event/week
EF <sub>lifetime</sub> - Exposure Frequency for chronic or lifetime exposure	0.082	event/day	1 event/week, 30 weeks/year
ED - Exposure Duration	1	day/event	
EP <sub>(1-2)</sub> - Exposure Period for age group 1-2	0.577	years	30 weeks
EP <sub>(1-6)</sub> - Exposure Period for age group 1-6	5	years	
BW <sub>(1-2)</sub> - Body Weight for age group 1-2	10.7	kg	U.S. EPA. 1997. Exposure Factors Handbook. Table 7-7, females.
BW <sub>(1-6)</sub> - Body Weight for age group 1-6	14.6	kg	Ibid
AP <sub>subchronic</sub> - Averaging Period for subchronic noncancer	0.577	years	30 weeks
AP <sub>lifetime</sub> - Averaging Period for cancer/lifetime	70	years	
		2	
SA <sub>(1-2)</sub> - Surface Area for age group 1-2	1670	cm <sup>2</sup> /day	50th percentile of face (1/3 head), forearms, hands, lower legs, and feet for females
			MADEP 1995 Guidance for Disposal Site Risk Characterization, Appendix Table B-2.
SA <sub>(1-6)</sub> - Surface Area for age group 1-6	2231	cm <sup>2</sup> / day	Ibid
SAF - Surface Adherence Factor	1	mg <sub>soil</sub> / cm <sup>2</sup>	All SAFs developed for ShortForm according to procedure outlined in MA DEP Technical
			Update: Weighted Skin-Soil Adherence Factors, April 2002

4 of 6 Sheet: Exp

#### Park Visitor - Sediment: Table PSIH-5 Chemical-Specific Data

Vlookup Version v0315

Oil or Hazardous Material	CSF (mg/kg-day) <sup>-1</sup>	RAF <sub>c-ing</sub>	RAF <sub>c-derm</sub>	Subchronic RfD mg/kg-day	Subchronic RAF <sub>nc-ing</sub>	Subchronic RAF <sub>nc-derm</sub>
ARSENIC	1.5E+00	0.5	0.03	3.0E-04	0.5	0.03
CHROMIUM(III)				1.5E+00	1	0.1
CHROMIUM(VI)				2.0E-02	1	0.1
LEAD				7.5E-04	0.5	0.006
NICKEL				2.0E-02	1	0.2
VANADIUM				9.0E-03	1	0.1

## Park Visitor - Sediment: Table PSIH-6 Cyanide Calculations

The soil cyanide concentration limit set to protect a child park visitor against an acute, potentially lethal one-time dose of cyanide from incidental ingestion of contaminated soil is 100 mg/kg<sub>soil</sub>. This is the concentration of available cyanide in soil below which acute human health effects would not be expected following a one-time exposure. This soil concentration is calculated using the equation below with a pica-type soil ingestion of 1000 mg<sub>soil</sub> and an available cyanide dose limit of 0.01 mg/kg<sub>body weight</sub>.

MassDEP's guidance on evaluating the risk from a one-time cyanide dose considers cyanide's potentially lethal effects as well as information on cyanide metabolism:

Cyanides are detoxified rapidly by the body, and a large acute dose which overwhelms the detoxification mechanism is potentially more toxic than the same dose distributed over a period of hours. (MassDEP *Background Documentation for the Development of an Available Cyanide Benchmark Concentration*, originally dated October 1992, Modified August 1998)

Assessment of a potential one-time dose requires an estimate of the maximum soil concentration the receptor could contact at any one time. The average soil concentration within a typical exposure area will underestimate the potential one-time dose. Therefore, to assess the acute risk of a one-time potentially lethal dose, the EPC for cyanide should be a conservative estimate of the maximum soil concentration.

The soil concentration limit to protect park visitors against adverse effects from an acute (one-time) exposure to cyanide is 100 mg/kg.

Concentration Calculation for Cyanide					
Concentration =	HQ x Acute Dose Limit x BW  IR x RAF x Conversion Factor				

Parameter	Value	Units
HQ (Hazard Quotient)	1	(unitless)
Acute Dose Limit	0.01	mg avail. CN/ kg BW
BW (Body Weight) 1-2	10.7	kg
IR (1-time reasonable max)	1000	mg
Conversion Factor	1.0E-06	kg soil / mg soil
RAF	1	(unitless)

The toxicological basis for estimating an allowable one-time dose is documented in MassDEP's 1992

Background Documentation for the Development of an "Available Cyanide" Benchmark Concentration, which is published at: 
<a href="http://www.mass.gov/eea/docs/dep/toxics/stypes/dscyanide.pdf">http://www.mass.gov/eea/docs/dep/toxics/stypes/dscyanide.pdf</a>

# APPENDIX E PUBLIC INVOLVEMENT



February 5, 2021

Town of Weymouth Mayor's Office 75 Middle Street Weymouth, Massachusetts 02189

Re: Notice of Availability

Immediate Response Action Completion Report

90 Bridge Street

Weymouth, Massachusetts

Release Tracking Number 4-28615

#### To Whom It May Concern:

TRC Environmental Corporation (TRC) has prepared this notification letter on behalf of Algonquin Gas Transmission, LLC (Algonquin) to inform you of the availability of an Immediate Response Action (IRA) Completion Report for the above-referenced release in Weymouth, Massachusetts. This notification is being provided to you in accordance with 310 CMR 40.1403(3)(c) of the Massachusetts Contingency Plan.

The IRA Completion Report can be reviewed at the Massachusetts Department of Environmental Protection (MassDEP), Southeast Regional Office, located at 20 Riverside Drive in Lakeville, Massachusetts and via the MassDEP database at <a href="https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615">https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615</a>. A copy of the summary of

findings and statement of conclusions from the IRA Completion Report is attached to this letter.

Sincerely,

**TRC Environmental Corporation** 

Immediate Response Action Completion Report 90 Bridge Street Weymouth, Massachusetts Release Tracking Number 4-28615

The following general findings and conclusions can be made based on the investigations performed at Kings Cove Shoreline located at 90 Bridge Street, Weymouth, Massachusetts and summarized in the Immediate Response Action (IRA) Completion Report:

Sample results for sediment samples collected in November 2020 at a depth of 0 to 0.5 feet indicated a concentration of arsenic or total chromium that exceeded the 2-hour notification threshold as a possible Imminent Hazard (IH) in accordance with 310 CMR 40.0321(2)(b). Additional investigations delineated the exceedances as shown in IRA Completion Report.

TRC Environmental Corporation (TRC) conducted an IH evaluation which concluded that Hazard Indices and Excess Lifetime Cancer Risks for the young child recreational visitor do not exceed MassDEP Risk Limits for an IH. Therefore, an IH associated with Kings Cove shore sediment does not exist.





February 5, 2021

Daniel McCormack, R.S., C.H.O. Director Weymouth Health Department 75 Middle Street Weymouth, MA 02189

Re: Notice of Availability

Immediate Response Action Completion Report

90 Bridge Street

Weymouth, Massachusetts

Release Tracking Number 4-26230

TRC Environmental Corporation (TRC) has prepared this notification letter on behalf of Algonquin Gas Transmission, LLC (Algonquin) to inform you of the availability of an Immediate Response Action (IRA) Completion Report for the above-referenced release in Weymouth, Massachusetts. This notification is being provided to you in accordance with 310 CMR 40.1403(3)(c) of the Massachusetts Contingency Plan.

The IRA Completion Report can be reviewed at the Massachusetts Department of Environmental Protection (MassDEP), Southeast Regional Office, located at 20 Riverside Drive in Lakeville, Massachusetts and via the MassDEP database at <a href="https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615">https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615</a>. A copy of the summary of findings and statement of conclusions from the IRA Completion Report is attached to this letter.

Sincerely,

**TRC Environmental Corporation** 

Immediate Response Action Completion Report 90 Bridge Street Weymouth, Massachusetts Release Tracking Number 4-28615

The following general findings and conclusions can be made based on the investigations performed at Kings Cove Shoreline located at 90 Bridge Street, Weymouth, Massachusetts and summarized in Immediate Response Action (IRA) Completion Report:

Sample results for sediment samples collected in November 2020 at a depth of 0 to 0.5 feet indicated a concentration of arsenic or total chromium that exceeded the 2-hour notification threshold as a possible Imminent Hazard (IH) in accordance with 310 CMR 40.0321(2)(b). Additional investigations delineated the exceedances as shown in IRA Completion Report.

TRC Environmental Corporation (TRC) conducted an IH evaluation which concluded that Hazard Indices and Excess Lifetime Cancer Risks for the young child recreational visitor do not exceed MassDEP Risk Limits for an IH. Therefore, an IH associated with Kings Cove shore sediment does not exist.



February 5, 2021

Public Involvement Plan Mailing List

Re: Notice of Availability

Immediate Response Action Completion Report

90 Bridge Street

Weymouth, Massachusetts

Release Tracking Number 4-26230

#### To Whom It May Concern:

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**LEGAL NOTICE** NOTICE OF PUBLIC INVOLVEMENT PLAN MEETING FOR 54-56 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0026230) 90 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028615) 82 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028676)

A release of oil and/or hazardous materials was identified at the above-referenced locations, which is a disposal site as defined by M.G.L. c. 21E, § 2 and the Massachusetts Contingency Plan, 310 CMR 40.0000 (the Site) and which is subject to a Public Involvement Plan (PIP). On April 7, 2021 between the hours of 6:30 pm and 9:00 pm a virtual public meeting will be held to receive comments on a Draft Release Abatement Measure (RAM) Completion Report for the Site dated February 2021, a Draft Immediate Response Action (IRA) Completion Report for RTN 4-0028615 associated with the Site dated February 2021, and a Draft IRA Completion Report for RTN 4-0028676 associated with the Site dated February 2021.

The continuing COVID-19 State of Emergency makes impossible certain actions specified in the PIP. In consultation with the Massachusetts Department of Environmental Protection (MassDEP), and consistent with COVID-19 public involvement guidance issued by MassDEP. Algonquin has taken the following steps to facilitate the public's review of, and comment on, the Draft RAM Completion Report and Draft IRA Completion Reports despite the continuing COVID-19 State of Emergency: (1) the Draft RAM Completion Report for the Algonquin Site is available and can be viewed electronically at https://eeaonline.eea.state.ma.us/EEA/ fileviewer/Rtn.aspx?rtn=4-0026230; the Draft IRA Completion Report for RTN 4-0028615 is available and can be viewed electronically at https://eeaonline.eea.state.ma.us/EEA/ fileviewer/Rtn.aspx?rtn=4-0028615; and the Draft IRA Completion Report for RTN 4-0028676 is available and can be viewed electronically at https://eeaonline.eea.state.ma.us/EEA/ fileviewer/Rtn.aspx?rtn=4-0028676; (2) a virtual meeting to present the Draft RAM Completion Report and Draft IRA Completion Reports and to receive public comments on them will be held on ZOOM on April 7, 2021 between the hours of 6:30 pm and 9:00 pm. The public can join the ZOOM meeting by computer at https://trccompanies.zoom.us/j/97927528994 or by calling 1 929-436-2866 Webinar ID: 979 2752 8994. Additional information on joining and participating in the meeting can be found at: https://www.trccompanies.com/insights/ weymouth-pip/; (3) hard copies of the Draft RAM Completion Report and/or the Draft IRA Completion Reports will be delivered by U.S. Mail or electronic mail upon request to James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854 or by emailing WeymouthCompressorStation@trccompanies.com; and (4) written comments or questions about the Draft RAM Completion Report and/or Draft IRA Completion Reports may be delivered to James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854; WeymouthCompressorStation@trccompanies.com no later than May 4, 2021.

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> 法律公告 公众参与计划会议通知

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持续的 COVID-19 紧急状态使得 PIP 中指定的某些行动无法实现。经与马萨诸塞州环境保护部 (MassDEP) 协商,并依循 MassDEP 发布的 COVID-19 公众参与指南,尽管 COVID-19 紧急状态仍 在继续,但 Algonquin 已采取以下措施来促进公众对 RAM 完成报告草案和 IRA 完成报告草案的 审查和评论: (1) 电子版本 Algonquin 地点 RAM 完成报告草案可在

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https://trccompanies.zoom.us/i/97927528994 或致电 1 929-436-2866 参与 ZOOM 会议,在线会议 ID: 979 2752 8994。有关加入和参与会议的其他信息请使用以下网址获取:

https://www.trccompanies.com/insights/weymouth-pip/; (3)可应要求以美国邮政或电子邮件的方式寄

送完成报告草案和/或 IRA 完成报告草案的纸质版本,方式是通过 James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854 申请或发送电子邮件至

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有关参与此 PIP 会议的其他信息,请登录 https://www.trccompanies.com/insights/weymouth-pip/ 获

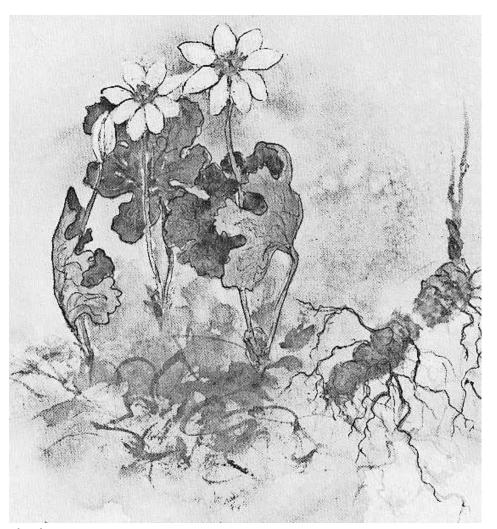
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#### THE ADDICTED GARDENER



**Bloodroot** ILLUSTRATION COURTESY OF ELIZABETH ELLISON

# The flowers of early spring

**Donna Lane** 

Columnist

Special to Wicked Local | USA TODAY NETWORK

Spring ephemerals will be poking their heads out of the ground very soon. If you aren't paying attention, you may miss them. That's how fleeting some of

Spring ephemerals are early herbaceous flowering plants that produce leaves, bloom and then set seed quickly after snowmelt in the spring. Spring ephemerals are natives found in deciduous forests. They take advantage of sunlight that reaches the ground before the trees have leaved out. The spring ephemeral flowers provide the muchneeded first nectar and pollen of the season for over-wintering pollinators. By the time the trees have filled out, the spring ephemerals are already dying back and going dormant.

We don't get to see a lot of native ephemerals in the wild anymore, which may account for their growing popularity at native plant gardens, their protected status in woodland preserves, and new commercial trends towards more native plant nurseries. Still, if you take a walk through the woods in the next few weeks, you just might see some of these beauties.

The first one that comes up in my garden is Sanguinaria canadensis, more commonly known as bloodroot. It produces 2-inch wide delicate pink or white blooms in mid-March through April. It prefers damp soil, but it can be naturalized in dry areas under trees (which is where mine is planted) as long as you water it well its first year. Mine is growing at the edge of my woodland garden where it receives partial shade. It can also tolerate full shade but it needs welldrained soil.

My all-time favorite ephemeral is Erythronium americanum, known by many other names including yellow trout lily, yellow adder's tongue, yellow fawn lily and yellow dog-tooth violet. Best grown in moist, acidic, humusy soils in part shade to full shade, plants can be grown from seed, but will not flower for four-five years. Quicker results can be obtained from planting corms that are sold by bulb suppliers and nurseries. Offsets from mature plants can also be harvested and planted. Plant corms 2-3 inches deep and 4-5 inches apart in fall. Corms of this species produce stolons, and plants will slowly spread to form large colonies if left undisturbed in optimum growing conditions. The showy yellow lilyformed flowers are about 6 inches tall.

My trout lilies have never naturalized because the soil is drier than the plant likes. If you do plant in a dry area, make sure the plants receive adequate water during the first growing season, but don't saturate the soil or the corms will rot. These native plants don't transplant well and should be left alone if found in the woods. The beautiful spotted foliage disappears by late spring when the plant goes dormant.

Trillium erectum, aka wake robin or red trillium, is another spring ephemeral that is associated with woodlands, primarily those dominated by Acer saccharum (sugar maple) and Fagus grandifolia (American beech) trees. This wildflower is also being cultivated in shade gardens. It prefers dappled sunlight or light shade during the spring, followed by shade during the summer. The soil should be moist and contain loam with decaying organic matter It takes a long time for this trillium to mature from seed (typically 5-10 years), so plants are your best alternative for acquisition. Wake robin blooms from midto late-spring for about two-three weeks. The flowers often have an unpleasant aroma. After flowering, the ovary matures into a dark maroon fruit. The foliage dies down later in the summer. The plant spreads via its rhizomatous roots.

Luckily there are several specialized commercial nurseries in different regions of the U.S. that propagate native bulbs and provide growing instructions for these early spring plants. Here are a few in the Northeast: Edge of the Woods Plant Nursery (edgeofthewoodsnur-Prairie sery.com); Nursery (prairienursery.com); Amanda's Native Perennial Garden (amandasnativeplants.com); and Plant Delights Nursery (plantdelights.com).

You can reach Donna at Addicted-Gardener@verizon.net.

#### **Prairies**

Continued from Page 8A

bee that must nest in the ground. It's universe is defined by how far it can fly and forage out from that little space. The universe is a circle, perhaps 50 or 100 yards. If there is a variety of different flowers, it could have a successful nest. But if somebody cuts hay on the prairie, the digger bee's universe would be wiped out!

Pop: Helzer has been in Nebraska for two decades working for TNC to defragment the landscape and get the plant species back in a way that animals can use them for a habitat. TNC has been able to do that, for example with the Platte River prairies. More than 1,500 acres of conversion from cropland to prairies has been accomplished with seed mixes of between 150 and 200 plant species.

Unfortunately, the organic matter in the soil does not get restored very well. It's going to be centuries to build what was lost by just a few years of farming. But the wound has been patched and stitched together to be functional.

There is optimism for the future of prairies and the animals that live there. Helzer says that prairies are incredibly resilient ecosystems. The Dust Bowl in the 1930s wiped away plant species, and two species of grass and weedy plants took over. However about three, four or five years later, the rains came and the prairies came roaring back.

Climate change is clearly the largest threat to prairies at the present, but the fact that they've come back from droughts and other challenges in the past, offers the expectation that the prairies will survive.

The secret is that the plant community must be diverse, and prairies must be connected and large.

# vaccine's reputation marred by missteps

By Maria Cheng ASSOCIATED PRESS

LONDON - AstraZeneca's release Monday of encouraging data about its coronavirus vaccine from its U.S. trial raised hopes that the drug company could put a troubled rollout behind it. But just hours after its announcement, American officials issued an unusual statement expressing concern the company had included "outdated information" from its study and that it may have provided "an incomplete view of the efficacy data.

Coupled with earlier missteps in reporting data and a recent blood clot scare, experts said the new stumble could cause lasting harm to the shot that is key to global efforts to stop the pandemic and erode vaccine confidence more broadly.

"I doubt it was (U.S. officials') intention to deliberately undermine trust in the AstraZeneca vaccine," said Dr. Paul Hunter, a professor of medicine at the University of East Anglia. "But this will likely cause more vaccine hesitancy."

AstraZeneca said Tuesday that the results it released a day earlier included information through Feb. 17 but appeared to be consistent with more up-to-date data. It promised an update within 48 hours. Those results showed its shot was about 79 percent effective in stopping symptomatic CO-VID-19 and that there were no severe illnesses or hospitalizations among vaccinated volunteers, compared with five such cases in participants who received dummy shots.

