A

EENF Distribution List

EENF Distribution List

Below is a list of state and municipal agencies from whom the Proponent will seek permits or approvals, and other parties, as specified in 301 CMR 11.16. Environmental Justice (EJ) Community Based Organizations provided by the MEPA Office as part of the Project-specific EJ Reference List are also listed below.

State and Regional Agencies and Officials

Executive Office of Energy and Environmental Affairs Attn: Tori Kim, Director of the Massachusetts Environmental Policy Act Office 100 Cambridge Street Boston, MA 02114 MEPA@mass.gov tori.kim@mass.gov	Executive Office of Energy and Environmental Affairs Attn: Environmental Justice Director 100 Cambridge Street Boston, MA 02144 MEPA-EJ@mass.gov
Massachusetts Department of Transportation Public/Private Development Unit 10 Park Plaza Boston, MA 02116 MassDOTPPDU@dot.state.ma.us	Massachusetts Water Resource Authority Attn: MEPA Coordinator 33 Tafts Avenue Deer Island Boston, MA 02128 Hillary.Monahan@mwra.com
Department of Environmental Protection One Winter Street Boston, MA 02108 helena.boccadoro@mass.gov	Massachusetts Bay Transit Authority 10 Park Plaza Boston, MA 02116-3966 MEPAcoordinator@mbta.com
Massachusetts Department of Transportation District #6 185 Kneeland Street Boston, MA 02111 michael.garrity@dot.state.ma.us	Massachusetts Historical Commission[1] 220 Morrissey Boulevard Boston, MA 02125 brona.simon@sec.state.ma.us
DEP/Southeastern Regional Office Attn: MEPA Coordinator 20 Riverside Drive Lakeville, MA 02347 jonathan.hobill@mass.gov george.zoto@mass.gov	Metropolitan Area Planning Council 60 Temple Place Boston, MA 02111 afelix@mapc.org mpillsbury@mapc.org

[1] A hardcopy of the EENF/Proposed EIR will be mailed to the Massachusetts Historical Commission.

Coastal Zone Management Attn: Project Review Coordinator 100 Cambridge Street, Suite 900 Boston, MA 02144 sean.duffy@mass.gov patrice.bordonaro@mass.gov	DMF – North Shore Attn: Environmental Reviewer 30 Emerson Avenue Gloucester, MA 01930 DMF.EnvReview-North@mass.gov
Department of Public Health Director of Environmental Health 250 Washington Street Boston, MA 02115 dphtoxicology@massmail.state.ma.us	

Town of Weymouth

Planning and Community Development Department Town Hall 75 Middle Street Weymouth, MA 02189 rluongo@weymouth.ma.us	Town Council Town Hall 75 Middle Street Second Floor Weymouth, MA 02189 towncouncil@weymouth.ma.us
Public Health Department Town Hall 75 Middle Street Weymouth, MA 02189 dmccormack@weymouth.ma.us	Conservation Commission Town Hall 75 Middle Street Weymouth, MA 02189 ahultin@weymouth.ma.us

Environmental Justice Community Based Organizations

Unitarian Universalist Mass Action Network	Mass Rivers Alliance
The Trust for Public Land	Browning the Green Space
Community Action Works	Appalachian Mountain Club
Conservation Law Foundation	Environmental League of Massachusetts
Environment Massachusetts	Mass Land Trust Coalition
Clean Water Action	Neighbor to Neighbor Mass.
Ocean River Institute	Sierra Club Massachusetts
Mass Audubon	Neponset River Watershed Association
Quincy Community Action Program	

Federal and State Tribal Organizations

Chappaquiddick Tribe of the Wampanoag Nation	Nipmuc Nation (Hassanamisco Nipmucs)
Massachusetts Commission on Indian Affairs	Herring Pond Wampanoag Tribe
Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan	North American Indian Center of Boston
Pocassett Wampanoag Tribe	Massachusetts Tribe at Ponkapoag
Wampanoag Tribe of Gay Head (Aquinnah)	Mashpee Wampanoag Tribe

B

Public Involvement Plan

FINAL

PUBLIC INVOLVEMENT PLAN

Algonquin Gas Transmission, LLC - Atlantic Bridge Project
Weymouth Compressor Station
6 & 50 Bridge Street
Weymouth, Massachusetts 02191
Release Tracking Number 4-0026230/4-0026243

Prepared for:

Algonquin Gas Transmission, LLC
890 Winter Street, Suite 300
Waltham, Massachusetts 02451

Prepared by:

TRC Environmental Corporation
2 Liberty Square
6th Floor
Boston, Massachusetts 02109

January 30, 2018

FINAL PUBLIC INVOLVEMENT PLAN

Weymouth Compressor Station Site
Release Tracking Number 4-0026230/4-0026243
6 and 50 Bridge Street, Weymouth

Prepared for
Algonquin Gas Transmission, LLC (Enbridge)
890 Winter Street, Suite 300
Waltham, Massachusetts
by
TRC Environmental, Inc.
2 Liberty Square
6th Floor
Boston, Massachusetts

January 30, 2018

For more information, contact:
Kelley Race, P.G., LSP (krace@trcsolutions.com)
Ryan Niles, P.G. (rniles@trcsolutions.com)
TRC Environmental Corporation
2 Liberty Square, 6th Floor
Boston, Massachusetts

TABLE OF CONTENTS

EXHIBITS

1.0 INTRODUCTION

On September 25, 2017, Algonquin Gas Transmission, Inc. (Algonquin) received a "*Petition for the PIP Designation for Disposal Site #4-0026243*" (the Petition) from Margaret Bellafiore of Weymouth, Massachusetts, representing a group of 16 residents from Weymouth, Quincy, Braintree, and Hingham. The Petition was also sent to the Massachusetts Department of Environmental Protection (DEP) and TRC Environmental, Inc. (TRC) (Licensed Site Professional, LSP). The Petition is associated with Release Tracking Number (RTN) Disposal Site #4-0026243/4-0026230 (the Disposal Site) and requested its designation as a Public Involvement Plan (PIP) site, under Chapter 21E, Section 14(a) of the Massachusetts General Laws (M.G.L. c. 21E), the State "Superfund" Law, and the Massachusetts Contingency Plan (MCP), 310 CMR, 40.1404). On September 25, 2017, the Disposal Site was identified on DEP's Bureau of Waste Site Cleanup (BWSC) site list as the Calpine Fore River site (Atlantic Bridge Weymouth Compressor Station (Weymouth CS), Site), with a property address of 6 & 50 Bridge Street in Weymouth, Massachusetts (the Property). As a PIP Disposal Site, the preparation and implementation of a PIP is required under the MCP.

This PIP has been prepared by TRC on behalf of Algonquin in accordance with the requirements of the MCP, 310 CMR 40.0000 and utilizing the Bureau of Waste Site Cleanup (BWSC) Public Involvement Plan Interim Guidance Document For Waiver Sites, WSC-800-90 (January 1991). However, as the MCP has been updated and revised over several years, sections of the Guidance document have been modified to incorporate changes in the MCP. An overview of the changes was included in the draft PIP as part of Exhibit III.

MCP Process – Summary

M.G.L. c. 21E and the MCP address environmental releases within the Commonwealth. The MCP includes a body of regulations and associated guidance documents that are required to be utilized in the assessment and remediation activities, also referred to as "response actions", for releases as defined in the MCP that have impacted the environment. The MCP places the responsibility for conducting response actions on the Disposal Site owner.

A Disposal Site owner is required to hire a state-licensed environmental professional called an LSP to perform and oversee the MCP response actions at a Disposal Site. An LSP is licensed by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals based on education, experience, and the satisfactory completion of an examination administered by the Board. TRC has been selected by Algonquin to manage MCP response actions for the Disposal Site and will serve as the LSP of Record who will sign and stamp MCP response action documents. Responsibility for conducting both technical and public involvement activities at the Weymouth CS Disposal Site will be conducted by TRC on behalf of Algonquin. Based on this privatized program, DEP does not provide direct oversight of the MCP response actions, but may provide technical screening audits and ensure that public involvement activities and MCP response actions are conducted in accordance with state law and regulations.

The MCP requires response actions be conducted to address release conditions at sites. These response actions include assessing the nature, source and extent of the contamination; identifying the risk posed by the site; evaluating whether cleanup actions are necessary and if necessary, determining and implementing the most appropriate remedial actions. In addition, the remedial response action process provides opportunities for public involvement throughout the process.