The back-and-forth over the latest release is not the first time the company has run into problems.

Partial results from its first major trial - which Britain used to authorize the vaccine - were clouded by a manufacturing mistake that researchers didn't immediately acknowledge. Insufficient data about how well the vaccine protected older people led some countries to initially restrict its use to younger populations before reversing course. And U.S. officials suspended an Astra-Zeneca study for an unusual six weeks while they sought details about problems reported in Britain before deciding the vaccine wasn't to blame.

Then last week, more than a dozen countries temporarily halted their use of the AstraZeneca shot after reports of rare blood clots in some people who received it. The European Medicines Agency concluded the shot did not increase the overall incidence of clots, but the unwanted attention appears to have left a mark.

In Norway, a top official warned on Monday it might not be able to resume its use of the vaccine because so many people were rejecting it.

"People clearly say that they do not want the AstraZeneca vaccine," Marte Kvittum Tangen, who heads a Norwegian doctors' association, told broadcaster NRK.

Last week in Bucharest, Romania, vaccination coordinator Valeriu Gheorghita said 33,000 AstraZeneca immunization appointments had been canceled in 24 hours and that about a third of the 10,000 people scheduled to receive the vaccine did not show up. In Belgrade, Serbia, a sprawling exhibition center set up for people to get the AstraZeneca vaccine was mostly deserted on Monday.

# AstraZeneca COVID | Colorado supermarket shooter identified as 21-year-old man

**By Patty Nieberg** and Thomas Peipert

BOULDER, Colo. - Police on Tuesday identified 21-yearold Ahmad Al Aliwi Alissa as the suspect in the killing of 10 people at a Boulder, Colorado, supermarket.

Authorities also identified nine victims after previously identifying a police officer who had been killed.

The victims ranged in age from 20 to 65, said Boulder Police Chief Maris Herold.

The shooting Monday at the crowded supermarket sent terrorized shoppers and workers scrambling for safety and stunned a state and a nation that has grieved several mass

Herold said police engaged in a shootout with the suspect inside the supermarket and that is when police officer Eric Talley was killed.

The suspect was undergoing treatment at a hospital and was expected to be booked into the county jail later Tuesday, said **Boulder County District Attor**ney Michael Dougherty.

Investigators don't know yet why the suspect opened fire inside the grocery store, Dougherty said. He said the investigation is in the early stages.

A law enforcement official briefed on the shooting told The Associated Press that the gunman used a lightweight semi-automatic AR-15 rifle. Officials were working to trace the gun. The official was not authorized to speak publicly and spoke to AP on condition of anonymity.

Hundreds of police officers from throughout the Denver metropolitan area responded to the Monday afternoon attack, converging on a King Soopers supermarket in a busy shopping plaza in southern Boulder.



People are led out of a King Soopers grocery store after a shooting there Monday in Boulder, Colo.

SWAT officers carrying ballistic shields slowly approached the store as others quickly escorted frightened people away from the building, some of its windows shattered. Customers and employees fled through a back loading dock to safety. Others took refuge in nearby shops.

Officers escorted a shirtless man in handcuffs, blood running down his leg, from the store during the siege. Authorities would not say if he was the suspect. Foothills Hospital in Boulder was treating one person from the shooting scene but declined further comment, said Rich Sheehan,

spokesman for Boulder Community Health, which operates the hospital.

Talley, 51, had been with Boulder police since 2010. He was the first to arrive after responding to a call about shots fired and someone carrying a rifle, she said.

"He was by all accounts one of the outstanding officers of the Boulder Police Department, and his life was cut too short," Dougherty said.

Dozens of police and emergency vehicles, their lights flashing, escorted an ambulance carrying the slain officer from the shooting scene after nightfall. Some residents stood along the route, their arms raised in salute.

The identities of the other nine victims were not disclosed because police said they were still notifying their

family members. Dougherty said it was too early to speculate on a motive and that the investigation involving local, state and federal law enforcement agencies would take days.

The attack in Boulder, about 25 miles northwest of Denver and home to the University of Colorado, stunned a state that has seen several mass shootings, including the 1999 Columbine High School massacre and the 2012 Aurora movie theater shooting.

Monday's midafternoon attack was the seventh mass killing this year in the U.S., following the March 16 shooting that left eight people dead at three Atlanta-area massage businesses, according to a database compiled by The Associated Press, USA TODAY and Northeastern University.

It follows a lull in mass killings during the coronavirus pandemic in 2020, which had the smallest number of such attacks in eight years, according to the database, which tracks mass killings defined as four or more dead, not including the shooter.

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https://trccompanies.zoom.us/j/97927528994 或致电 1 929-436-2866 参与 ZOOM 会议, 在线会议 ID: 979 2752 8994。有关加入和参与会议的其他信息请使用以下网址获取:

https://www.trccompanies.com/insights/weymouth-pip/; (3)可应要求以美国邮政或电子邮件的方式寄 送完成报告草案和/或 IRA 完成报告草案的纸质版本,方式是通过 James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854 申请或发送电子邮件至

WeymouthCompressorStation@trccompanies.com; 以及 (4) 关于 RAM 完成报告草案和/或 IRA 完成 报告草案的书面意见或疑问可寄送至 James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854; 或发送电子邮件至

WeymouthCompressorStation@trccompanies.com, 时间为 2021 年 5 月 4 日之前。

有关参与此 PIP 会议的其他信息,请登录 <a href="https://www.trccompanies.com/insights/weymouth-pip/">https://www.trccompanies.com/insights/weymouth-pip/</a> 获



Call today for your **FREE** in-home or virtual quote!

Financing available to qualified purchasers. Contact your local dealer for financing details. Limited time offer. Valid through March 31, 2021, at participating dealers only. Not available in AK; HI; Nassau cty, NY; Suffolk Cty, NY; Westchester cty, NY; and Buffalo Cty, NY. Also may not be available in other areas. \$1,000 off average price of KOHLER walk-in bath. Dealer sets all prices and is responsible for full amount of discount. Cannot be combined with any other advertised offer. Subject to credit approval. Interest is billed during the promotional period but all interest is waived if the purchase amount is paid before the expiration of the promotional period. There is no minimum monthly payment required during the promotional period. Financing for GreenSky® consumer loan programs is provided by federally insured, equal opportunity lender banks. NMLS #1416362. GreenSky® Program is a program name for certain consumer credit plans extended by participating lenders to borrowers for the purchase of goods and/or services from participating merchants. Participating lenders are federally insured, equal opportunity lender banks. GreenSky® is a registered trademark of GreenSky, LLC. GreenSky Servicing, LLC services the loans on behalf of participating lenders. NMLS #1416362 GreenSky® financing offers available at participating dealers only.

Total market cap: \$1,021.0b

**Globe 25 index** 

170

165

160

155

Thermo Fisher Sci (TMO)

American Tower Corp (AMT)

General Electric (GE)

Vertex Pharma (VRTX)

Analog Devices (ADI)

Moderna Inc (MRNA)

Boston Scientific (BSX)

Alexion Pharma (ALXN)

State Street Corp (STT)

HubSpot Inc (HUBS)

Insulet Corp (PODD)

Waters Corp (WAT)

Alnylam Pharma (ALNY)

PerkinElmer Inc (PKI)

ABIOMED Inc (ABMD)

Skyworks Solutions (SWKS)

Keurig Dr Pepper Inc (KDP)

TJX Cos Inc(TJX)

Raytheon Technologies Corp (RTX)

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Index of publicly traded companies in Massachusetts

22 29 5 12 19 26 2 9 16 23 2

452.01

75.18

12.66

229.85

64.53

213.59

150.49

136.52

37.24

34.61

267.21

335.93

152.18

84.47

175.38

79.38

457.85

113.12

72.73

277.05

270.69

99.69

138.66

127.25

298.62

**Markets** 

Stocks fall amid virus worries

US equities fell, with companies that would benefit from an

end to lockdowns faring the worst, amid concern that rising

virus cases and new restrictions in Germany signal the global

reopening will be delayed. The S&P 500 slumped and the

small-cap Russell 2000 dropped 3.6 percent as beneficiaries

of the reopening trade including Carnival and TripAdvisor

Jerome Powell played down the risk that economic growth

barrel on concern the market is oversupplied. While setbacks

foot, the stabilization in bond yields is providing some relief

against fears that heavy US spending could reignite inflation

stock of equity gains on the one-year anniversary of the S&P

percent since then. "When you consider how far we've come

it is truly staggering," said Chris Larkin, at E\*Trade Financial.

Low: **29,982.62** 

9 16 23

Low: 12.609.16

500's bear-market bottom. The gauge has surged about 75

would spur unwanted inflation. Oil dropped below \$60 a

in the coronavirus fight are putting investors on the back

and force tighter central-bank policy. Investors also took

**DOW JONES industrial average** 

12 19 26 2

**NASDAQ Composite index** 

Yesterday 32,423.15 ▼ 308.05 ▼ 0.9% ▲ YTD 5.9%

High: 14.095.47

12 19 26 2 9 16 23

Yesterday 13,227.70 ▼ 149.84 ▼ 1.1% ▲ YTD 2.6%

33,000

31.000

29,000

13,600

13,100

12,600

tumbled. An index of airline shares fell the most since

October. The dollar strengthened, while the 10-year US

Treasury yield slid for a second day after Fed chairman

-2.65

-1.74

-0.47

+4.02

-1.97

-5.23

-4.01

-9.08

-0.99

+0.03

-5.13

-3.07

+2.22

-4.44

-2.24

-1.80

-3.89

-1.20

+7.73

-0.94

-0.50

-0.88

Yesterday 166.46 ▼ 2.93 ▼ 1.7% ▲ YTD 4.6%

cap (bil.

114.0

111.2

102.1

77.5

55.5

55.5

52.8

48.7

40.7

34.8

33.4

29.0

28.9

27.9

21.2

18.7

18.3

16.8

14.3

-2.3

-3.6

+1.8

-3.0

-2.4

-2.6

-6.2

-2.6

+0.1

-1.9

-2.8

-2.0

+2.7

-2.5

-2.7

-0.4

-3.3

-1.6

+2.9

-0.3

-0.5

-3.8

-0.7

-2.5

High: 33.015.37

Last: 32.423.15

Last: 13,227.7

Hidh: 3.974.12

Last: 3.910.52

**LEGAL NOTICES** 

LEGAL NOTICES

**LEGAL NOTICES** 

NOTICE OF PUBLIC INVOLVEMENT PLAN MEETING FOR 54-56 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0026230) 90 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028615) 82 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028676)

which is a disposal site as defined by M.G.L. c. 21E, § 2 and the Massachusetts Continge Plan, 310 CMR 40.0000 (the Site) and which is subject to a Public Involvement Plan (PIP).

On April 7, 2021 between the hours of 6:30 pm and 9:00 pm a virtual public meeting will be held to receive comments on a Draft Release Abatement Measure (RAM) Completion Report for the Site dated February 2021, a Draft Immediate Response Action (IRA) Completion Report for RTN 4-0028615 associated with the Site dated February 2021, and a Draft IRA Completion Report for RTN 4-0028676 associated with the Site dated February 2021.

The continuing COVID-19 State of Emergency makes impossible certain actions specified in the PIP. In consultation with the Massachusetts Department of Environmental Protection (MassDEP), and consistent with COVID-19 public involvement guidance issued by MassDEP, Algonquin has taken the following steps to facilitate the public's review of, and comment on, the Draft RAM Completion Reports despite the continuing COVID-19 State of Emergency: (1) the Draft RAM Completion Report for the Algonquin Site is available and can be viewed electronically at ps://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0026230; the Draft IRA impletion Report for RTN 4-0028615 is available and can be viewed electronically at

line.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615; and the Draft IRA Completion Report for RTN 4-0028676 is available and can be viewed ele https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028676; (2) a virtual meeting to present the Draft RAM Completion Report and Draft IRA Completion Reports and to receive public comments on them will be held on ZOOM on April 7, 2021 between the hours of 6:30 pm and 9:00 pm. The public can join the ZOOM meeting by computer at https://trccompanies.zoom.us/i/97927528994 or by calling 1 929-436-2866 Webinar ID: 979 2752 8994. Additional information on joining and participating in the meeting can be found at: https://www.trccompanies.com/insights/weymouth-pip/; (3) hard copies of the Draft RAM Completion Report and/or the Draft IRA Completion Report and/or the Draft IRA Completion Report and/or the Draft IRA Completion Report and/or provided by U.S. Mail or electronic mail upon request to James Doherty, PE, LSP, at TRC Environmental Corporation,

ymount-compressorsationing/companies/oring and compressors white forming so questions to be used to 01854; WeymouthCompressorStation@trccompanies.com no later than May 4, 2021.

#### 公众参与计划会议通知 54-56 BRIDGE STREET, WEYMOUTH, MA(**发布追除编码** (RTN) 4-0026230) 90 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028615) 82 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028676

我们已确认在上述地点进行石油和/或危险物质的排放,该地点是 M.G.L. c. 21E, § 2 和马萨诸塞州 应急计划 310 CMR 40.0000 (该地点)定义的处理地点,并受公众参与计划 (PIP) 的约束

2021年4月7日下午6:30到晚上9:00之间将举行一次虚拟的公开会议,以获取与2021年2月这 地点减排措施 (RAM) 完成报告草案、2021 年 2 月与该地点相关的 RTN 4-0028615 即刻响应行动 (IRA) 完成报告草案, 以及 2021 年 2 月与该地点相关的 RTN 4-0028676 IRA 完成报告草案相关的

持续的 COVID-19 紧急状态使得 PIP 中指定的某些行动无法实现。经与马萨诸塞州环境保护部 (MassDEP) 协商,并依循 MassDEP 发布的 COVID-19 公众参与指南,尽管 COVID-19 紧急状态仍 在继续,但 Algonquin 已采取以下措施来促进公众对 RAM 完成报告草案和 IRA 完成报告草案的 审查和评论: (1) 电子版本 Algonquin 地点 RAM 完成报告草案可在 us/EEA/fileviewer/Rtn.aspx?rtn=4-0026230 获取和查阅;电子版本的

RTN 4-0028615 IRA 完成报告草案可以在 ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615 获取和查阅;电子版本的

RTN 4-0028676 IRA 完成报告草案可在

attps://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028676 获取和查阅;(2) 将于 2021 年 4 月 7 日下午 6:30 至晚上 9:00 之间通过 ZOOM 举行虚拟会议,届时将展示 RAM 完成报告草 案和 IRA 完成报告草案,并听取公众意见。公众可以使用电脑通过 https://trccompanies.zoom.us/i/97927528994 或致电 1 929-436-2866 参与 ZOOM 会议,在线会议 ID:

979 2752 8994。有关加入和参与会议的其他信息请使用以下网址获取; https://www.trccompanies.com/insights/weymouth-pip/; (3)可应要求以美国邮政或电子邮件的方式寄

送完成报告草案和/威 IRA 完成报告草案的纸质版本,方式是通过 James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854 申请或发送电子邮件至 WeymouthCompressorStation@trecompanies.com: 以及 (4) 关于 RAM 完成报告草案和/或 IRA 完成 报告草案的书面意见或疑问可寄送至 James Doherty, PE, LSP, at TRC Environmental Corporation, 650 Suffolk Street, Lowell, MA 01854; 或发送电子邮件至 WeymouthCompressorStation@trccompanies.com, 时间为 2021 年 5 月 4 日之前

有关参与此 PIP 会议的其他信息,请登录 https://www.trccompanies.com/insights/weymouth-pip/ 获

Notice of Intent to Submit a Project Proposal to the Asset Management Board and Public Hearing for the Long-Term Lease and Redevelopment of the land comprising the Lemuel L. Shattuck Hospital located at 170 Morton Street in the City of Boston

Commonwealth of Massachusetts, Division of Capita the Commonwealth of Massachusetts, Division of Capital ssest Management and Maintenance, hereby gives notice inder 810 CMR 2.05 that it intends to submit a Project Pro-osal to the Asset Management Board and that it will hold public hearing on the proposed project which has been ranted Preliminary Project Approval by the Board. The pro-osed project is for the long-term lease (up to 99 years) of he land (approximately 13 acres) comprising the Lemuel L hattuck Hospital located at 170 Morton Street in the City of Boston. The estimated fair market value of the leasehold is restricted is expected to be nominal.

The public is invited to visit the "Project Website" at <a href="https://www.mass.gov/service-details/shattuck-campus-redevel-">https://www.mass.gov/service-details/shattuck-campus-redevel-</a> opment-at-morton-street-proposal. Copies of the Project Proposal will be available on the Project Website starting on March 24, 2021. Copies of the Project Proposal are also available from Loryn Sheffner, DCAMM Project Manager at One Ashburton Place, Room 107, Boston, MA 02108 or via email: Loryn. Sheffner@mass.gny.

The deadline for receipt of written comments through the Project Website or directly to Loryn Sheffner (via regular mail or email) is April 20, 2021 at 5:00 p.m. All changes will be posted on the Project Website.

#### March 24, 2021 CCA HMO Complete, LLC 30 Winter Street, Boston, MA 02108

The above company has made application to the Massachusetts Division of Insurance to obtain a Health Maintenance Organization license to transact Health Insurance as a Health Maintenance Organization in the Commonwealth of Massachusetts.

Any person having any information regarding the company which relates to its suitability for the license or authority the applicant has requested is asked to notify the Massachusetts Division of Insurance by personal letter to the

Commissioner of Insurance, 1000 Washington Street, Suite 810, Boston, MA 02118 Attn: Financial Surveillance and Company Licensing

#### TOWN OF WESTON MASSACHUSETTS BOARD OF APPEALS HEARING NOTICE

within 14 days of the date of this notice.

Notice is hereby given that the Board of Appeals of the Town of Weston will hold a public hearing on Wednesday, April 7, 2021 at 7:30 P.M. on an application by 518 South Ave LLC, 231 Boston Post Road, Wayland, MA, as to 510, 518 and 540 South Ave, Weston, MA (Map 43 Block 30, Map 44 Block18 lot 0, and Map 43 Block 29 lot 0) remestine a Comprehensive Permit under M.G.L., Ch. 40B for questing a Comprehensive Permit under M.G.L. Ch. 40B for 200 rental housing units, 50 of which will be affordable, or approximately 9.54 acres.

Public Participation will be via Virtual Means Only - Pursuant to Governor Baker's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law, G.L. c. 30A, \$18, and the Governor's March 15, 2020 Order imposing strict limitation on the number of people that may gather in one place, this meeting of the Weston Zoning Board of Appeals will be conducted via remote participation. The public may participate in this meeting via Remote Participation: The website link for the virtual meeting will be provided on the Zoning Board of Appeal's Agenda posted on the Town's website (www.weston.org) at least 48 hours prior to the meeting or you may email geary.v@westonma.gov for the agenda to be emailed to you.

The petition and plans on above application with said Board of Appeals are available on the Town of Weston website, <a href="https://www.weston.org/1366/518-South-Avenue.">https://www.weston.org/1366/518-South-Avenue.</a> By: Jane Fisher Carlson Board of Appeals, Town of Weston

he Montachusett Regional Transit Authority (MART)

cordance with plan specifications, at Fitchburg, MA 01420

Contractors are invited to obtain the Request for Response document which outlines the instructions and format for responses by accessing our website at <a href="http://www.mrta.us/doing-business/contractingopportunities">http://www.mrta.us/doing-business/contractingopportunities</a> or contracting procurement@mrta.us. Responses will be accepted until 10AM on April 8, 2021, and should be sent via email to <a href="https://www.mrta.us.responses">procurement@mrta.us.responses</a> received after the date and time specified above will be considered late. MART reserves the right to accept or to reject any and/or all responses.

The award under this solicitation is subject to funding from Federal Transit Administration and Massachusetts Department of Transportation. Disadvantaged Business Enterprises are encouraged to submit responses; and no respondent will be subject to discrimination based on race color, national origin, gender, age, or disability. The successful respondent will be required to comply with federal and catalogical states against a subject to comply with federal and catalogical states.

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MONSTER

PERSONAL PROPERTY

By virtue and in execution of the Power of Sale contained in that certain Mortgage (the "Mortgage") granted by Hudson 62 Realty LLC (the "Mortgage") to Northern Bank & Trust Company (the "Mortgage") dated as of January 10, 2017, and recorded with the Suffolk County Registry of Deeds at Book 57405, Page 197, of which the undersigned is the present holder, and pursuant to the security interests and rights granted by the Mortgage or to the Mortgage under the Mortgage, and for the purpose of foreclosing the same, the Mortgage, and for the purpose of foreclosing the same, the Mortgage will offer all of the real property described in said Mortgage located in Boston (East Boston), Suffolk County, Massachusetts, further described on Exhibit A annexed hereto and specifically incorporated herein by reference (the "Real Property") and, pursuant to a secured party public sale under Article 9 of the Uniform Commercial Code, together with and not separately from the Real Property, certain personal property assets of the Mortgagor related to, or used in connection with, the Real Property in which the Mortgage has been granted a security interest (collectively, the "Personal Property") and together with the Real Property, collectively, the "Mortgaged Property") for sale together at 1:00 P.M. The sale described above will be referred to hereinafter, as the "Sale." The Sale shall be held at that portion of the Real Property commonly known and numbered as 183 Orleans Street, East Boston, Massachusetts (ONE MINISTED AND ELECTIVE.

**LEGAL NOTICES** 

**Business** 

C11

**LEGAL NOTICES** 

TERMS OF SALE. A deposit of ONE HUNDRED AND FIFTY THOUSAND AND 00/100 DOLLARS (\$150,000.00) shall be required to be paid by the highest bidder to the Mortagee for the Mortaged Property. The deposit shall be made by certified check or bank cashier's check at the time and place of the Sale as a non-refundable earnest money deposit to be held at the option of the Mortgagee as iquidated damages for any default or breach by the highest bidder (cash will NOT be accepted). The deposit shall be increased to an amount equal to ten percent (10%) of the highest bid at the Sale, which amount is to be paid to the Mortgagee within five (5) business days of the date of the Sale. The balance of the purchase price for the Mortgaged Property is to be paid to the Mortgage by federal funds wire transfer of immediately available funds in or within thirty (30) calendar days from the date of the Sale, WITH TIME BEING OF THE ESSENCE.

The Mortgaged Property is to be sold together, subject to, and with the benefit of, all easements, restrictions, orders of condition, building and zoning laws, unpaid taxes, tax titles, water bills, environmental liens or restrictions, mulcipal liens and assessments, rights of tenants and parties in possession, existing encumbrances, and assessments, and all other claims in the nature of liens, now existing or hereafter arising, having priority over the Mortgage, if any there be. The Mortgaged Property is also sold subject to the right of redemption of the United States of America, if any there be.

The Mortgagee may, at its option, either sell the Mortgaged Property to the second highest bidder at the Sale or assume the highest bid should the highest bidder fail to fulfill the highest bidder's obligations under the terms of a sale sagreement to be entered into with the Mortgagee immediately after the Sale, provided that Mortgagee in its discretion may require, (i) the second highest bidder to deposit as set forth herein within five (5) business days after written notice to the second highest bidder of the default of the highest bidder, (ii) the second highest bidder to execute a Sales agreement and/or assume the obligations of the sales agreement and/or assume the obligations of the sales agreement executed by the highest bidder, and (iii) the payment of the balance of the purchase price of the Mortgaged Property to the Mortgagee within thirty (30) days of said written notice, WITH TIMB BEING OF THE ESSENCE unless the Mortgagee agrees otherwise. In the days of said written notice, WITH TIME BEING OF THE ESSENCE unless the Mortgagee agrees otherwise. In the event that the highest bidder defaults under such sales agreement and the Mortgagee sells the Mortgaged Property to the second highest bidder, the Mortgagee may, at its option, assume the second highest bid should the second highest bidder fall to fulfill its obligations under such sales agreement. No such assumption of the highest or second highest bidder fall to fulfill its obligations under such the Mortgagee to such second highest bidder shall relieve the highest or second highest bidder, as applicable, from its obligations under such sales agreement no operate as a waiver by the Mortgagee of its rights and remedies against the highest or second highest bidder at the Sale.

In the event of any typographical errors in the publication of the legal description of the Real Property in this Notice of Sale, the legal description contained in the Mortgage shall control.

of Sale, the legal description contained in the Mortgage shall control.

THE SALE OF THE MORTGAGED PROPERTY WILL BE OFFERED AND SOLD "AS-IS". "WHERE-IS", AND "WITH ALL FAULTS", LATENT OR PATENT, AND SUBJECT TO ALL PRIOR ENCUMBRANCES, AND WITHOUT ANY WARRANTIES OR REPRESENTATIONS WHETHER EXPRESS, IMPULED, OR IMPOSED BY LAW. The transfer of the Mortgaged Property will be made and accepted by the highest bidder without any other expressed or implied representations or warranties whatsoever, including, but not limited to, representations regarding acreage, description of the Mortgaged Property, uses, rent roils, leases, outstanding taxes, liens and encumbrances, title and/or title matters, availability of any utilities, building permits, occupancy, any matter relating to any structure on the Real Property, or any other matter. The highest bidder shall be deemed to have expressly acknowledged by participation in the Sale that any warranty or representation, other than those contained herein, are without authority and that the highest bidder has duly inspected the Mortgaged Property, the title thereto, the occupancy thereof, and all other matters in connection with the Sale by itself and by its own experts, including counsel, as the highest bidder has elected to consult. To the extent that the Mortgaged Property and the transfer hereunder include fixtures or other personalty, then all such items shall be conveyed "AS-IS". "WHERE-IS", and "WITH ALL FAULTS". THE MORTGAGEE EXPRESSLY DISCLAIMS ALL WARRANTIES FOR MORTGAGEE EXPRESSLY DISCLAIMS ALL WARRANTIES REGARDING TITLE TO ANY SUCH FIXTURES OR OTHER PERSONALTY. From and after the conclusion of the back and the palse and/or post-

The Mortgagee reserves the right to credit bid at the Sale to advance its bid at the Sale, and to pause and/or post pone the Sale by auctioneer's public proclamation. The Mortgagee further reserves the right to change terms of the Sale at the Sale or to add additional terms and to qualify some or all bidders.

Other terms, if any, to be announced at the Sale

NORTHERN BANK & TRUST COMPANY, Present holder of the Mortgage

By Its Attorneys

151-155 Port [sic] Street, East Boston
The land in Boston, Suffolk County, being five certain part lead from the land in Boston.

340, bounced and described and measured as follows:

Lot 23: Beginning at a point in the Northerly side line of Frankfort Street, fifty-seven 58/100 (57.58) feet from the Northwesterly Corner of Frankfort and Porter Streets, thence running Northwesterly at right angles to said line of Frankfort Street and bounded Easterly by Lot numbered 22, one hundred 00/100 (100.00) feet to a point, thence Southwesterly at a right angle and bounded Northerly by Lots numbered 18 and 19, twenty-eight 82/100 (28.82) feet to a point, thence Southeasterly at right angles, parallel to the line first above described, and bounded Westerly by lot, number 24, one line of Frankfort Street, thence Northeasterly along said line to Frankfort Street, thence Northeasterly along said line to Frankfort Street, twenty-eight 82/100 (28.82) feet to the point of beginning, containing 2,882 square feet of land, more or less.

Lot 24: Beginning at a point in the Northerly side of Frank-fort Street, eighty-six 40/100 (86.40) feet from the North-westerly corner of Frankfort and Porter Streets, thence running Northwesterly at right angles to said line of Frankfort Street, and bounded Easterly by Lot numbered 23, one hundred 00/100 (100.00) feet to a point, thence Southwesterly at right angles and bounded Northerly by Lots numbered 17 and 18, twenty-eight 82/100 (28.82) feet to a point, thence Southeasterly at right angles, parallel to the line first above described, and bounded Westerly by Lot, numbered 25, one hundred 00/100 (100.00) feet to a point in the Northerly side line of Frankfort Street, twenty-eight 82/100 (28.82) feet to a point of beginning, containing 2,882 square feet of land, more or less.

Lot 25: Beginning at the Southwesterly corner of said lot 24, thence Northwesterly at right angles, one hundred 00/100 (100.00) feet thence Southwesterly at right angles twenty-eight 82/100 (28.82) feet, thence Southwesterly at right angles, one hundred 00/100 (100.00) feet to northwesterly side of Frankfort Street, thence, Northeasterly along said line of Frankfort Street, twenty-eight 82/100 (28.82) feet to the point of beginning, containing 2,882 square feet, more or less.

Parcel #1: About twenty-eight hundred seventy-six (2,876) square feet of land on the Northwesterly side of Frankfort Street, adjoining another estate now or formerly of said Lorenzo DiGuisto, being Lot Twenty-One (21), Edward P. Adams, Plan dated May 15, 1905, recorded with Suffolk Deeds, Book 3046, Page 340, Block 54, Section 5, East Boston District.

The land at 183 Orleans Street, East Boston, Suffolk County Massachusetts, consisting of two parcels of land, bounded and described as follows: First Parcel:

Commencing at a point on Orleans Street, two hundred twenty (220) feet from the southwest corner of Porter and Orleans Streets; thence running at right angles and

Southeasterly feet; thence running

westerly and parallel with Orleans Street a distance of one hundred forty (140) feet; thence running at rights angles and

along the southeasterly side of Orleans Street, a distance of one hundred forty (140) feet to the point of beginning.

For title reference see deed of 183 Orleans Street LLC re corded herewith.

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Ad Nur

3,900

S&P 500 index

5 12 19 26 2 9 16 23 2 Yesterday 3,910.52 ▼ 30.07 ▼ 0.8% ▲ YTD 4.1% SOURCE: Bloomberg News

# Powell, Yellen call road back long

Continued from Page C8 four decades this year.

Still, there are plenty of challenges to getting the elements of the sprawling stimulus law out the door, along with many unresolved questions about how hundreds of billions of dollars allocated by the American Rescue Plan will actually be dispersed. On Tuesday, a number of lawmakers pushed for more regular oversight of the \$1.9 trillion bill, noting mechanisms put in place after Congress passed the Cares Act last spring.

"Now that we have an addition \$1.9 trillion to track, I would ask for your commitment along those same lines," Representative Patrick McHenry of North Carolina, the top Republican on the House Financial Services Committee, told Yellen, adding, "That would be encouraging that you'd continue the practice of your predecessor... to ensure appropriate oversight."

Yellen agreed to work with the committee and other oversight groups, and laid out some of the challenges to implementing Biden's bill. Yellen said earlier rounds of the Pavcheck Protection Program often didn't reach the country's smallest businesses, especially those in rural and low-income areas. Rental assistance was frequently tied up in red tape. Many Americans still haven't received their stimulus checks.

"And all this is just a fraction of Treasury's work," Yellen told the committee. "There are so many more relief programs, including one that will provide \$350 billion in aid to state and local governments. Implementing all of it is more complicated than it sounds."

Meanwhile, many Republican lawmakers, Wall Street investors, and prominent economists are worried that the economy won't be able to absorb a massive stimulus package and postpandemic consumer spending, pushing prices rapidly upward. Their worry is that dangerous cycles of inflation will force the Fed to hike interest

rates, triggering a new recession. "Economic projections are increasingly positive." McHenry said. But "with the addition of \$1.9 trillion, there's been a great deal of debate about what will happen with this amount of li-

quidity in financial markets." But the Fed and White House argue that inflation is not a pressing concern. Powell says that there would have to be substantial progress in the labor market before the Fed considers raising rates. Any price increases resulting from the economy reopening and people spending big on vacations or concert tickets will be temporary, he has

"Our best view is that the effect on inflation will be neither particularly large nor persistent," Powell said Tuesday. "We've been living in a world of strong disinflationary pressures around the world really for a quarter of a century. We don't think a one-time surge in spending leading to temporary price increase would disrupt that."

Lawmakers pressed Powell and Yellen on a range of other issues, from the regulators' research on digital currencies to banking regulations. Of particular focus was climate policy, which the Biden White House has made core to its agenda. The Fed increasingly points to climate risk as a threat to the financial system and financial stabili-As Powell and Yellen testified

on Tuesday, Fed governor Lael Brainard said that the central bank is launching a Financial Stability Climate Committee, which will work closely with another Fed team focused on banks' resilience to climate Republicans in Congress

have warned the Fed against

delving too deeply into climate issues. They argue that climate

policy is part of progressives political agenda and not the purview of the central bank. Yellen and Powell will appear before the Senate Banking Committee on Wednesday.

#### boston.com/ monster

## today and

# experts.

Parcel #2: About Twenty-Eight Hundred Eighty-Two (2,882) square feet of land on the Northwesterly side of Frank-fort Street, adjoining another estate now or formerly of said Lorenzo DiGuisto being Lot Twenty-Two (22) Edward P. Adams, Plan dated May 15, 1905, recorded with Suffolk Deeds, Book 3046, Page 340, Block 34, Section 5, East Boston District.

183 Orleans Street, East Boston

Northwesterly twenty (220) feet; by Orleans Street, two hundred

by Porter Street, one hundred Southeasterly by a line parallel to the southeasterly line of Orleans Street and one hundred feet distant therefrom, two hundred twenty (220) feet; and

Southwesterly by land now or formerly of How ard S. Cosgrove, one hundred (100) feet. Second Parcel:

a distance of one hundred (100)

Top local employers are looking for people

The Boston Globe

The Boston Sunday Globe's Careers Section



June 10, 2021

Town of Weymouth
Mayor's Office
75 Middle Street
Weymouth, Massachusetts 02189

Re: Notice of Availability

Final Immediate Response Action Completion Report

90 Bridge Street

Weymouth, Massachusetts

Release Tracking Number 4-28615

#### To Whom It May Concern:

TRC Environmental Corporation (TRC) has prepared this notification letter on behalf of Algonquin Gas Transmission, LLC (Algonquin) to inform you of the availability of the Final Immediate Response Action (IRA) Completion Report for the above-referenced release in Weymouth, Massachusetts. This notification is being provided to you in accordance with 310 CMR 40.1403(3)(c) of the Massachusetts Contingency Plan.

The Final IRA Completion Report can be reviewed via the MassDEP database at <a href="https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615">https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615</a>. A copy of the summary of findings and statement of conclusions from the report is attached to this letter.

Sincerely,

**TRC Environmental Corporation** 

Final Immediate Response Action Completion Report 90 Bridge Street Weymouth, Massachusetts Release Tracking Number 4-28615

The following general findings and conclusions can be made based on the investigations performed at Kings Cove Shoreline located at 90 Bridge Street, Weymouth, Massachusetts and summarized in the Final Immediate Response Action (IRA) Completion Report:

Sample results for sediment samples collected in November 2020 at a depth of 0 to 0.5 feet indicated a concentration of arsenic or total chromium that exceeded the 2-hour notification threshold as a possible Imminent Hazard (IH) in accordance with 310 CMR 40.0321(2)(b). Additional investigations delineated the exceedances as shown in the Final IRA Completion Report.

TRC Environmental Corporation (TRC) conducted an IH evaluation which concluded that Hazard Indices and Excess Lifetime Cancer Risks for the young child recreational visitor do not exceed MassDEP Risk Limits for an IH. Therefore, an IH associated with Kings Cove Shoreline sediment does not exist.





June 10, 2021

Daniel McCormack, R.S., C.H.O. Director Weymouth Health Department 75 Middle Street Weymouth, MA 02189

Re: Notice of Availability

Final Immediate Response Action Completion Report

90 Bridge Street

Weymouth, Massachusetts

Release Tracking Number 4-28615

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Sincerely,

**TRC Environmental Corporation** 

Final Immediate Response Action Completion Report 90 Bridge Street Weymouth, Massachusetts Release Tracking Number 4-28615

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Sample results for sediment samples collected in November 2020 at a depth of 0 to 0.5 feet indicated a concentration of arsenic or total chromium that exceeded the 2-hour notification threshold as a possible Imminent Hazard (IH) in accordance with 310 CMR 40.0321(2)(b). Additional investigations delineated the exceedances as shown in the Final IRA Completion Report.

TRC Environmental Corporation (TRC) conducted an IH evaluation which concluded that Hazard Indices and Excess Lifetime Cancer Risks for the young child recreational visitor do not exceed MassDEP Risk Limits for an IH. Therefore, an IH associated with Kings Cove Shoreline sediment does not exist.





June 10, 2021

Public Involvement Plan Mailing List

Re: Notice of Availability

Final Immediate Response Action Completion Reports and Final Release Abatement Measure Completion Report

54-90 Bridge Street

Weymouth, Massachusetts

Release Tracking Numbers 4-28676, 4-28615 and 4-26230

#### SENT VIA ELECTRONIC MAIL

To Whom It May Concern:

TRC Environmental Corporation (TRC) has prepared this notification on behalf of Algonquin Gas Transmission, LLC (Algonquin) to inform you of the availability of the Final versions of the following documents that provide results of investigations and responses to public comments related to activities performed at the above-referenced location in Weymouth, Massachusetts.

- Immediate Response Action Completion Report, 82 Bridge Street, Weymouth MA, dated June 2021, RTN 4-28676; this document can be viewed on the MassDEP Database at: https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028676
- Immediate Response Action Completion Report, 90 Bridge Street, Weymouth MA, dated June 2021, RTN 4-28615, this document can be viewed on the MassDEP Database at: <a href="https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615">https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0028615</a> and
- Release Abatement Measure Completion Report, 54-56 Bridge Street, Weymouth MA, dated June 2021, RTN 4-26230, this document can be viewed on the MassDEP Database at: https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0026230

Please also find attached Algonquin's Response to Comments received at the Public Meeting conducted on April 7, 2021 and during the subsequent Public Comment Period.

This notification is being provided to you in accordance with the provisions of the Final Public Involvement Plan for Release Tracking Number 4-26230 dated January 30, 2018.

Sincerely,

**TRC Environmental Corporation** 



June 10, 2021

Tufts Public Library 46 Broad Street Weymouth, MA 02188

RE: Public Repository for Release Tracking Number 4-0026230
Final Immediate Response Action Completion Report
82 Bridge Street, Weymouth, MA;
Final Immediate Response Action Completion Report
90 Bridge Street, Weymouth, MA; and
Final Release Abatement Measure Completion Report
54-56 Bridge Street, Weymouth, MA

#### To Whom it May Concern:

At the request of local petitioners, the above Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) has been designated a Public Involvement Plan (PIP) Site pursuant to the Massachusetts Contingency Plan (specifically 310 CMR 40.1404). The Tufts Public Library has been established as a document repository for members of the community to access and review documents relevant to the RTN. Please accept the enclosed reports which are to be added to the repository and maintained for review by members of the community. The following reports are included with this letter:

- Immediate Response Action Completion Report, 82 Bridge Street, Weymouth MA, dated June 2021;
- Immediate Response Action Completion Report, 90 Bridge Street, Weymouth MA, dated June 2021; and
- Release Abatement Measure Completion Report 54-56 Bridge Street, Weymouth MA, dated June 2021.