PIP Plan Overview

A draft PIP was prepared by TRC, on behalf of Algonquin, and was reviewed by the public and updated based on comments submitted. This final Plan is implemented in conjunction with the applicable response actions under the MCP for the Disposal Site. The Disposal Site incorporates two previous RTNs identified as #4-0026230 and #4-0026243 which were combined under the MCP Tier Classification Process (further described in Section 2) under RTN #4-0026230 (identified as the primary RTN in the DEP sites database).

This document is the PIP for the Weymouth CS Disposal Site located at 6 and 50 Bridge Street in Weymouth, Massachusetts. Section 2 contains background information on the Disposal Site, MCP environmental assessment and MCP public involvement histories. Section 3 explains how the remedial response action process addresses community concerns that have been raised during the development of the PIP. Section 4 explains the proposed public involvement activities. Section 5 contains a schedule for public involvement activities. Section 6 outlines the roles and responsibilities of those involved in implementing the PIP. It also explains the procedures DEP will use to address situations in which the agency receives complaints about the manner in which the PIP is being implemented. Section 7 describes how the Plan will be revised in the future.

Plan Comment Period

The draft PIP was presented by TRC, on behalf of Algonquin, at a public meeting on November 13, 2017 at 5:30 at the Abigail Adams Middle School at 89 Middle Street, in Weymouth, Massachusetts. Comments on the draft PIP were encouraged and were requested to be voiced at the meeting or in writing to Kelley Race, P.G., LSP, TRC Environmental, Inc. 2 Liberty Square, 6th Floor, Boston, MA 02109 or krace@trcsolutions.com. The public comment period ran from November 14, 2017 through January 5, 2018 (53 days) based on a PIP Petitioner request for an extension to the original 20-day comment period and Algonquin's acknowledgement of Holidays during the draft PIP comment period.

2.0 SITE BACKGROUND

2.1 Site Description and History

The Weymouth CS Disposal Site is located at 6 & 50 Bridge Street in Weymouth, Massachusetts (the Property) (See **Figure 1** - Site Location). The Disposal Site and Property are currently owned by Algonquin, who acquired the Property in December 2016 from Calpine Fore River Energy Center, LLC. The Property is developed with asphalt paved and unpaved access roads, storage areas, and the Algonquin meter and regulator (M&R) station on the southwest portion. A Massachusetts Water Resources Authority (MWRA) pumping station and a pedestrian park adjacent to Kings Cove bound the Property to the north and east, respectively. The Weymouth Fore River is located to the north and west of the Property. The topographic elevation is generally flat ranging from 12 feet above mean sea level (amsl) to 14.62 feet amsl.

Specifically, the Disposal Site as shown on **Figure 2** is identified as an approximate one-acre portion of the approximately 12.3-acre Property within an approximately 4-acre triangular peninsula lying northeast of Route 3A (Bridge Street). The Disposal Site is located within a fenced vacant area in the triangular parcel on the Property. Currently, there are no workers on the Disposal Site and access is restricted by a locked gate. Based on 2010 Census data, the estimated population within ½ mile of the Site is more than 1,000 people. Residential properties lie east and south of King's Cove along streets that connect to Route 3A.

Operational History

Based on a review of available historical maps, the Property consisted of significantly less upland area and was undeveloped in the 1800s. Tideland filling activities occurred in approximately the late 1910s/early 1920s. The source(s) of the material used to fill the subject Property is unknown; however, an off-Property source(s) of material would have been required given that much of the current footprint of the Property was tidal until at least 1917. Information included in a 1997 Response Action Outcome Report (MCP regulatory closure) from 1997 for the Property indicates that the Property received some coal ash from Edgar Station that was reused as fill; however, such filling would have been ancillary to the previous filling of the tidelands and received from an off-Property source as no power generating operations or activities associated with the Edgar Station occurred at the Property.

In addition, based on the Property history and observed surface and subsurface conditions, there is no evidence that the Disposal Site or surrounding Property functioned as a permitted landfill, historic municipal landfill/dump, burn dump or illegal landfill. The Historic Fill present at the Property (based on filling of the Property almost 100 years ago) contains coal, clinkers, and coal ash. These materials were observed by both past consultants (in the 1990s) and also during TRC's recent subsurface investigations. Historically, power generating operations associated with the Edgar Station were to occur in the "proposed Fuel Oil Day Tank and King's Cove Waterfront Park areas," which are shown on figures from 1998 (located in the general area of the Disposal Site), however, no power generating operations were initiated.