The document repository will need to be maintained for approximately two years, and additional relevant documents will be added to the repository over that time. Please contact me at <a href="mailto:jdoherty@trccompanies.com">jdoherty@trccompanies.com</a> with any questions.

Sincerely,

**TRC Environmental Corporation** 



June 10, 2021

Weymouth Health Department Town of Weymouth 75 Middle Street Weymouth, MA 02189

RE: Public Repository for Release Tracking Number 4-0026230
Final Immediate Response Action Completion Report
82 Bridge Street, Weymouth, MA;
Final Immediate Response Action Completion Report
90 Bridge Street, Weymouth, MA; and
Final Release Abatement Measure Completion Report
54-56 Bridge Street, Weymouth, MA

To Whom it May Concern:

At the request of local petitioners, the above Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) has been designated a Public Involvement Plan (PIP) Site pursuant to the Massachusetts Contingency Plan (specifically 310 CMR 40.1404). The Weymouth Health Department has been established as a document repository for members of the community to access and review documents relevant to the RTN. Please accept the enclosed reports which are to be added to the repository and maintained for review by members of the community. The following reports are included with this letter:

- Immediate Response Action Completion Report, 82 Bridge Street, Weymouth MA, dated June 2021;
- Immediate Response Action Completion Report, 90 Bridge Street, Weymouth MA, dated June 2021; and
- Release Abatement Measure Completion Report 54-56 Bridge Street, Weymouth MA, dated June 2021.

The document repository will need to be maintained for approximately two years, and additional relevant documents will be added to the repository over that time. Please contact me at <a href="mailto:jdoherty@trccompanies.com">jdoherty@trccompanies.com</a> with any questions.

Sincerely,

**TRC Environmental Corporation** 

# APPENDIX F RESPONSE TO PUBLIC COMMENTS

#### 54-56 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0026230) 90 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028615) 82 BRIDGE STREET, WEYMOUTH, MA (RTN 4-0028676)

Response to Comments on Draft Immediate Response Action Completion Reports and Draft Release Abatement Measure Completion Report Received During Public Involvement Plan (PIP) Meeting or Public Comment Period

TRC Environmental Corporation (TRC), on behalf of Algonquin Gas Transmission, LLC (Algonquin), has prepared the following responses to comments received during either the PIP Meeting held on April 7, 2021 or during the public comment period regarding a Draft RAM Completion Report dated February 2021 respecting 54-56 Bridge Street (RTN 4-0026230), a Draft IRA Completion Report dated February 2021 respecting 54-56 Bridge Street, 82 Bridge Street and 90 Bridge Street (RTN 4-0028615), and another Draft IRA Completion Report dated February 2021 respecting 82 Bridge Street and 90 Bridge Street (RTN 4-0028676) (hereafter the "Response to Comments").

The Massachusetts Department of Environmental Protection (MassDEP) assigned RTN 4-26230 to address Oil and Hazardous Material (OHM) impacts associated with the filling of the 54-56 Bridge Street portion of the MCP Site also known as the "Compressor Station Property". RTN 4-26243 was assigned to address the presence of Light Non-Aqueous Phase Liquid (LNAPL) OHM at the Compressor Station Property. RTN 4-28186 was assigned to address OHM impacts associated with the filling of 82 Bridge Street and 90 Bridge Street also known as the "Kings Cove Conservation Area". RTN 4-28076 was assigned to the presence of arsenic in shallow soil on a portion of both the Compressor Station Property and the Kings Cove Conservation Area. Going forward, response actions at both the Compressor Station Property and the Kings Cove Conservation Area (together "the MCP Site") will be tracked under RTN 4-26230.

The Final Public Involvement Plan (January 2018) for the MCP Site provides for a 20-day public comment period which ended on May 4, 2021.

**Section I** of this Response to Comments summarizes the comments, concerns, and questions during the April 7, 2021 PIP Meeting and the responses to these comments. The comments (*in italics*) and corresponding responses (in regular font) are grouped into six categories numbered 1 to 6. Within each category, individual comments were assigned a letter. For example, in Category 3 (Concerns about Risk), the three comments were labeled Comments 3a through 3c. The response to each comment is summarized directly following the corresponding comment. The comments were captured and preserved using Zoom's Q&A function. Two TRC note takers listened to the meeting and compiled responses provided during the meeting. Additional information has been added to the responses, where warranted. In cases of similar comments, a response may reference a response to an earlier comment.

**Section II** of this Response to Comments addresses written comments received during the public comment period. Each comment received was assigned a number, and if

multiple comments were provided by one author, the individual comments were assigned letters. For example, Commenter 8 provided five comments which are designated Comments 8a through 8e in Section II. The response to each comment is provided directly following the comment.

Again, in cases of similar comments, a response may reference a response to an earlier comment.

In both Sections I and II, comments unrelated to the substance of the Draft RAM Completion Report or either of the Draft IRA Completion Reports are noted.

TRC has not identified the commenters in this Response to Comments. However, all commenters who provided contact information will receive this Response to Comments in accordance with the PIP.

A list of those individuals who signed into the April 7, 2021 PIP meeting is appended to this document as Attachment A.

- I Comments, Questions, and Concerns During the April 7, 2021 PIP Meeting
- 1. Concerns about TRC's and MassDEP's Activities Relating to the MCP Site
- 1a. I was told by Gerard Martin At (sic) MADEP that the RTN numbers would be consolidated in ONE PLACE. They are not. Why not? This is important for public access.

<u>Response</u>: The RTNs will be linked administratively when the final IRA Completion Reports are submitted to MassDEP.

1b. What other work have you down with Enbridge and the Town of Weymouth?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1c. TRC refers to its credentials, I am asking specifically jobs related to that relationship with Enbridge. Also other jobs with Town of Weymouth.

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1d. Has Maggie Suter worked on any aspect of this portion of the project as a consultant to ERM

Response: No.

1e. Does being paid by an entity with a vested interest in results negate the validity of an investigator's efforts and violate the scientific method?

Response: No.

1f. As the LP (sic) of record If Mr. Doherty is unaware when the fire/burner bricks were manufactured and/or used at the Edgar coal plant that are littered all over the King Cove, how is he comfortable that the site has been fully tested for asbestos?

<u>Response:</u> The LSP, under MassDEP supervision, has determined an appropriate plan for assessing potential asbestos containing materials (ACM) at the MCP Site.

As discussed in the draft RAM Completion Report, on June 26, 2019, Mr. David Gavin of TRC, a Massachusetts-licensed asbestos inspector, collected a total of eight samples from five different locations on the Compressor Station Property. No asbestos was identified in the samples.

Additional sampling of bricks unearthed during construction excavations at the Compressor Station Property was performed on February 15, 2020 by both Mr.

Eric Gomes of TRC, a Massachusetts-licensed asbestos inspector, and MassDEP. Four samples were collected during this event. No asbestos was identified in the samples collected by TRC or MassDEP.

As will be discussed further in the draft Phase II Comprehensive Site Assessment Report, Mr. Brian Burke and Mr. Mike McCarter of TRC, also both Massachusetts-licensed asbestos inspectors, implemented a comprehensive sampling plan to assess the potential for ACM in the Kings Cove Conservation Area. A total of 76 samples of potential ACM were collected from the Shore. No asbestos was identified in any of the samples collected.

These activities have comprehensively addressed the possibility of ACM at the MCP Site, including the Kings Cove Conservation Area.

1g. If we hired someone to excavate some dirt and test it and if we got a different result, would that be taken into consideration?

<u>Response:</u> Yes. Among other things, TRC would assess the training and certifications of the personnel who had collected and analyzed the samples as well as their methods.

1h. Were the inspectors hired independent or paid by the company?

Response: The asbestos inspectors were employed by TRC.

1i. Should a truly independent environmental group be hired to address the health and safety concerns of nearby residents?

<u>Response:</u> That isn't necessary. The MCP Site is being appropriately addressed by LSPs under the supervision of MassDEP.

#### 2. Questions and Comments Related to the Public Meeting

2a. How many people are on the meeting?

<u>Response</u>: Zoom identified a total of 48 unique viewers who attended some or all of the meeting.

2b. How many people are attending the meeting.

Response: See response to Comment I.2.a.

2c. How long is the presentation part?

Response: The presentation was approximately 20 minutes.

2d. Is there a list of attendees on this call?

Response: Yes, it is appended to this Response to Comments as Appendix A.

2e. Is it that much trouble to say the number?

Response: See response to Comment I.2.a.

2f. Will a video recording of this meeting be publicly available post meeting? If yes, where can it be accessed?

<u>Response:</u> Yes, a recording of the meeting is available at: <a href="https://www.trccompanies.com/insights/weymouth-pip/">https://www.trccompanies.com/insights/weymouth-pip/</a>

2g. Unable to see other people's questions until after they are answered. very poor format for information dissemination.

Response: Comment noted.

2h. Why can't I see any of the questions already received?

<u>Response:</u> The comments that were answered were viewable in the Q&A feature once they were answered.

2i. I want to object to your screening and offering commentary on whether a question is appropriate without us seeing it.

<u>Response:</u> No questions were screened. All of the questions submitted via the Q&A function were read and those pertaining to either the RAM Completion Report or either of the IRA Completion Reports were answered.

2j. I would like to agree with Margaret Bellafiore. This format... the inability to see other participants and questions submitted is not helpful. ZOOM format allows for that ability. I don't understand why it is not being made available to participants.

Response: Comment noted

2k. Can we see questions and vote on them? This was something we asked for feedback from the last meeting. It is hard to see who's on the meeting and what other questions are on webinar and what questions have been asked

Response: Comment noted.

2I. The intent of the Public Involvement Plan Program as defined by 310CMR40 is not being met by this zoom meeting. There is no reason the residents cannot be visible on the screen so participants can see each other as they ask questions. The

format TRC has selected is a barrier to public participation. Pre pandemic, we held these public meetings face to face at the Abigail Adams Middle School. The zoom format selected is not satisfactory. A pandemic solution using zoom did not have to exclude a "face to face" participation. I have asked for this to be changed and my request was rejected.

Response: Comment noted.

2m. Where is Jim Doherty?

<u>Response:</u> He went to get a glass of water while someone else was responding to a question.

2n. Will the August PIP meeting be held live and in person as the audience will be vaccinated by then?

<u>Response:</u> We hope that the next public meeting can be in person. We will confer with MassDEP respecting what is most appropriate as the next PIP meeting date approaches.

20. How would complaints about the process for this meeting be lodged?

<u>Response:</u> We welcome your feedback regarding all aspects of public involvement by telephone, email or mail.

2p. I concur with others who have noted that this format does not meet the requirements for a public meeting.

Response: Comment noted.

2q. When is the Phase 2 PIP Meeting that Jim said he would answer the questions about shellfish and other things? Next month? Months from now?

<u>Response:</u> The Draft Phase II Comprehensive Site Assessment Report is due on July 28, 2021. The public meeting regarding that document will occur after that date.

#### 3. Questions and Comments About Risk

3a. At one of the first PIP public meetings TRC reps admitted that the large areas of deep contamination were not included in RAM data that was used to determine there was 'no significant risk'. so therefore, assurances that the area was 'extensively investigated' rings hollow.

Response: See response to Comment I.1.i.

3b. If you're saying very little contaminants were found in your samples, can this guarantee that there is no direct threat to people utilizing the public park there? conservation land will continue to be open for the public to enjoy for decades to come?

Response: The Phase II Comprehensive Site Assessment will include an assessment of any risk to visitors to the Kings Cove Conservation Area. The Imminent Hazard Evaluations reported in the draft IRA Completion Reports established the absence of imminent hazard conditions.

3c. Is it a possibility that King Cove Park could be shut down to the public if it is determined cleanup is not possible to make it safe from contaminants?

Response: No.

#### 4. Questions and Comments Related to RAM Activities

4a. Can you clear up the confusion as to why the RAM plan referred to the coal ash as "historic fill" if Mr. Doherty agrees that it is not, and how it was determined that the coal ash was not a hazard?

Response: The RAM Plan did not conclude that coal ash at the Site was or was not "historic fill." What it said was that "The re-evaluation of the fill across the Property as Historic Fill is incomplete and ongoing. For this final RAM Plan, however, it is not relevant whether some or all of the fill at the site is or is not Historic Fill within the meaning of the MCP. That is because much of the fill to be encountered during construction is contaminated by arsenic or other constituents at levels higher than applicable RCS-1 soil reporting thresholds and must be handled as contaminated material even if it qualifies as Historic Fill." [page 14]

The risk to human health associated with construction of the Compressor Station was evaluated in the risk characterization included in the RAM Plan. That evaluation, in accordance with MassDEP guidance, concluded that the OHM in the coal ash did not present a risk to human health in connection with the construction of the Compressor Station. Human health risks associated with foreseeable uses of the MCP Site will be further evaluated in the Phase II Comprehensive Site Assessment.

4b. Could Mr. Doherty explain how Edgar Coal plant waste and LNAPL fit the definition of "historic fill," that includes the following: "may contain, but is not primarily composed of, construction and demolition debris, reworked soils, dredge spoils, coal, coal ash, wood ash or other solid waste material; was contaminated with metals, hydrocarbons, and/or polycyclic aromatic hydrocarbons.... does not contain oil or hazardous materials originating from operations or activities at the location..."

Response: TRC has not concluded that "plant waste and LNAPL fit the definition of 'historic fill' "

4c. Please explain how coal ash is not a hazardous waste when it is known to be high in arsenic content? How is it categorized it as "urban fill"?

Response: TRC does not agree that coal ash is "known to be high in arsenic content." The MCP requires the assessment of all of the OHM present at the MCP Site, including arsenic. However, not all hazardous substances are "hazardous waste" which is regulated under other federal or state laws.

4d. Isn't ash a hazardous waste and not a "fill" material

Response: Please see the response to Comment I.4.c.

4e. The ash at the site was incorrectly categorized as "historic fill" by TRC. It does not fit the legal definition of "historic fill," as it is industrial waste from the Edgar coal plant. Therefore, it was inappropriately used as fill and continues to endanger the public.

Response: Please see the responses to Comments I.4.a and c.

4f. My question about the coal ash should not be answered "leave it at that"!!! Your presenter said the coal ash was not hazardous on this meeting. It is fair for me to ask for an explanation!!! And Mr. Doherty said it was "urban fill." EXPLAIN

Response: Please see the responses to Comments I.4.a and c.

4g. I noticed a black smear on one of the slides showing the bottom of the excavation, what caused that?

<u>Response:</u> It is not a "smear". What you are seeing is darker fill beneath lighter fill.

4h. During the construction phase, there was a very large, square hole in the corner of the property closest to the MWRA access road and the public access road. It had a very strong smell of petroleum or petroleum distillates. And yet no LNAPL was detected during construction? How is that possible?

<u>Response:</u> None of the "holes" excavated on the Compressor Station Property were deep enough to encounter the LNAPL present at greater depths below the ground surface.

4i. Please explain how you wouldn't have the name of TRC's own asbestos inspector for this PIP meeting?

Response: Please see the response to Comment I.1.f.

4j. Was any of the topsoil that was removed from the north parcel and used as daily cover in Fitchburg tested for pollutants/contaminants?

<u>Response:</u> Yes, material removed from the MCP Site was pre-characterized for the presence of OHM prior to being transported elsewhere. The results of that pre-characterization are summarized in Table 1 of the draft RAM Completion Report.

4k. I'm also curious to know how it is that soil that was required to be removed from the North Parcel was usable in Fitchburg as "daily cover." What is daily cover?

<u>Response:</u> Daily cover is material used to cover solid waste at a landfill at the end of each day of operation. It is not the same as the cap that is placed on a landfill that has reached its capacity.

4l. Comment: It is unconscionable that this soil was used as daily cover in Fitchburg, an Environmental Justice community, only to be sunk into a landfill that will ultimately be burned as "sourgas" in the future. Any toxins in that soil will go into this gas. Kicking the can down the road does nothing to protect vulnerable populations in the future.

<u>Response:</u> MassDEP regulates what can be used as daily cover to prevent what you suggest.

4m. Asbestos testing was only performed prior to RAM plan? So, nothing dug up during construction was asbestos tested?

Response: Please see the response to Comment I.1.f.

4n. Were you able to determine which decade the 8 bricks came from?

Response: We made no attempt to determine the age of the bricks which is irrelevant to whether or not they contained asbestos. Only analysis can determine the presence or absence of asbestos in any material, including the bricks used to create the Site.

4o. Based on the total number of bricks and the one location sampled, was 8 bricks from the shoreline a representative sample

<u>Response:</u> No, and many more than eight bricks were analyzed. Please see the response to Comment I.1.f.

4p. Specifically, how was it determined there were no burner bricks in the area?

Response: Please see the response to Comment I.1.f.

4q. How were the 8 bricks selected to be tested for asbestos from the approx. 40 bricks found at or near the surface of the site. Who selected the bricks to be tested for asbestos?

Response: Please see the response to Comment I.1.f.

4r. The MADEP document "Top Ten Most Common MCP Risk Characterization Problems" lists #2 Analytic data has not been reviewed prior to use in the risk assessment". A number of questions centered around the composition of fire brick. Having done the research on this matter and having worked on the bricks in the Navy, I would like to know if you have factored into your data the fact that from the 1800s to the 1970s, ALL FIRE BRICK contained asbestos. After the 1970s, asbestos was removed from the bricks. Most likely the bricks that were on top and tested

<u>Response:</u> Comment noted. However, the substance of the comment is inconsistent with the results of the evaluations discussed in the response to Comment I.1.f.

4s. Would not a licensed professional asbestos inspector looking for asbestos bricks at the compressor site be able to know whether to test or not test a yellow kiln brick for asbestos from a visual inspection since asbestos bricks tend to be more crumbly with color that can be scratched off?

Response: Please see the response to Comment I.1.f.

4t. Would not a licensed professional asbestos inspector looking for asbestos bricks at the compressor site be able to know whether to test or not test a kiln brick found at the site by picking it up since asbestos kiln bricks, that can be composed of 90% asbestos, are noticeably lighter than non-asbestos bricks.

Response: Please see the response to Comment I.1.f.

4u. Did you randomly sample for asbestos or did you ignore that firebricks were the source of friable asbestos, thus violating OSHA requirements.

Response: Please see the response to Comment I.1.f.

4v. By visiting the Baker Library at Harvard to go through the archives of the Edgar Coal station, I saw evidence of numerous times that used firebricks were removed from the kilns and discarded at the site. They were purchased from the O'Connor company that used asbestos in the making of the bricks during those years. Therefore, it is not hypothetical that asbestos was disposed of on the site.

Response: Please see the response to Comment I.1.f.

4w. Is it correct to say that the contention, as stated in the last PIP, that asbestos brick have not been found at the site, a finding that has allowed for the excavation of many tons of contaminated material without safety protocols for the safe handling of asbestos, relied on the asbestos testing data from only eight bricks?

Response: Please see the response to Comment I.1.f.

4x. More specifically re 8 tested bricks: Were you able to determine the year each of the bricks were manufactured and used at that Edgar coal plant?

Response: Please see the response to Comment I.4.n.

4y. Who is this licensed professional?

Response: Please see the response to Comment I.1.f.

4z. Why isn't the asbestos professional at this meeting?

<u>Response:</u> An asbestos inspector will be available to respond to the public's questions/comments at the PIP meeting that will be scheduled after TRC submits the draft Phase II Comprehensive Site Assessment Report for the Site.

4aa. Did the quick project timeline effect the depth of the cleanup?

Response: No.

#### 5. Questions and Comments Related to the Draft Immediate Response Actions

5a. Was it hexavalent chromium?

Response: The four sediment samples obtained from locations surrounding the SL1-08 location where chromium was detected were analyzed for the presence of hexavalent chromium. Hexavalent chromium was not detected in three of those four samples. Hexavalent chromium was reported in the fourth sample but at a concentration that was approximately 10% of the total chromium concentration. The December 28, 2020 supplemental sediment sample chromium speciation results in the vicinity of sample location SL1-08 indicated that less than ten-percent of total chromium exists in the hexavalent form.

5b. Do you have the figures on how much trivalent and how much hexavalent chromium was found?

Response: Please see the response to Comment I.5.a.

5c. What industrial activity caused the high levels of chromium and arsenic

<u>Response:</u> We don't know the source of the chromium detected at sediment sampling location SL1-08, but the IRA confirmed that this detection is not representative of Site conditions. It is suspected that elevated levels of arsenic at the Site are related to the presence of coal ash.

Further, the suggestion that the concentration of chromium in sediment is "high" is inconsistent with the fact that the average chromium and hexavalent chromium concentrations in the sampled sediments were below the background concentration of chromium in "Natural" soil published by MassDEP in its guidance document *Historic Fill/Anthropogenic Background* Public Comment Draft dated July 16, 2016.

5d. What was the original source of Hexavalent chromium?

Response: Please see the response to Comment I.5.c.

5e. Why would the hexavalent chromium be present and could it exist at higher concentrations in areas not sampled?

<u>Response:</u> 394 soil and sediment samples were collected at the MCP Site and analyzed for total chromium. Only one sediment sample (SL1-08) exceeded the MCP Method 1 standard for total chromium.

5f. If you don't know the source of the hex chrome and its distribution on the site, then have you properly completed IRA requirements?

Response: Please see the response to Comments I.5.a., c. and e.

5g. Please say I don't know if you have not identified the source of hexavalent chromium instead of simply discussing concentrations or producing some wild theories about chrome wire. Could the power plant or shipyard be doing metal plating and thus be the source of hex chrome waste? If you don't know the source or the disposal methods then you may not be able to identify any hot spots

Response: Please see the response to Comment I.5.a. c., and e.

5h. You recognize that after the compressor Building was completed, you spread 1 foot of topsoil to allow grass to grow. The MWRA did the same to cover the 60" pipe on the walkway. How can you anticipate finding anything when your criteria of 0-0.5 ft testing? You are testing topsoil trucked in from the outside.

<u>Response:</u> Additional deeper soil sampling was performed before and after the IRA investigations presented in these documents. The results of all of the soil sampling at the MCP Site will be presented in the draft Phase II Comprehensive Site Assessment.

5i. Was the top foot of soil that was tested, previously put there as 'new top soil' in previous work at the compressor site? possibly during construction of the MWRA facility or the development of the Kim

Response: Please see the response to Comment I.5.h.

5j. Defining the concentration gradient is not determining what caused or what it is attributable to

Response: Comment noted.

5k. If we know the toxic waste was from past use vs current use why would you use recently applied topsoil to evaluate past toxic waste danger?

Response: Please see the response to Comment I.5.h.

5l. 40.0321 (2)(b) states "hazardous material concentration as ug/g why are your results noted in MG/KG??

Response: Comment noted.

5m. Why did you not test for asbestos on the beach?

Response: Please see the response to Comment I.1.f.

5n. We have requested that the fence surrounding the park be removed. You removed a portion to bring trucks into the park. You then put it back up. Can you remove the fence?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

5o. Does the level of asbestos exceed any public health standards in which case shouldn't it be reported before a phase 2 is complete?

Response: Please see the response to Comment I.1.f.

# 6. Questions Unrelated to the MCP Submittals On Which Public Comment Was Requested.

6a. Mr. Porter, have you been to the site at any point before, during or after construction? Have you seen it for yourself?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6b. Mr. Porter, have you seen the site for yourself?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6c. Did TRC test any of the numerous clinkers that are seen along the coast line at all for contaminants and asbestos?

<u>Response:</u> Although this question is unrelated to the RAM Completion Report or either of the two IRA Completion Reports, the composition of representative samples of the clinkers in the Kings Cove Conservation Area was analyzed. The results of those analyses will be presented in the Phase II Comprehensive Site Assessment Report.

6d. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the cleanup, if at all?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6e. How many bricks from the beach were tested for asbestos?

Response: Please see the response to Comment I.1.f.

6f. If Algonquin/Enbridge/Calpine find that the cost of clean up is too costly, who will pay for the work?

<u>Response:</u> Although this question does not relate to the RAM Completion Report or either of the two IRA Completion Reports, Algonquin is responsible for achieving a condition of "No Significant Risk" with respect to releases of OHM at the Site.

6g. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the clean up, if at all?

Response: Please see the response to Comment I.6.d.

6h. Did the Phase 1 analyze the activities of the entire length of time for the coal fired power plant and identify where all waste materials were disposed?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6i. Did the phase 1 identify all persons or companies who may have disposed of materials on the site, such as the general dynamics shipyard or other nearby businesses? This would have required questioning all entities who operated on the site and employees who supervised the site.

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6j. Shouldn't the phase 1 analyze the entire operation time of the power plant because it owned the property and was the only company that disposed of material on the site?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6k. A phase 1 report should have influenced any IRA or RAM

Response: Comment noted.

6l. In the permanent solution, I request that Algonquin/Calpine do a restoration of the beach by clearing the large clinkers and bricks or covering them up to make the beach easier to walk on and prevent further erosion of coal ash, clinkers and bricks from the bank. Making the beach more walkable for recreational users was something also expressed at a previous meeting of the Conservation Commission by the late Chair of the Commission Tom Tanner who tragically died from complications of COVID-19. Our Chapter 91 rights of navigation, fishing and fowling in the intertidal zone of King's Cove shall not be rescinded or restricted

Response: Although this question does not relate to the RAM Completion Report or either of the two IRA Completion Reports, Algonquin is responsible for achieving a condition of "No Significant Risk" with respect to releases of OHM at the MCP Site. Any actions Algonquin takes in this regard will comply with applicable laws and regulations. Algonquin acknowledges the tragic passing of Conservation Commissioner Tanner and his service to the Town.

6m. Have you done analysis and explored exposure to receptor pathways through the ingestion of shellfish in the cove? If not will you commit to do this in Phase 2?

Response: Although this question is unrelated to the RAM Completion Report or either of the two IRA Completion Reports, Algonquin will evaluate the potential human health risks related to the potential consumption of shellfish from that area of Kings Cove within the MCP Site in the Phase II Comprehensive Site Assessment.

6n. Can the arsenic and chromium leach into the seawater in kings cove, then bioaccumulate in mollusks

Response: Although this question is unrelated to the RAM Completion Report or either of the two IRA Completion Reports, TRC will evaluate the human health and ecological risks related to OHM at the MCP Site in the Phase II Comprehensive Site Assessment.

60. Also you can put up a sign "closed to recreational shellfishing" up tomorrow. It is a fact the area is closed to recreational shellfishing. It would help keep people safe. Especially if signs have multiple languages. Not every resident knows the area is closed to shellfishing. This is a safety issue. Please be good neighbors and fix the erosion and put up signage.

<u>Response:</u> Although this question does not relate to the RAM Completion Report or either of the two IRA Completion Reports, Algonquin is responsible for achieving a condition of "No Significant Risk" with respect to releases of OHM at the MCP Site.

6p. What is the status on the public access to the West Waterfront Area of the North Parcel?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6q. How do you morally justify participating in a process that placed a toxic, polluting, potentially explosive piece of industrial infrastructure in the middle of residential

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6r. How can the compressor come on line with so many issues of safety and contamination left to be answered until phase 2?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6s. I second that question. Would you be comfortable with this compressor station in your back yard? If not, how can you participate in this?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

6t. Why did you characterize the opposition group FRRACS (mispronounced by you) as having "a tendency to try to go after contractors"? What do you mean by "go after"? Please elaborate with specifics because the term "go after" implies a victimization. Do you feel that contractors are the victims here?

- <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 6u. I didn't realize that "enter" would make my previous comment be sent. The second/follow up question is "Could you guarantee the conservation land will continue to be open for the public to enjoy for decades to come?"
  - <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 6v. COMMENT: You will have to understand that we do not trust TRC. TRC has been lying about the site since they prepared the FERC EA Resource Reports.
  - <u>Response:</u> Comment noted. Algonquin and TRC respectfully but emphatically reject this assertion.
- 6w. Before phase 2 will you employ interim erosion control measures to prevent more erosion of clinkers and burner bricks onto the beach? More trees, bricks, ash and clinkers are falling in.
  - <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 6x. The erosion is a safety issue. Please fix the erosion of the beach before phase 2. It keeps getting worse. Just because it is out of scope of work of RAM etc. does not mean it is not a concern for residents and visitors of the park.
  - <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

#### II. Email Comments and Questions

1a. In reading the Draft report for King's Cove Park you mention receptor pathways were "recreational visitors could potentially be exposed to surficial sediment primarily through incidental ingestion (i.e., a result of hand-to-mouth activity) and dermal contact." It is assuming people visit once a week, however residents visit the park and beach more frequently.

Response: The Imminent Hazard Evaluation that is part of the IRA Completion Report for sediment assumed that people contact sediment (material below mean high water) for 30 days per year. Contact with sediment and surface water are likely to occur only during the warmest months of the year and would occur half of the times the resident visits the shore and contacts soil above mean high water (assumed to occur 60 days per year). People visiting the upland portion of the conservation area are assumed to contact soil 90 days per year.

1b. Many shellfish are present at King's Cove Park. There are clams, mussels, oysters and quahogs. Attached are photos of shellfish in the Cove including a live oyster growing on a clinker. (17, 24, and 26 also talk about shellfish)

Recreational shellfishing is generally prohibited in the Fore River Basin because of bacteria, however King's Cove is Conditionally Restricted (See attached document) Conditionally Restricted means: "Contains a limited degree of contamination at all times. Subject to intermittent pollution events and may close due poor water quality from rainfall events or season. When open, only commercial harvesting of soft shell clams for depuration is allowed."

I request that TRC speak with Massachusetts Division of Marine Fisheries to look into putting an additional advisory closure for shellfishing in the west side of King's Cove along the Park because of the heavy metal releases. If conditions of water quality improve with respect to bacteria, the area could potentially be opened to commercial then recreational shellfishing. An additional advisory of heavy metals should be put in place.

Response: Please refer to the response to Comment I.6.m.

1c. Have you done analysis and explored exposure to receptor pathways through the ingestion of shellfish in the cove?

Response: Please see response to Comment I.6.m.

1d. Have you tested shellfish in the cove for different heavy metals and other toxins?

Response: Please see response to Comment I.6.m.

1e. If it has not been done I request that you test shellfish in the cove and explore exposure receptor pathways through ingestion of shellfish.

Response: Please see response to Comment I.6.m.

1f. I also request that you test the soils in the clam mudflats as you have not done any ground penetrating radar or soil testing around the flats as they are exposed at low tides.

Response: Please see response to Comment I.6.m.

1g. As the area is currently closed to recreational shellfishing because of the bacteria and could also have additional risks because of contaminated sediments, I request that TRC/Algonquin/Calpine place signs on the beach stating "Closed to shellfishing" with pictures of shellfish crossed out in multiple languages including Chinese, English, Spanish and Vietnamese. I included images of some examples

attached. I suspect that knowledge that the area is closed to shellfishing may not be universally known.

Response: Please see response to Comment I.6.m.

1h. Is there any concern of receptor pathway exposure from recreational fishing on King's Cove Beach?

<u>Response:</u> No. The shallow waters of the Kings Cove Conservation Area are not good habitat for fish that one might fish for. In addition, surface water analytical results do not indicate a risk to fish.

The beach has been open to recreational fishing and should remain open to recreational fishing and kayak/canoe launching and should be in the future. If recreational fishing and kayak/canoe launching, walking on the beach are not safe, then it should be made safe in the remediation process final solution for the property. Our Chapter 91 rights of navigation, fishing and fowling in the intertidal zone of King's Cove shall not be rescinded or restricted. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats and launch kayaks and canoes.

I attached photos of recreational kayaking in the King's Cove.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1i. Has there been testing of sediments on the beach and in the bricks of the beach for asbestos?

Response: Please see the response to Comment I.1.f.

1j If there has not been testing for asbestos why? Residents have been concerned about this.

Response: Please see the response to Comment I.1.f.

1k. If TRC and MassDEP are not concerned about the presence of asbestos, why not rule it out by taking samples of the bricks and sediments on the beach and in the park?

Response: Please see the response to Comment I.1.f.

11. Have you tested what heavy metals are in clinkers themselves? Residents in the past before knowing what they were, including children have collected clinkers and brought them home to rock collections thinking they were odd rocks or lava rocks. I

myself as a child found one on the Boston Harbor Islands and brought it home unknowing of toxins.

Response: Please refer to the response to Comment I.6.c.

Erosion of Clinker and Coal Ash Filled Bank

1m. Can you please provide temporary erosion control measures to stop further erosion of coal ash, clinkers and burner bricks onto King's Cove Beach? The erosion has gotten significantly worse and residents have been requesting erosion control measures for a long time. More trees and shrubs from the park have fallen onto the beach. We appreciate that caution tape has been put up in the park, however more must be done in the interim to prevent more coal ash and clinkers to erode.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1n. Can all answers to questions from the PIP meeting be sent to the registrants of the PIP meeting as well as put in the response documents? It would be helpful to have peoples questions answered to their emails together as well as in the documents to follow. It can be hard for folks to look through the documents to find answers.

Response: This Response to Comments will be an appendix to the RAM Completion Report and the two IRA Completion Reports. A hyperlink to download the Response to Comments will also be emailed to everyone on the PIP mailing list.

1o. Can the PIP meeting show all the questions submitted and can people vote on them? I have seen this done in other zoom meetings in the Q&A function.

Response: Please see the response to Comment I.2.i.

1p. If Algonquin/Enbridge/Calpine find that the cost of clean up is too costly, who will pay for the work?

Response: Please see the response to Comment I.6.f.

1q. It is my understanding that Algonquin/Enbridge is taking this up on their own accord, however the land is owned by Calpine. I am concerned that this web of responsible parties may cause a muddying of responsibilities.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

- 1r. Algonquin and Calpine have dropped the ball and are not plowing Lovell's Grove parking lot and have plowed King's Cove parking lot intermittently. Similar issues have arisen in maintenance and emptying trash receptacles in both parks.
  - <u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 1s. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the clean up, if at all?

Response: Please see the response to Comment I.6.d.

1t. It is my understanding they are off the hook because they are not the property owner anymore and it is not declared a superfund site.

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1u. In the permanent solution, I request that Algonquin/Calpine do a restoration of the beach by clearing the large clinkers and bricks or covering them up to make the beach easier to walk on and prevent further erosion of coal ash, clinkers and bricks from the bank. Making the beach more walkable for recreational users was something also expressed at a previous meeting of the Conservation Commission by the late Chair of the Commission Tom Tanner who tragically died from complications of COVID-19.

Response: Please see the response to comment I.6.I.

1v. If you walk around the other parts of the cove, it is not covered in coal ash and clinkers and it is easier to walk on. The beach must be restored to look like other parts of the cove.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1w. Different measures should be explored as alternatives including but not limited to beach nourishment, removal of clinkers offsite, incorporating clinkers back into a restored bank behind erosion controls, nature based solutions for erosion control and more armoring of the bank. I prefer a more nature based solution for the erosion of the clinkers and the bank but would like to see different feasibilities for each.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

1x. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats and launch kayaks and canoes.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

TRC Draft Immediate Response Action (IRA) Completion Report RTN – 4-28676

2a. In the introduction of Report 4-28676, it is noted that soil samples were collected from a depth of "less than twelve inches below the ground surface". It is also noted that the site is known as the Kings Cove Conservation Area. Additionally, the site is also the location of the MWRA 60" sewage pipeline ROW going to the Braintree/ Weymouth regional pump station. The site also is the location of all utilities serving the pump station. As with all such pipeline ROWs, the material at the top of the site is covered with up to a foot of topsoil utilized to hold freshly planted grass and shrubs. Thus, any soil samples taken at less than a depth of one foot, would only consist of soil trucked in for coverage. Prior samples taken on the compressor site, show contamination up to 20' below ground level. The determination of the level of contamination exposure is based on its impact on background levels. 310 CMR 40.006 defines "background" as" those levels of oil and hazardous material that would exist in the absence of the disposal site of concern".

Response: Please see the response to Comment I.5.h.

2b. In section 2.1 - Release Description, the evaluation of "imminent hazard" in this section, appears to selectively choose the criteria that will yield the chosen result (results-oriented testing). 310 CMR 40.903 is entitled "scope of the risk characterization and supporting documentation". This document does not define the risk scope of the area, nor supplies supporting documentation beyond laboratory analysis numbers.

<u>Response:</u> The Imminent Hazard Evaluation was included in its entirety as Appendix C of the IRA Completion Report.

2c. In Section 2.2 - Site Conditions, the description of the noted site is limited. 310 CMR 40.0904 states "the scope and level of effort of the risk characterization shall depend on the complexity of the disposal site and response action being performed. The risk characterization shall be of sufficient scope and adequately documented to demonstrate that the Response Action Performance Standard (RAPS) has been met in accordance with 310 CMR 40.0191. This is obviously not the case with this document.

<u>Response:</u> 310 CMR 40.0904 is not relevant to the RAM Completion Report or either of the two IRA Completion Reports. A risk characterization in accordance with that regulation will be part of the Phase II Comprehensive Site Assessment.

2d. The level and quality of the Draft Report do not meet the standards established under 310 CMR 40.900. This is confirmed in a comparison with the Mass DEP document entitled "Top Ten Most MCP Risk Characterization Problems". You could find all of them in the TRC report.

Response: Please see the response to Comment II.2.c.

TRC Draft Immediate Action Completion Report – RTN 4-28615

2e. The Introduction notes that "sediment samples were obtained at a depth of 0-0.5 feet along 3 sample lines oriented parallel to the shoreline to assess human and ecological exposure". The Kings Cove is impacted by sediment being carried in with Fore/ Town Rivers and Boston Harbor waters. A sample depth of 0-0.5 feet, may only consist of sediment from other Boston Harbor locations.

Response: To meet the requirements of an Imminent Hazard Evaluation, material at ground surface or within 12 inches of ground surface must be tested and evaluated. Deeper sediments have also been tested. The evaluation of the deeper sediments will be contained in the comprehensive risk characterization for the Phase II CSA Report.

2f. The second paragraph in section 2.0 - Release Description, states that the applicable 2-hour notification threshold for "arsenic is 40 mg/kg and for chromium it is 200 mg/kg" as specified in 310 CMR 40.321. The chart in 310 CMR 40.321(2)(b) states the "concentration" in ug/g not mg/kg.

Response: See response to comment I.5.I.