Historically, the Disposal Site included an above ground storage tank (AST) which contained approximately 11,256,000 gallons of No. #2 fuel oil and a 6,000-gallon fuel additive AST. Based on previous reports, the 11,256,000-gallon AST was installed in 1974 and the 6,000-gallon fuel additive tank was installed in 1990. Based on aerial photographs, the fuel oil AST was present in 1978 and although the exact removal date of the AST is unknown, it is believed to have been present until at least 2004. Aerial photographs from 2005 show the tank as removed. Historical figures from 1997 and 1998 show the 11,256,000-gallon AST and associated piping as present. The exact date(s) and volume(s) of release(s) of fuel oil from the 11,256,000-gallon AST are unknown. A figure dated 1998 indicates a large berm as present around the 11,256,000-gallon AST, 6,000-gallon fuel additive AST, and piping infrastructure as well on the Property. The piping associated with the large AST is located to the northwest of the AST.

An application and permit to move the 6,000-gallon fuel additive AST from the Property to the Sprague Energy facility at 728 Southern Artery, Quincy, Massachusetts was issued on October 9, 1997. The permit states that the tank was used to store a multi-component diesel fuel additive, and hand-written notations on an historical figure suggest the additive may have included acetone, a common diesel fuel additive. As described in the Class B-1 RAO (ABB, 1997), between May 1991 and January 1992, soil and groundwater samples were collected from the vicinity of the fuel additive tank and analyzed for VOCs, semi-volatile organic compounds (SVOCs), and total petroleum hydrocarbons (TPH). One VOC (toluene), several polyaromatics hydrocarbons (PAHs), and TPH were detected in soil, but at concentrations below MCP reporting threshold. Acetone was not detected in the soil samples. For groundwater, no volatile (including acetone), semi-volatile or petroleum-related compounds were detected. These data indicate that it is unlikely that there was a release from the 6,000-gallon fuel additive AST prior to its removal from the Property in 1997.

Current MCP Release History

Evidence of a release of fuel oil was discovered (based on field observations in a boring) in April 2016, during geotechnical drilling. TRC observed contaminated soils within the subsurface from approximately 14 to 19 feet below ground surface (bgs) at one location (boring B-105) within the approximate footprint of the 11,256,000-gallon No. 2 fuel oil AST. Soil samples were collected and submitted for laboratory analysis of extractable and volatile petroleum hydrocarbons with target compounds including polyaromatic hydrocarbons and target volatile organic compounds.

The Weymouth CS Disposal Site was listed with the DEP in response to a 120-day release notification condition and a 72-hour release notification condition as regulated under the MCP. On July 29, 2016, RTN 4-0026230 was issued by the DEP in response to Reportable Concentrations (RC) of petroleum-related compounds detected in soil above the MCP RC-S1 soil standards. DEP issued RTN 4-26243 in response to an MCP 72-hour reporting condition pursuant to 310 CMR 40.0314 that was triggered when greater than 0.5 inch of light non-aqueous phase liquid (LNAPL) was observed in a monitoring well (MW-201) on the Property.

2.2 Environmental Assessments

Environmental site assessments conducted on the Property date back to 1991 and include an evaluation of subsurface conditions for the proposed Fuel Oil Day Tank and King's Cove Waterfront Park. The subsurface observations show the thickness of fill ranged 2.0 feet to 22.5 feet and was composed of coal ash, river deposits from the Weymouth Fore River and sand with miscellaneous metal debris, brick, and wood. Coal ash deposits were observed throughout the area and specifically, ash, coal, and clinkers were noted to depths of 22 feet below grade. Additional details are provided below.

Release History – On-Site and Nearby Sites

In 1991 -1992, site assessment activities were conducted including installation of test pits and monitoring wells, and the collection of surface water, subsurface soil, and groundwater samples. The assessment activities were conducted to support the Fuel Oil Day Tank and Kings Cove Waterfront Park as part of the Edgar Energy Park. No releases of oil and/or hazardous materials were identified. Boring logs from the assessment activities indicate ash and coal clinkers as present in the subsurface.