# Testing for toxins

2g. Has there been testing of sediments on the beach and in the bricks of the beach for asbestos? If there has not been testing for asbestos, why? Residents have been concerned about this. If TRC and MassDEP are not concerned about the presence of asbestos, why not rule it out by taking samples of the bricks and sediments on the beach and in the park?

Response: Please see the response to Comment I.1.f.

2h. Have clinkers that are present on Kings Cove been tested for heavy metals? Residents in the past before knowing what they were, including children, have collected clinkers and brought them home to rock collections thinking they were odd rocks or lava rocks.

Response: Please see the response to Comment I.6.c

2i Have you tested shellfish in the cove for different heavy metals and other toxins? If it has not been done, I request that you test shellfish in the cove and explore exposure receptor pathways through ingestion of shellfish.

Response: Please refer to the response to Comment I.6.m.

#### Erosion control

2j. Please provide temporary erosion control measures to stop further erosion of coal ash, clinkers and burner bricks onto King's Cove Beach. The erosion has gotten significantly worse, and residents have been requesting erosion control measures for a long time. More trees and shrubs from the park have fallen onto the beach. We appreciate that caution tape has been put up in the park, however, more must be done in the interim to prevent more erosion of coal ash and clinkers.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

2k. If Algonquin/Enbridge/Calpine find that the cost of clean-up is too costly, who will pay for the work?

Response: Please see the response to Comment I.6.f.

2I. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the clean-up, if at all?

Response: Please see the response to Comment I.6.d.

2m. In the permanent solution, I request that Algonquin/Calpine do a restoration of the beach by clearing the large clinkers and bricks or covering them up to make the beach easier to walk on and prevent further erosion of coal ash, clinkers and bricks from the bank.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

2m. Different measures should be explored as alternatives including, but not limited to, beach nourishment, removal of clinkers offsite, incorporating clinkers back into a restored bank behind erosion controls, nature-based solutions for erosion control and more armoring of the bank.

- <u>Response</u>: This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 2n. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats, and launch kayaks and canoes.
  - <u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 2o. I request you test shellfish in King's Cove for the presence of toxin as the area is currently closed to recreational shell fishing because of the bacteria and could also have additional risks because of contaminated sediments. This is especially important as the area is conditionally restricted for commercial shellfish harvesting
  - Response: Please refer to the response to Comment I.6.m.
- 2p. Conditionally Restricted means: "Contains a limited degree of contamination at all times. Subject to intermittent pollution events and may close due poor water quality from rainfall events or season. When open, only commercial harvesting of soft shell clams for depuration is allowed."
  - Response: Please refer to the response to Comment I.6.m.
- 2q. I request that TRC/Algonquin/Calpine place signs on the beach stating "Closed to shell fishing" with pictures of shellfish crossed out in multiple languages including Chinese, English, Spanish and Vietnamese.
  - Response: Please refer to the response to Comment I.6.m.
- 2r. I request that the area is closed to shell fishing because of bacteria may not be widely known.
  - Response: Please refer to the response to Comment I.6.m.
- 3a. As a resident in Quincy less than two miles away from Kings Cove in Weymouth I have great concern over the development in this area. Past history has shown us the contaminants. Soil samples from Report 4-28676 have shown hazardous materials in depth. Residents I know who live closer and some that fish in the area have even more concern for their health and safety. We should be protecting and helping our land more now that we are able to have this awareness and see the erosion, pollution, and hard caused from harmful development. The Compressor Station shows increased harm and pointless

increase of toxins for the families and businesses who reside in Weymouth, Hingham, Quincy, Braintree, and beyond.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4a. My name is Inbal Goldstein and I live in the neighborhood of North Weymouth, Massachusetts along with my wife and beautiful 12 year old daughter. I live within less than a mile away from the toxic Weymouth Compressor site and my wife's parents live in the same neighborhood in a house that is less than half a mile away from the site. You and your company TRC work for and represent Enbridge, the deeply irresponsible and careless company that has built this compressor station in spite of its flawed location on highly toxic ground and in the middle of a residential neighborhood full of children, and in spite of the deep opposition of all the people in this area and of all the politicians (Republicans, Democrats, and Independents) who represent the South Shore....and now this haphazardly built facility that your company gets paid to represent has already had three emergency Gas release accidents in less than 8 months before it has even started to operate. Do you feel good about the money you make from Enbridge?

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4b. Mr. Doherty, after you met us (the citizens of Weymouth and the South Shore) at the October 10<sup>th,</sup> 2019 public meeting at the Abigail Adams Middle School in Weymouth, I believe that you understand well how opposed we are here to this horribly dangerous, and toxic Compressor Station by Enbridge (who you represent), so this badly contaminated soil issue is just one of many reasons why we will never let this facility operate in our backyard, just as I'm sure you would never want such a toxic and dangerous facility to ever exist and operate in your backyard and especially if your backyard was already highly contaminated with many many years of toxic Industrial waste. Just think of your family, and think of your beautiful children, and you'll fully understand and appreciate why we fight for our lives here.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4c. I would like you to know anything less than 100% guarantee of safety from this contaminated soil means that there is a chance that my family (including myself) could be exposed to arsenic, coal ash, asbestos, and other highly toxic, and carcinogenic materials that could harm and damage our health, and expose us to an increased risk of cancer and other life endangering diseases like emphysema, asthma, etc. ARE YOU WILLING TO MAKE A PERSONAL PROMISE THAT THIS WILL NOT HAPPEN UNDER THE TRC IMMEDIATE RESPONSE

# ACTION PLANS?? Would you be ok if your family was exposed to these toxic contaminants near your house?

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4d. I have some questions and comments for you related to the Draft Release Abatement Measure Completion Report, 54-56 Bridge Street (Release Tracking Number 4-26230), and also related to the Draft Immediate Response Action Completion Report, 90 Bridge Street, Weymouth MA (Release Tracking Number 4-28615), and also related to the Draft Immediate Response Action Completion Report, 82 Bridge Street, Weymouth MA. (Release Tracking Number 4-28676). I ask that you please personally send me replies to all these questions, as they pertain to the health and safety of my dear family:

Comments and questions relating to testing for toxins:

4e. Has there been testing of sediments on the beach and in the bricks of the beach for asbestos? If there has not been testing for asbestos, why? Residents have been concerned about this. If TRC and MassDEP are not concerned about the presence of asbestos, why not rule it out by taking samples of the bricks and sediments on the beach and in the park?

Response: Please see the response to Comment I.1.f.

4f. Have clinkers that are present on Kings Cove been tested for heavy metals? Residents in the past before knowing what they were, including children, have collected clinkers and brought them home to rock collections thinking they were odd rocks or lava rocks.

Response: Please see the response to Comment I.6.c

4g. Have you tested shellfish in the cove for different heavy metals and other toxins? If it has not been done, I request that you test shellfish in the cove and explore exposure receptor pathways through ingestion of shellfish.

Response: Please see response to Comment I.6.m.

4h. Please provide temporary erosion control measures to stop further erosion of coal ash, clinkers and burner bricks onto King's Cove Beach. The erosion has gotten significantly worse and residents have been requesting erosion control measures for a long time. More trees and shrubs from the park have fallen onto the beach. We appreciate that caution tape has been put up in the park, however more must be done in the interim to prevent more coal ash and clinkers to erode.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4i. Comments and questions relating to Cleanup Responsibility: If Algonquin/Enbridge/Calpine find that the cost of clean up is too costly, who will pay for the work?

Response: Please see the response to Comment I.6.f.

4j. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the clean up, if at all?

Response: Please see the response to Comment I.6.d.

4k. Restoration- In the permanent solution, I request that Algonquin/Calpine do a restoration of the beach by clearing the large clinkers and bricks or covering them up to make the beach easier to walk on and prevent further erosion of coal ash, clinkers and bricks from the bank.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4L. Different measures should be explored as alternatives including, but not limited to, beach nourishment, removal of clinkers offsite, incorporating clinkers back into a restored bank behind erosion controls, nature-based solutions for erosion control and more armoring of the bank.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided

4m. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats, and launch kayaks and canoes. I frequently walk on the beach myself.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

4n. I request you test shellfish in King's Cove for the presence of toxins

Response: Please see response to Comment I.6.m.

4o. As the area is currently closed to recreational shellfishing because of the bacteria and could also have additional risks because of contaminated sediments

Response: Please see response to Comment I.6.m.

4p. This is especially important as the area is conditionally restricted for commercial shellfish harvesting

Response: Please see response to Comment I.6.m.

4q. Conditionally Restricted means: "Contains a limited degree of contamination at all times. Subject to intermittent pollution events and may close due poor water quality from rainfall events or season. When open, only commercial harvesting of soft shell clams for depuration is allowed."

Response: Comment noted.

4r. I request that TRC/Algonquin/Calpine place signs on the beach stating "Closed to shellfishing" with pictures of shellfish crossed out in multiple languages including Chinese, English, Spanish and Vietnamese.

Response: Please see response to Comment I.6.m.

4s. Knowledge that the area is closed to shellfishing because of bacteria may not be universally known.

Response: Please see response to Comment I.6.m.

4t. In the introduction of Report 4-28676, it is noted that soil samples were collected from a depth of "less than twelve inches below the ground surface". It is also noted that the site is known as the Kings Cove Conservation Area. Additionally, the site is also the location of the MWRA 60" sewage pipeline ROW going to the Braintree/ Weymouth regional pump station. The site also is the location of all utilities serving the pump station. As with all such pipeline ROWs, the material at the top of the site is covered with up to a foot of topsoil utilized to hold freshly planted grass and shrubs. Thus, any soil samples taken at less than a depth of one foot, would only consist of soil trucked in for coverage. Prior samples taken on the compressor site, show contamination up to 20' below ground level. The determination of the level of contamination exposure is based on its impact on background levels. 310 CMR 40.006 defines "background" as" those levels of oil and hazardous material that would exist in the absence of the disposal site of concern".

Response: Please see the response to Comment I.5.h.

4u. In section 2.1 - Release Description, the evaluation of "imminent hazard" in this section, appears to selectively choose the criteria that will yield the chosen result (results oriented testing). 310 CMR 40.903 is entitled "scope of the risk characterization and supporting documentation". This document does not define

the risk scope of the area, nor supplies supporting documentation beyond laboratory analysis numbers.

Response: Please refer to the response to Comment II.2.b.

4v. In Section 2.2 - Site Conditions, the description of the noted site is limited. 310 CMR 40.0904 states "the scope and level of effort of the risk characterization shall depend on the complexity of the disposal site and response action being performed. The risk characterization shall be of sufficient scope and adequately documented to demonstrate that the Response Action Performance Standard (RAPS) has been met in accordance with 310 CMR 40.0191. This is obviously not the case with this document.

Response: Please refer to the response to Comment II.2.c.

4w. The level and quality of the Draft Report do not meet the standards established under 310 CMR 40.900. This is confirmed in a comparison with the Mass DEP document entitled "Top Ten Most MCP Risk Characterization Problems". You could find all of them in the TRC report.

Response: Please see the response to Comment II.2.c.

4x. The Introduction notes that "sediment samples were obtained at a depth of 0-0.5 feet along 3 sample lines oriented parallel to the shoreline to assess human and ecological exposure". The Kings Cove is impacted by sediment being carried in with Fore/ Town Rivers and Boston Harbor waters. A sample depth of 0-0.5 feet, may only consist of sediment from other Boston Harbor locations.

Response: Please refer to the response to Comment II.2.e.

4y. The second paragraph in section 2.0 - Release Description, states that the applicable 2-hour notification threshold for "arsenic is 40 mg/kg and for chromium it is 200 mg/kg" as specified in 310 CMR 40.321. The chart in 310 CMR 40.321(2)(b) states the "concentration" in ug/g not mg/kg.

Response: Please refer to the response to Comment I.5.I.

4z Mr Doherty, please respond to my comments and questions relating to all these issues I have brought up, and when you have a moment, please try to spend some time thinking about what it means to be doing work for a deeply harmful and destructive company such as Enbridge. Your talent and intelligence could be much better utilized working for an organization that is helping communities like mine to fight and oppose toxic polluters like Enbridge and to turn the tide against environmental injustice and Climate Change on Earth. Please dig deep into your heart and think about it.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

TRC Draft Immediate Response Action (IRA) Completion Report RTN – 4-28676

5a. My name is Michael J. Lang and I am the Environmental Coordinator of the East Braintree Civic Association (EBCA). The EBCA has been involved in environmental issues in the Fore River Basin for over 50 years. I have participated in those issues for 40+ years. The included comments are to be considered in the position of the three Fore River Basin communities, relative to the noted "TRC Draft Immediate Response Action (IRA) Completion Report RTN – 4-28676".

This section notes that soil samples were collected from a depth of "less than twelve inches below the ground surface". It is also noted that the site is known as the Kings Cove Conservation Area. Additionally, the site is also the location of the MWRA 60" sewage pipeline ROW going to the Braintree/ Weymouth regional pump station. The site also is the location of all utilities serving the pump station. As with all such pipeline ROWs, the material at the top of the site, is covered with up to a foot of topsoil utilized to hold freshly planted grass and shrubs. Thus, any soil samples taken at less than a depth of one foot, would only consist of soil trucked in for coverage. Prior samples taken on the compressor site, show contamination up to 20' below ground level. The determination of the level of contamination exposure is based on its impact on background levels. 310 CMR 40.006 defines "background" as" those levels of oil and hazardous material that would exist in the absence of the disposal site of concern".

Response: Please see the response to Comment II.2.a.

5b. While I recognize the significance of the location of arsenic exceeding the 310 CMR 40.032(2)(b) standard, in light of the history of the entire "north parcel" as the Edison dumping ground, it can be assumed that the arsenic level at this site is representative of the entire compressor/ conservation area. This is supported by vast amounts of coal slag and clinkers located at the base of the conservation embankment (Kings Cove). This is further supported by the enclosed picture of the berm washout which consists almost entirely of coal slag (near B-609). Please explain why this one contaminated location was segregated from the entire conservation area when it can be assumed that the entire site is consistent with these findings.

Response: This comment is inconsistent with the data from the MCP Site, all of which will be included in the Phase II Comprehensive Site Assessment report.

5c. In the first paragraph, it notes that 310 CMR 40.0321(2)(b) is 40 mg/kg. The actual reading states that arsenic concentration (all listed hazardous material) is 40 ug/g. A gram is 0.001kg. Additionally, 310 CMR 40.0321(2)(b) also lists

cadmium (total), chromium, cyanide, mercury, PCB (total). The levels of these chemicals should be listed under a confirmed mg/kg standard.

Response: Please see response to Comment I.5.I.

5d. The evaluation of "imminent hazard" in this section, appears to selectively choose the criteria that will yield the chosen result (results oriented testing). 310 CMR 40.903 is entitled "scope of the risk characterization and supporting documentation". This document does not define the risk scope of the area, nor supplies supporting documentation beyond laboratory analysis numbers. A significant amount of data exists that shows "excess lifetime cancer risk" when exposure pathways such as the recreational waters of Kings Cove are present. While TRC would have you consider only the single exposure point that they have chosen, the definition of "exposure point" states it may describe an "area or zone of potential exposure". 310 CMR 40.0956(1) states "the focus of a substantial hazard evaluation shall be on possible exposures to "Human and Environmental Receptors", considering the current use(s) of the disposal site and the surrounding environment".

<u>Response:</u> A Substantial Hazard Evaluation is different from an Imminent Hazard Evaluation. The primary focus of an Imminent Hazard Evaluation is on current exposures and also on "hot spots", or area(s) of elevated contaminant concentrations.

5f. The description of the noted site is limited. 310 CMR 40.0904 states "the scope and level of effort of the risk characterization shall depend on the complexity of the disposal site and response action being performed. The risk characterization shall be of sufficient scope and adequately documented to demonstrate that the Response Action Performance Standard (RAPS) has been met in accordance with 310 CMR 40.0191. This is obviously not the case with this document.

Response: Please refer to the response to Comment II.2.c.

5g. While the "shallow (0-1 ft. and 0-3 ft) soil samples show the existence of arsenic at location B-603, perimeter samples were taken at "a depth of less than 12 inches". Since the soil at a depth of "less than 12 inches" may allow for soil samples at ground level, a deeper sample would indicate hazardous material BELOW pristine topsoil.

Response: Please refer to the response to Comment II.2.a.

5h. This section notes that soil samples collected from a depth of 0 to 1 foot at the additional perimeter locations, indicated no arsenic concentration above 40 mg/kg. 3.1 Soil Sampling, notes that at perimeter locations at a sampling depth of 0-3 feet, indicated "arsenic concentrations above 40 mg/kg.". This may indicate as I said, that clean topsoil was placed over the MWRA ROW.

Response: Please refer to the response to Comment II.2.a.

5i. The second paragraph continues the quest for results oriented sampling. It indicates that sampling at UU-02, UU-03, UU-04, and UU-05 at a depth of "less than 12 inches" indicated "no arsenic concentration over 40 mg/kg. However, Section 4.1 notes that perimeter samples around B-603 at UU-02, UU-04, and UU-05 were "NOT AUTHORIZED FOR ANALYSIS". 3.1 Soil Sampling, indicates that at a depth of 0-3 feet, it indicates "arsenic concentrations above 40 mg/kg.

Response: The suggestion of "results oriented sampling" is inconsistent with the data from the Site, all of which will be presented in the Phase II Comprehensive Site Assessment Report. Because arsenic concentrations in samples collected at in UU-02, UU-04 and UU-05 at a depth of 0-3 feet indicated arsenic concentrations equal to or above 40 mg/kg, additional soil samples were collected at a depth of 0-1-feet at locations adjacent to samples UU-02, UU-04 and UU-05. These samples were collected to determine the concentration of arsenic in shallow soil consistent with the objective of the IRA Plan. Because all of the additional samples identified arsenic concentrations below 40 mg/kg, no additional sampling was warranted in this area as part of the IRA.

5j. The level and quality of the Draft Report, do not meet the standards established under 310 CMR 40.900. This is confirmed in a comparison with the Mass DEP document entitled "Top Ten Most MCP Risk Characterization Problems". You could find all of them in the TRC report.

Response: Please see the response to Comment II.2.c.

5k. The first paragraph notes that location B-603 was the only location within THE SITE with an arsenic concentration that exceeded the concentration specified at 310 CMR 40.0321(2)(b). It also notes that "the IH Evaluation evaluates the risks to recreational visitors who may be exposed to arsenic and "OTHER CONTAMINANTS" in soil less than 12 inches below ground at location B-603". Section 4.1 notes that perimeter samples around B-603 at UU-02, UU-04, and UU-05 were "NOT AUTHORIZED FOR ANALYSIS". If you do not authorize, you cannot summarize. Additionally, as noted in 310 CMR 321(2)(b) none of the listed "other contaminants" other than arsenic were evaluated. Additionally, this draft report fails to recognize and evaluate the asbestos impregnated fire brick and clunkers paving the base of the site berm and extending into Kings Cove. Also, 310 CMR 40.0321(2)(c) notes when evaluating "cumulative receptor risk limits in 310 CMR 40.0993(10), that past exposures may be included in such evaluations to the extent that is reasonable to quantify those exposures The "north parcel" was used as a landfill since the 1920's.

Response: Please see the response to Comments I.3.b, 1.4.a, II.2.c, and II.5.i..

*51.* The second paragraph is both perplexing and distasteful. The current site conditions "show the site consisting of a park/walkway with an abutting ocean front beach that has been utilized since colonial times for recreation and ocean related food. 310 CMR 40.0322(3)(a) notes that "risk of harm to the environment" shall be based on the data collected pursuant to the response action being performed and the site, receptor, and exposure information. The Kings Cove beach area has been closed to swimming and clam harvesting as a result of north parcel leaching contaminants. 310 CMR 40.0956(1)(b) notes "the period of exposure to be considered SHALL BE EQUAL TO OR GREATER than the time from notification to the date that the Substantial Hazard Evaluation is conducted, PLUS 5 YEARS. Also, the obvious use of a child to be used to evaluate the acceptable risk level of contamination, is beyond words. Because this is the standard used, I must comment 310 CMR 40.0921 Identification of Human Receptors, deals with this issue. 310 CMR 40.0921(4) gives a list of descriptions of groups without limitations. (e) gives the child group as "children, ages one to eight years, not your noted 6 years old. Other groups that deserve consideration, include "lifelong residents at the disposal site (like the residents along Kings Cove), trespassers, women of child bearing age, and construction workers. In addition to the DEP group considerations, are "habitats" including (c) fresh and saltwater fisheries, including but not limited to, shellfish areas" such as the Kings Cove area which has not been considered.

Response: The regulations referenced in the comment are not applicable to the IRA Completion Reports. As specified in the MCP, the focus of the Imminent Hazard Evaluation is the evaluation of risk to current receptors, considering an appropriately short period of time, defined as 5 years or less. The most sensitive receptor for this type of evaluation would be a child less than 6 years of age. Long-term exposures will be included in the comprehensive risk characterization that will be part of the Phase II Comprehensive Site Assessment. An ecological risk characterization will also be part of the Phase II Comprehensive Site Assessment.

5m. 310 CMR 40.0921 Identification of Human Receptors, deals with this issue. 310 CMR 40.0921(4) gives a list of descriptions of groups without limitations. (e) gives the child group as "children, ages one to eight years, not your noted 6 years old. Other groups that deserve consideration, include "lifelong residents at the disposal site (like the residents along Kings Cove), trespassers, women of child bearing age, and construction workers. In addition to the DEP group considerations, are "habitats" including (c) fresh and saltwater fisheries, including but not limited to, shellfish areas" such as the Kings Cove area which has not been considered.

Response: Please see the response to Comment II.5.m.

5n. The submitted TRC Draft Immediate Response Action Completion Report RTN 4-28676, through tunnel vision and the selective use of regulations, has reached the conclusion that "the concentrations of arsenic in soil do not present an IH". 310 CMR 40.0903 states "the risk characterization shall be of SUFFICIENT SCOPE and ADEQUATELY DOCUMENTED to demonstrate that the Response Action Performance Standard (RAPS) has been met in accordance with 310 CMR 40.0191. 310 CMR 40.0922 requires that Environmental Receptors be identified in the surrounding environment (Kings Cove residents). This has not been done. 310 CMR 40. 924(2)(a)(2) notes that "for soil, the exposure points shall be defined by the horizontal and vertical distribution of the contaminated soil in combination with the soil category (ies) determined to be applicable". The report did not consider the past erosive effect on the site berm. The arsenic bearing fire brick and clinkers appear to pave the Kings Cove beach area. The report did not make the obvious conclusion that the fire brick and clinkers came from the studied area (see the included picture). While the report noted the arsenic level at B-603, it did not allow lab analysis of surrounding soil samples

Response: Please see the response to Comment 2.5.m..

5o. The paragraph states that "no further field investigations are planned regarding arsenic concentrations in soil that are the subject of this IRA. Through this report, TRC has directed the field investigation to one specific location and chemical contaminant, rather than determining if other contaminants have leached to other locations from the site. The DEP requires that site investigations consider all chemical contamination beyond arsenic.

Response: Please see the response to Comments I.3.b, 1.4.a, II.2.c, and II.5.i..

5p. The paragraph states that "the objectives identified in the MCP and have been designed and performed according to our understanding of the conditions present at the site". Additionally, the IRA was conducted in conformance with the VERBAL IRA PLAN. This obviously shows the lack of control by the MassDEP, and the TRC prospective that the regulations are subject "according to our (their) understanding". The final sentence shows TRC's control of this DEP requirement by noting that "an IH condition does not exist at this site".

Response: The LSP has certified that the IRA was conducted in accordance with the MCP on the BWSC-105 transmittal form accompanying the IRA Completion Report which states, in Section E:

The response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y)

with the identified provisions of all orders, permits, and approvals identified in this submittal.

Draft Immediate Action Completion Report – RTN 4- 28615

5q. The section notes that "sediment samples were obtained at a depth of 0-0.5 feet along 3 sample lines oriented parallel to the shoreline to assess human and ecological exposure". The Kings Cove is impacted by sediment being carried in with Fore/ Town Rivers and Boston Harbor waters. A sample depth of 0-0.5 feet, may only consist of sediment from other Boston Harbor locations.

Response: Please refer to the response to Comment II.2.e.

### 1.0 Release Description

The second paragraph states that the applicable 2-hour notification threshold for "arsenic is 40 mg/kg and for chromium it is 200 mg/kg" as specified in 310 CMR 40.321. The chart in 310 CMR 40.321(2)(b) states the "concentration" in ug/g not mg/kg.

Response: Please refer to the response to Comment I.5.I

#### 2.2 Site Condition

The stated definition of "anthropogenic (man made) material is not accurate. "caused by human or their activity of nature", is more accurate. As you should know, coal in any form is not "man made".

Response: Comment noted.

#### 2.3 Surrounding Receptors

Missing from the list of "surrounding receptors", are the residents on the opposite side of Kings Cove which is closer than Calpine. Additionally, the Fore River Bridge carries 33,000 vehicles per day, which should be considered a "surrounding receptor" based on a 2 direction 5 day a week commute to/from Boston. When the bridge is open, it is a 20 or more minute wait for it to close.

<u>Response:</u> Evaluation of direct contact (ingestion, dermal contact, and inhalation of dust) exposures to people at the Kings Cove Conservation Area was conducted.. Four hours of dust inhalation was assumed for a visitor to the Kings Cove Conservation Area which exceeds the estimated time of an area commuter.

# 3.1 Supplemental Sediment Sampling

This section reads like the description of a magician's trick where he first diverts the audience's attention. It is well documented that Boston Edison had dumped coal, fire brick, asbestos, and construction debris in the north parcel landfill between the 1920's and 1970's. The arsenic, chromium and asbestos, can be traced back to the coal, fire brick, and furnace insulation material. Sampling done at a depth of 0-0.5 ft., will only result in analysis of sediment from other locations that had come with incoming tides. Also, in TRC's quest for analysis of sediment in the Kings Cove, how could they bypass the fire brick paving a large portion of the beach area, to get to the sediment that sits below the brick?

<u>Response:</u> Please see response to Comment II.2.e. Bricks along the shore were moved as needed to access sediment.

## 4.1 Sediment Sample Results

310 CMR 40.321(2)(b) lists chromium and arsenic units as ug/g not mg/kg.

Response: Please refer to the response to Comment I.5.I

#### 4.2 Imminent Hazard Evaluation

310 CMR 40.955(4) states "the documentation of the imminent Hazard Evaluation shall clearly state whether the conditions at the disposal site pose an Imminent Hazard based upon criteria described in 310 CMR 40.0955(1) through (3). Lacking from this short section, is most of the required criteria noted in 310 CMR 40.0955. While section 4.2 limits itself on evaluating the risks to "recreational visitors", 310 CMR 40.0955(3) questions "the risk of harm to the environment". Additional consideration is given to stressed biota, the site, and exposure information. 310 CMR 40.0955(4) clearly stresses compliance to this requirement.

<u>Response:</u> The IRA Completion Reports and the Imminent Hazard evaluations appended to them conclude that conditions at the MCP Site do not pose an Imminent Hazard.

The final sentence (page 4-1) offers limited information on the IH Evaluation. Additionally, the "applicable guidance" is without a source.

Response: The Imminent Hazard Evaluation in its entirety is included as Appendix D to the IRA Completion Report. The text of the IRA Completion Report only provides a brief summary of the Imminent Hazard Evaluation, and refers the reader to Appendix D for more details.

Page 4-2 offers another example of data manipulation in order to reach a set result. The paragraph states "an IH Evaluation is focused on actual or likely exposure to receptors under current site conditions considering a period of time that is 5 years or less". 310 CMR 40.0956(1)(b) states "the period of exposure to be considered shall be equal to or greater than the time from Notification to the date that the Substantial Hazard Evaluation is conducted PLUS 5 YEARS. 310 CMR 40.0921(4) states "the Human Receptor shall be described in terms such as age group ....." Children ages one to EIGHT YEARS" not 6 YEARS!!

Response: A Substantial Hazard Evaluation is different than an Imminent Hazard Evaluation. The regulatory requirement for an Imminent Hazard Evaluation are provided in 310 CMR 40.0951 through 310 CMR 40.0955.

While page 4-2 IH Evaluation utilizes "current site conditions and CURRENT uses of the site", 310 CMR 40.0923 "identification of site activities and uses" states "the Site Activities and Uses shall include all current and REASONABLY FORESEEABLE uses and activities occurring at the disposal site or in the surrounding environment ....".

<u>Response:</u> The comprehensive risk characterization being completed as part of the Phase II Comprehensive Site Assessment Report will include an evaluation of all current and reasonably foreseeable activities and uses. The role of the Imminent Hazard Evaluation is to focus only on current site conditions and uses.

# 6.0 Statement of IRA and Conclusions 310 CMR 40.0427(4)(d)

310 CMR 40.0427(1)(a) requires the remediation of adverse site conditions including (a) the accomplishment of any necessary stabilization of site conditions. The enclosed pictures show an example of the site berm which has collapsed and exposed a wall of coal clinkers. This is an obvious source of arsenic and represents a hazard to receptors utilizing the park. TRC attempts to conclude that the concentrations of COPCs in sediment do not present an IH. The depth of the sampling includes only sediment from other Boston Harbor locations. The shallow sediment will be gone with the next storm, and will expose the contaminated Kings Cove.

Response: Please see response to Comment II.2.e.

# 9.0 LSP Opinion 310 CMR 40.0427(5)

This section states "the IRA was conducted in conformance with the "VERBAL IRA PLAN". 310 CMR 40,009 "Certification of Submittals" lists all of the WRITTEN submittals required for the IRA. 310 CMR 40.009(2) states "the

WRITTEN" declaration in 310 CMR 40.009(1) required of a person undertaking a response action shall be made by the highest ranking individual (s) having day-to-day responsibility for the performance of the response action which is the subject of the submittal". It would appear that the lack of "certification of the IRA Plan", would nullify this project.

<u>Response:</u> The certification referenced is included on the BWSC-105 transmittal form for the IRA Completion Reports which is signed by the LSP as part of the document submittal process.

5r. The East Braintree Civic Association and the residents of the Fore River Basin, ask that TRC and Enbridge/ Algonquin be required to abide by the ten issues to consider before submitting an MCP Risk Characterization document" as noted in the MassDEP document "Top Ten Most Common MCP Risk Characterization Problems". Based on our review of the DEP document and the submitted "Draft Immediate Response Action Completion Reports – RTN 4-28615 & RTN 4-28676" TRC and Enbridge/ Algonquin have failed in all "Risk Characterizations".

Response: The Imminent Hazard Evaluations that are part of the IRA Completion Reports comply with the applicable regulations and guidance as will the Phase II Comprehensive Site Assessment to which the guidance mentioned in this comment refers.

I was unhappy with the format. Too many questions screened and not answered. We need a face to face meeting next. Thank you for making it possible to have a regular meeting.

Response: Comment noted.

7a. Has there been testing of sediments on the beach and in the bricks of the beach for asbestos? If there has not been testing for asbestos, why? Residents have been concerned about this. If TRC and MassDEP are not concerned about the presence of asbestos, why not rule it out by taking samples of the bricks and sediments on the beach and in the park?

Response: Please see response to Comment I.1.f.

7b. Have you tested shellfish in the cove for different heavy metals and other toxins? If it has not been done, I request that you test shellfish in the cove and explore exposure receptor pathways through ingestion of shellfish.

Response: Please refer to the response to Comment 1.6.m.

8a. I write to express my concern about the Public Involvement Process (PIP) for cleanup of the North Parcel in Weymouth. First, the process: The virtual format

during COVID did not meet the criteria for a public meeting. Participants were not able to see one another, or to confer via the chat feature, in order to coordinate questions and comments in real time. Nor were we able to see one another's questions, which were vetted by the meeting host with many not answered. I have been in many other meetings where the Q&A feature was used to query meeting leaders, where participants were visible, and where and chat was used for participants to confer among themselves, so it was not a problem of technology.

Response: Comment noted.

8b Second, the content: From the first day of the PIP, TRC/MassDEP were clearly allied with Enbridge in denying the extent of the site's toxicity, and the dangers to the public, and to the environment from its "cleanup." I could list numerous examples, but most of them were cited at one or more of the meetings, and dismissed. Just one example is the documentation of decades of dumping of used asbestos-containing burner bricks at the North Parcel (which several of us reviewed at the Harvard Business School Baker Library Archives of the Edgar Power Plant). Yet the bricks chosen for testing by TRC were all from the top foot or so of soil, meaning that they would have been deposited there after asbestos was banned from bricks in the 1970's. Having observed the cleanup in person on many occasions. I can attest that soil was dug out in holes at least as deep as the height of a grown man (and carted away in trucks with filthy tires, and with coal ash blowing off the back). Bricks were extracted, broken, and strewn about the site, with asbestos fibers likely blowing onto Rt. 3-A and surrounding neighborhoods.

Response: Algonquin and TRC vehemently disagree with the suggestion that TRC and Mass DEP have been "allied with Enbridge in denying the extent of the site's toxicity." The substance of this comment relating to the potential for asbestos to be contained in bricks at the MCP Site is inconsistent with the data from the MCP Site.

8c. To add insult to injury, residents were scolded for not being willing to accept any risks in the name of the projects "benefits." We know that all of the gas from Enbridge's compressor station is destined for points beyond Massachusetts, and all of the profits go to Houston and Calgary, while Mass. residents will pay for this project on their energy bills, and already overburdened EJ communities will suffer more health and safety impacts. . . all for no benefit whatsoever.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

8d. I used to have confidence that MassDEP existed to protect residents and the environment. Being involved in the PIP, along with more than six years of engagement in the permitting process for the Weymouth compressor station has

decimated that belief. Regulatory capture appears to rule the Commonwealth's energy and environmental policy. My taxes pay the salaries people who betray the public's trust, health, and safety, working not for those who employ them, but for the polluters they are supposed to regulate. Participating in the PIP has made me disillusioned, disgusted, and determined to make change. I hope that the recent passage of the Next Generation Climate bill will be a catalyst for the systemic change that needs to take place in order to restore the people's trust.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

9a. Has there been testing of sediments on the beach and in the bricks of the beach for asbestos? If there has not been testing for asbestos, why? Residents have been concerned about this, and if TRC and MassDEP are not concerned about the presence of asbestos, then why not rule it out by taking samples of the bricks and sediments on the beach and in the park so as to give residents greater peace of mind?

Response: Please see response to comment I.1.f.

9b. Have clinkers that are present on Kings Cove been tested for heavy metals?
Residents in the past before knowing what they were, including children, have collected clinkers and brought them home to rock collections thinking they were odd rocks or lava rocks.

Response: Please see the response to Comment I.6.c

9c. Have you tested shellfish in the cove for different heavy metals and other toxins? If it has not been done, I request that you test shellfish in the cove and explore exposure receptor pathways through ingestion of shellfish

Response: Please see response to Comment I.6.m.

9d. Please provide temporary erosion control measures to stop further erosion of coal ash, clinkers and burner bricks onto King's Cove Beach. The erosion has gotten significantly worse and residents have been requesting erosion control measures for a long time. More trees and shrubs from the park have fallen onto the beach. We appreciate that caution tape has been put up in the park, however more must be done in the interim to prevent more coal ash and clinkers to erode.

Response: This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

9e. If Algonquin/Enbridge/Calpine find that the cost of clean up is too costly, who will pay for the work?

- Response: Please refer to the response to Comment I.6.f.
- 9f. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the clean up, if at all?
  - Response: Please see the response to Comment I.6.d.
- 9g. In the permanent solution, I request that Algonquin/Calpine do a restoration of the beach by clearing the large clinkers and bricks or covering them up to make the beach easier to walk on and prevent further erosion of coal ash, clinkers and bricks from the bank.
  - <u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 9h. Different measures should be explored as alternatives including, but not limited to, beach nourishment, removal of clinkers offsite, incorporating clinkers back into a restored bank behind erosion controls, nature-based solutions for erosion control and more armoring of the bank
  - <u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 9i. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats, and launch kayaks and canoes.
  - <u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 9j. I request you test shellfish in King's Cove for the presence of toxins
  - Response: Please see the response to Comment I.6.m.
- 9k. As the area is currently closed to recreational shellfishing because of the bacteria and could also have additional risks because of contaminated sediments
  - Response: Please see the response to Comment I.6.m.
- 9l. This is especially important as the area is conditionally restricted for commercial shellfish harvesting. Conditionally Restricted means: "Contains a limited degree of contamination at all times. Subject to intermittent pollution events and may close due poor water quality from rainfall events or season. When open, only commercial harvesting of soft shell clams for depuration is allowed."

Response: Please see the response to Comment I.6.m.

9m. I request that TRC/Algonquin/Calpine place signs on the beach stating "Closed to shellfishing" with pictures of shellfish crossed out in multiple languages including Chinese, English, Spanish and Vietnamese.

Response: Please see the response to Comment I.6.m.

9n. Knowledge that the area is closed to shellfishing because of bacteria may not be universally known and there needs to be more work done to educate the public about this.

Response: Please see the response to Comment I.6.m.

I live diagonally across the Fore River from this facility and I am aware of Many of the obvious dangers. The unexplained unexpected release of toxic fumes Is criminal. My area is an environmental justice zone which is being ignored. What Is being done to protect people in this area. Where are the monitors, escape routes and aids. What is being done to clean the air, the soil.....the property values....the quality of life.

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

11a. As representative of the Public Involvement Program (PIP), I am making the following comments on the DRAFT Release Abatement Measure Completion Report RTN4-0026230, DRAFT Immediate Response Action Completion Report RTN4-0028615 and the DRAFT Immediate Response Action Completion Report RTN4-0028676 as well as commenting on the PIP meeting held April 7, 2021: 1. The Public Involvement Program participants want to insure that the upcoming meeting to be held in mid August 2021 will be one of real public participation instead of the constricted format chosen by TRC/Enbridge on April 7, 2021. There was no reason to exclude the faces and voices of the citizens who registered for the zoom format. What was chosen was a format that prevented the public from interacting with the presenters and each other. The questions were selected by the TRC/Enbridge facilitator and read by the facilitator instead of the citizens having a voice and speaking for themselves. One of my questions on the imminent hazard of coal ash was reiected for discussion with an unsatisfactory "we will leave it at that." This format actually discouraged public participation. This is not the way a public access meeting should be run whether using a zoom format or not. It is my expectation that, in August, we will be face to face in a truly public setting like the Abigail Adams Middle School. If Covid still acts as a deterrent, the PIP participants can meet outside, fully vaccinated in a public park, playing field with bleacher seating, etc. That will fulfill the intention of 310CMR40.000.

# Response: Comment noted.

11b. The explanation for why coal ash does not pose an Imminent Hazard in the Kings Cove is not satisfactory. How were exposure limits and age limits determined for IH? Coal ash is pervasive throughout the North Parcel as it is the actual fill for the parcel itself. Historic photos show water present not land! The Edgar Coal Plant dumped coal ash containing heavy metals of arsenic, chromium and asbestos for decades. Why it would not be a IH does not make any sense. I would expect more information to be presented at the August 2021 PIP meeting to answer this more fully. I was part of a group who went to the Edgar Archive at the Harvard Library where the complete history of the Edgar Coal Plant is held. We examined ledgers, documents, etc. which describe the continuous dumping of furnace bricks at the North Parcel. These "burner bricks" are present along the Kings Cove shore in the thousands along with the residue of burned coal aka "clinkers." Asbestos was not satisfactorily tested with a large enough sample of furnace bricks. The original manufacturers' stamps on the bricks upon research reveal their composition which include asbestos and chromium. The PIP participants would like to have the Inspector who did this asbestos analysis be present at the next PIP meeting in August as we could not get adequate answers at the April 7, 2021 PIP meeting. It is not acceptable that asbestos is not considered a "contaminant of concern." Why not?

Response: Samples of sediments and soil containing ash have been collected and analyzed. A small number of these samples collected at the ground surface or within 12 inches of ground surface triggered reporting thresholds listed in the MCP that "could pose" an imminent hazard. The data were evaluated in the Imminent Hazard Evaluations and the conclusion each time was that an imminent hazard condition did not exist at the MCP Site because the concentrations of OHM were not elevated enough to be of concern in the short-term. The evaluation of long-term exposures will be included in the comprehensive risk characterization being completed as part of the Phase II Comprehensive Site Assessment Report. Because asbestos has not been detected at the Site it is not a contaminant of concern for the risk characterization.

11c. The DRAFT RAM in section 2.1.8.1 on page 11 describes the Air Sampling done during construction of the compressor station. The detailed and extensive results of the dust monitors are given as part of Appendix B. However, although a photo-ionization detector (PID) was used to test for the VOCs, there is no table of reported results of the air monitoring for VOCs. There is no information except a sentence that states "there were no VOCs found during construction". This is not satisfactory as we know there are measurable VOCs already present in the air at the North Parcel! The PID could not have recorded zero. How many PID monitors were used? Where were the monitors located? How many times were they used? What were the actual results? Please make this information public as

this is vital to the health of the citizens. We need to have real data from your air monitoring of VOCs.

Response: Please refer to RAM Status Reports #1 and 2 for information regarding PID readings between November 2019 and September 2020. One PID was used to monitor VOCs in the work zone during construction. PIDs take readings continuously in real time while they're turned on and running. No VOCs were measured in the work zone during construction, with the exception of interferences from moisture or vehicle exhaust. The PID was used for health and safety purposes and the data was not downloaded from the unit.

12a. The Draft RAM Completion Report for the Weymouth Compressor Station, dated February 2021, states in section 2.1.10 that water samples were collected from three fractionation tanks containing a mix of hydrostatic water and stormwater. In part it says that "Arsenic and barium were detected slightly above the laboratory reporting limits (detections at 6 micrograms per liter [µg/L] and 33 µg/L, respectively)." What is a 'fractionation tank?'

Response: A large (10,000-20,000-gallon) tank used to store liquids, typically water.

12b. What is 'hydrostatic water'?

Response: Hydrostatic testing is the use of water under pressure to test the competency of newly installed pipe and fittings. Water is transferred from the hydrant to the newly installed pipe and put under pressure. Upon completion of the test, the water is transferred from the pipe to an on-site storage tanks. At that time, water samples are collected to characterize the water for off-site disposal. Upon confirmation from the proposed disposal facility, a tanker truck is dispatched to transfer the water from the on-site storage tanks to the tanker truck and the water is transported off-site.

12c. Where does that hydrostatic water come from? Whatever the source of the hydrostatic water, I am concerned that the samples of hydrostatic water and stormwater contained unacceptable and excessive levels of substances -- barium and arsenic -- that are highly toxic to living things, including humans. If I am correct in the assumption that these toxic substances come from the contaminated soil which still sits below virtually the entire Compressor site, how do we know that such toxic substances won't leach out in the future, creating an ongoing public health risk both for workers at the site and nearby residents, including those who live in designated environmental justice areas.

<u>Response:</u> The water used for hydrostatic testing came from a nearby fire hydrant.

13a. In reading the Draft report for King's Cove Park you mention receptor pathways were "recreational visitors could potentially be exposed to surficial sediment primarily through incidental ingestion (i.e., a result of hand-to-mouth activity) and dermal contact."

It is assuming people visit once a week, however residents visit the park and beach more frequently.

Response: Please refer to the response to Comment II.1.a.

13b. Many shellfish are present at King's Cove Park. There are clams, mussels, oysters and quahogs. Attached are photos of shellfish in the Cove including a live oyster growing on a clinker.

Recreational shellfishing is generally prohibited in the Fore River Basin because of bacteria, however King's Cove is Conditionally Restricted (See attached document) Conditionally Restricted means: "Contains a limited degree of contamination at all times. Subject to intermittent pollution events and may close due poor water quality from rainfall events or season. When open, only commercial harvesting of soft shell clams for depuration is allowed."

I request that TRC speak with Massachusetts Division of Marine Fisheries to look into putting an additional advisory closure for shellfishing in the west side of King's Cove along the Park because of the heavy metal releases. If conditions of water quality improve with respect to bacteria, the area could potentially be opened to commercial then recreational shellfishing. An additional advisory of heavy metals should be put in place.

Response: Please see the response to Comment I.6.m.

13d. Have you done analysis and explored heavy metal exposure to receptor pathways through the ingestion of shellfish in the cove? If not will you commit to doing exposure analysis for heavy metals to receptor pathways through ingestion of shellfish on the cove in Phase II?

Response: Please refer to the response to Comment I.6.m.

13e. Have you tested shellfish in the cove for different heavy metals and other toxins? If not will you commit to doing testing in Phase II?

Response: Please refer to the response to Comment I.6.m.

13f. I request that you test the soils in the clam mudflats as you have not done any ground penetrating radar or soil testing around the flats as they are exposed at low tides.

Response: Please refer to the response to Comment I.6.m.

13g. As the area is currently closed to recreational shellfishing because of the bacteria and could also have additional risks because of contaminated sediments, I request that TRC/Algonquin/Calpine place signs on the beach stating "Closed to shellfishing" with pictures of shellfish crossed out in multiple languages including Chinese, English, Spanish and Vietnamese. I included images of some examples attached. I suspect that knowledge that the area is closed to shellfishing may not be universally known.

Response: Please see the response to Comment I.6.m.

13h. Is there any concern of receptor pathway exposure from recreational fishing on King's Cove Beach? The beach has been open to recreational fishing and should remain open to recreational fishing and kayak/canoe launching and should be in the future. If recreational fishing and kayak/canoe launching, walking on the beach are not safe, then it should be made safe in the remediation process final solution for the property. Our Chapter 91 rights of navigation, fishing and fowling in the intertidal zone of King's Cove shall not be rescinded or restricted. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats and launch kayaks and canoes.

Response: Please see the response to Comment I.6.m.

13i. Asbestos was not mentioned once in the document. Has there been testing of sediments on the beach and in the bricks of the beach for asbestos?

Response: Please see the response to Comment I.1.f.

13j. If there has not been testing for asbestos why? Residents have been concerned about this. If TRC and MassDEP are not concerned about the presence of asbestos, why not rule it out by taking samples of the bricks and sediments on the beach and in the park?

Response: Please see the response to Comment I.1.f.

13k. Have you tested what heavy metals are in clinkers themselves? Residents in the past before knowing what they were, including children have collected clinkers and brought them home to rock collections thinking they were odd rocks or lava rocks. I myself as a child found one on the Boston Harbor Islands and brought it home unknowing of toxins.

Response: Please see the response to Comment I.6.c.

13I. Can you please provide temporary erosion control measures to stop further erosion of coal ash, clinkers and burner bricks onto King's Cove Beach? The erosion has gotten significantly worse and residents have been requesting erosion control measures for a long time. More trees and shrubs from the park have fallen onto the beach. We appreciate that caution tape has been put up in the park, however more must be done in the interim to prevent more coal ash and clinkers to erode.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

13m. Can all answers to questions from the PIP meeting be sent to the registrants of the PIP meeting as well as put in the response documents? It would be helpful to have peoples questions answered to their emails together as well as in the documents to follow. It can be hard for folks to look through the documents to find answers.

Response: Please see the response to Comment II.1.k.

Can the future PIP meeting show all the questions submitted and can people vote on them before they are answered? I have seen this done in other zoom meetings in the Q&A function.

Response: Please see the response to Comment I.2.i.

13n. If Algonquin/Enbridge/Calpine find that the cost of clean up is too costly, who will pay for the work?

Response: Please see the response to Comment I.6.f.

It is my understanding that Algonquin/Enbridge is taking this up on their own accord, however the land is owned by Calpine. I am concerned that this web of responsible parties may cause a muddying of responsibilities.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

13o. Algonquin and Calpine have dropped the ball and are not plowing Lovell's Grove parking lot and have plowed King's Cove parking lot intermittently. Similar issues have arisen in maintenance and emptying trash receptacles in both parks.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

13p. Boston Edison, which is now Eversource, originally owned the property and dumped the coal ash, clinkers and burner bricks from the Edgar Power Plant. How much is Eversource responsible for the clean up, if at all? It is my understanding they are off the hook because they are not the property owner anymore and it is not declared a superfund site.

Response: Please see the response to Comment I.6.d.

13q. In the permanent solution, I request that Algonquin/Calpine do a restoration of the beach by clearing the large clinkers and bricks or covering them up to make the beach easier to walk on and prevent further erosion of coal ash, clinkers and bricks from the bank. Making the beach more walkable for recreational users was something also expressed at a previous meeting of the Conservation Commission by the late Chair of the Commission Tom Tanner who tragically died from complications of COVID-19.

Response: Please see the response to Comment I.6.I.

13r. If you walk around the other parts of the cove, it is not covered in coal ash and clinkers and it is easier to walk on. The beach must be restored to look like other parts of the cove.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

13s. Different measures should be explored as alternatives including but not limited to beach nourishment, removal of clinkers offsite, incorporating clinkers back into a restored bank behind erosion controls, nature based solutions for erosion control and more armoring of the bank. I prefer a more nature based solution for the erosion of the clinkers and the bank but would like to see different feasibilities for each.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

13t. Access to the beach via a trail should be maintained in any permanent solution so people can walk on the beach to fish, fowl, navigate boats and launch kayaks and canoes.

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

13u. Here are examples of "Closed to Shellfishing" Signs in Quincy Point at Mound Street Beach about a mile away from King's Cove upstream on the Town River. There were 2 signs, both were only in English which is unfortunate however there was at least some signage. Please send my request along to

Calpine and Enbridge to install signage like this but in multiple languages.

Response: Please see the response to Comment I.6.m..

14a. Can you confirm that at the time of the last PIP meeting, there has been no testing for asbestos at the North Parcel since the original representative sampling of 8 bricks?

Response: Please refer to the response to Comment I.1.f.

14b. Please confirm that just 8 bricks were the representative sample that was tested for asbestos.

Response: Please refer to the response to Comment I.1.f.

14c. Who decided on the representative sample size of 8 bricks for the original testing for asbestos at the North Parcel, names and titles please?

Response: Please refer to the response to Comment I.1.f.

14d. What was logic behind the 8 brick representative sample size for the thousand (sic) of tons of possible contaminated material at the North Parcel? How was this representative sample size decided?

Response: Please refer to the response to Comment I.1.f.

14e. Why was the decision made not to test for asbestos on the beach of King's Cove at The North Parcel in the previous phase of testing when so much of the public inquiry of the previous PIP meeting was dedicated to the public concerns about potential asbestos bricks seen on the beach and visibly protruding from the soil at The North Parcel?

Response: Please refer to the response to Comment I.1.f.

14f. Who made this decision to wait for the next phase to test for asbestos? What are the names of the people, their professional positions and responsibilities?

Response: Please refer to the response to Comment I.1.f.

14g. How many tons of material were excavated and removed from the North Parcel (without specific asbestos safety protocols) before and during construction on the compressor station?

<u>Response:</u> Section 2.2.1 of the Draft RAM Completion Report indicates that 17,301.82 tons of soil was shipped to either Turnkey Landfill or Fitchburg Landfill under MassDEP Bills of Lading.

14h. For James Doherty directly: Why did you chose not to answer directly the question to confirm that only 8 bricks were tested for asbestos, at the last PIP meeting, and only to refer to them as a representative sample? Was this answer meant to minimize the fact that the testing of only 8 bricks was used the justify the absence of asbestos removal protocols in the excavation of several tons of contaminated material?

Response: Please see response to Comment I.1.f.

14i. What is the name of the original Licensed Asbestos Inspector who conducted the investigation into asbestos at the North Parcel, who oversaw the original testing of the 8 bricks? What is their MA State license number and who do they directly work for (the name of the company)? What are their professional credentials relevant to asbestos inspection? What was their previous position(s) or job(s) working for the Massachusetts Department of Environmental Protection?

Response: Please refer to the response to Comment I.1.f.

14j. Which certified Asbestos Analytical Lab (AAL) was used for asbestos testing? What is their Class Certification?

Response: EMSL Laboratory.

14k. Is a MA state licensed professional asbestos inspector trained to make visual inspections to identify possible signs of the presence of asbestos?

<u>Response:</u> Massachusetts-Licensed Asbestos Inspectors are trained to inspect for materials suspected to be asbestos containing.

14I. Would a MA state licensed professional asbestos inspector looking for evidence of the presence of asbestos in kiln bricks be expected to know of widespread use of asbestos in kiln bricks produced before 1970?

<u>Response:</u> Licensed Asbestos Inspectors know and understand that asbestos was used in manufacturing of brick.

14m. Would a state licensed professional asbestos inspector looking for possible asbestos bricks on or in the ground of the North Parcel be expected to know or be expected to research the origin of possible asbestos bricks found in abundance on the beach and seen embedded in the soil of King's Cove, the coast of the North Parcel?

<u>Response:</u> The licensed asbestos inspectors sampled all of the different types of brick observed in the Kings Cove Conservation Area.

14n. Would a MA state licensed professional Asbestos Inspector be expected to do a simple internet search of the names of companies seen on these possible asbestos bricks that would have revealed that some of these brick manufacturers have been directly identified as using asbestos in the production of their bricks?

Response: Please see the responses to Comments I.1.f and 2.14.n.

14o. Were any of the representative sample of 8 bricks stamped "oil", making them less likely to contain asbestos since this would indicate that they were likely to have been used in the Edgar power plant after it switched from coal energy production to oil around 1970, after the use of asbestos in kiln bricks was curtailed?

<u>Response:</u> Please see the responses to Comments I.1.f and 2.14.n. Representative samples of homogeneous brick were collected and analyzed for asbestos content.

14p. Who or what agency is responsible for overseeing and disciplining possible conduct violations of licensed professional Asbestos Inspectors?

<u>Response:</u> MassDEP and the Massachusetts Department of Labor and Standards.

To whom should a complaint be filed?

Response: Please refer to the response to Comment II.14.P.

14q. Who is the certified Asbestos Inspector that will be conducting the asbestos testing in the next phase of testing at King's Cove? Will the same Asbestos Inspector of the original testing of the 8 bricks be conducting the next inspection and testing?

Response: Please refer to the response to Comment I.1.f.

14r. Were any of estimated 1,100 truckloads of contaminated material removed from the site tested for the presence of asbestos before or after they were trucked through public roadways to be dumped in a landfill?

If so, how many truckloads were tested and which lab did the testing?

Response: No. Please refer to the response to Comment I.1.f.

14s. For Dave Sullivan: Please don't respond with "that's an awful question to ask" as you did in the previous PIP meeting. Why did you characterize the Mass DEP as "acting with distinction on this property" when the DEP's own Presiding Officer Jane Rothchild criticized her own agency, the MA DEP, in an official proceeding

for failing to include massive amounts of testing data relating to an assessment that led to the permitting of the Weymouth compressor?

<u>Response:</u> This comment does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.

14t. Why did we not see the questions asked by the public as they were asked and entered into the chat? Questions appeared in the chat after they were asked. Were the questions we saw in the chat curated before being presented in the active public chat window? Were questions eliminated? What was the specific criteria used for not sharing some of the public's questions and hiding them from public view? Who specially was responsible for these question omissions? Please provide names and what entity(s) they were working for. Is this not a limiting of public involvement?

Response: Please refer to the response to Comments I.2.g through I.2.1.

14u. Why was that last PIP meeting ended prematurely? Why was the statement that there were no more questions used to justify the abruptly terminated PIP meeting when it was reported that people had submitted questions that went unanswered?

<u>Response:</u> The last PIP meeting was not ended prematurely. A single question was not responded to that was submitted after it was announced that the Q&A section of the meeting was over. That question could have been submitted as part of the written comments.

14v. Why were community participants not allowed to introduce themselves, their specific concerns and speak their own questions?

Response: Because a moderator read the questions at the meeting.

14w. Why was there not a neutral moderator for the last PIP meeting? How do you expect the public to trust an attorney for a law firm whose lobbying arm has actively worked for the company who proposed the compressor to conduct the proceedings? Is this a conflict of interest?

<u>Response:</u> The meeting moderator respectfully read all questions/comments that were submitted and questions/comments that were applicable to the subject MCP documents were addressed.

Will you hire a neutral moderator for the next meeting that would not be perceived as biased?

Response: Please refer to the response to Comment I.2.n.

- 14x. Will you hold a public, in-person meeting for the upcoming PIP once state covid-19 restriction on indoor public gathering are relaxed/lifted indoors for gatherings?
  - Response: Please refer to the response to Comment I.2.n.
- 14y. How will you ensure that this upcoming PIP process includes actual public participation that is not limited or managed to narrow opportunity to ask questions with all-important follow-up questions and clarifications?
  - Response: Please refer to the response to Comment I.2.n.
- 14z. For James Doherty: Please answer this question as you said you would at the the previous PIP meeting. Why did you characterize the opposition group FRRACS (mispronounced by you) as having "a tendency to try to go after contractors". What do you mean by "go after"? Please elaborate with specifics because the term "go after" implies a victimization. Do you feel that contractors are the victims here? What specific documented actions led you to characterized the opposition group this way? Do you feel you misspoke? Do you wish apologize to the Fore River Residents Against the Compressor Station, a hard working group of unpaid community volunteers, many of whom may see their opposition as protecting their fellow residents from the health and safety risks presented by this piece of industrial infrastructure forced on their community?
  - <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 14aa. For James Doherty: Please answer this question that went unanswered at the PIP meeting. How do you morally justify participating in a process that placed a toxic, polluting, potentially explosive piece of industrial infrastructure in the middle of residential neighborhoods?
  - <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 14ab. In January 2020, a press release from the Weymouth Public Schools identified TRC as having done the reported arsenic testing on the grounds of the Maria Weston Chapman Middle School. What other business has TRC Companies conducted with the Town of Weymouth?
  - <u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.
- 14ac. Please identify any and all contracts TRC Companies, it's contractors and subsidiaries have had with the Town of Weymouth for the years 2015 through 2020.

<u>Response:</u> This question does not relate to the RAM Completion Report or either of the two IRA Completion Reports so no response is provided.