In July 1997, a Class B-1 Response Action Outcome Statement (RAO Statement) was prepared by ABB Environmental Services (ABB), on behalf of BECO, and submitted for RTN 3-2387. The Class B-1 RAO statement included portions of this Disposal Site and indicated no remedial actions were required, including no activity and use limitations (AULs), given the existence of the condition of no significant risk. The RAO report identified two ASTs were located at the RAO site (the Disposal Site as referenced in this PIP). The tanks were installed in 1974 and 1990, contained No. 2 Fuel Oil and Fuel Additive (believed to be acetone), and had capacities of 11,256,000 gallons and 6,000 gallons, respectively. The 1997 RAO report identified concentrations of contaminated soil that exceeded applicable cleanup criteria (e.g., arsenic concentrations), but the concentrations were attributed to the presence of coal ash, which was observed during boring advancement and test pitting on Site. ABB indicated that the identified contaminant concentrations were not reportable to DEP due to an MCP reporting exemption for coal/coal ash. ABB indicated that no releases of oil and/or hazardous materials were known to have occurred at this location.

In January 2003, A Utility-related Release Abatement Measure (URAM) Completion report was submitted for a URAM (RTN 3-21150) conducted in 2001-2002 at the MWRA property (located north of the Disposal Site and Property) due to petroleum discovered in soils prior to the construction of the MWRA tunnel which was to be used to transport waste water. Approximately 476 tons of petroleum-impacted soils were excavated from approximately 20 to 28 feet below ground surface and transported off-site to Chemical Recycling Services in Maine for disposal. This MCP release site is located north of the Disposal Site. (As described in the Response to Comments, TRC installed several borings and monitoring wells in between the release associated with the MWRA URAM site and the Disposal Site). No petroleum contaminated soil (or groundwater) was encountered in the subsurface locations between the two release sites).

MCP Disposal Site Compliance – Summary of Completed Environmental Studies

On July 29, 2016, during gauging of monitoring wells on the Disposal Site, TRC identified greater than 0.5 inch of LNAPL in monitoring well MW-201, triggering a 72-hour reporting condition, pursuant to 310 CMR 40.0313(1). DEP was notified on the same day. Following notification of the 72-hour Immediate Response Action (IRA) condition, the DEP assigned RTN 4-26243. In addition to the 72-hour release notification, a 120-day release notification condition was identified due to petroleum-related constituents greater than the RCs, triggering DEP notification and issuance of RTN 4-26230.

In September 2016, an IRA Plan was submitted to eDEP that summarized assessment activities completed in August and September 2016 and planned for fall 2016 to evaluate the nature and extent of LNAPL identified on Disposal Site.

In November 2016, IRA Status Report #1 was prepared and submitted to eDEP summarizing assessment activities completed in the fall of 2016 and future activities planned for December 2016 – May 2017.

In May 2017, IRA Status Report #2 was submitted to eDEP that summarized the results of activities performed during December 2016 to May 2017 that further evaluated the nature and extent of LNAPL and contamination at the Disposal Site.

In July 2017, a Phase I Initial Site Investigation and Tier Classification (Phase I ISI/TC) was submitted to eDEP that summarized assessment activities conducted during June 2015 through May 2017. The Disposal Site was classified as a Tier II Disposal Site. Public notification, as required by the MCP, was conducted.

The subsurface investigations (see Figure 3) and data collection completed to date for the Disposal Site (includes sampling locations on and off the Disposal Site) include the following:

- Installation of 10 geotechnical borings B-1 through 10 in June 2015;
- Installation of 3 test pits TP-1, 2 and 3 in December 2015;
- Installation of 8 geotechnical borings B-101 through 108 in April 2016;
- Installation of 5 soil borings B/MW-201 through B/MW-205 in May 2016 and completion as monitoring wells;
- Installation of 18 small diameter borings (B-300 through B315 and B317 through B-319) in October 2016;
- Installation of 18 soil borings (B-400 through B-417), and completion of monitoring wells in each of the borings in December 2016;
- Groundwater sampling in August 2016, November 2016, January 2017, March 2017, and June 2017;
- Thirty-Eight (38) groundwater gauging events in 2016 and 2017; and
- Soil and groundwater samples (generally analysis included volatile petroleum hydrocarbons, extractable petroleum hydrocarbons, metals, among other analysis) collected in 2016 to 2017 and included the following:

- 19 soil samples including 2 duplicate samples in the petroleum release area;
- 64 soil samples including 1 duplicate sample to evaluate historic fill samples/outside the Disposal Site boundary;
- 9 soil samples of the petroleum saturated soil;
- 12 samples for specialty analysis of petroleum migration;
- 22 groundwater samples (three seasonal rounds from 6 wells, including 4 duplicate samples); and
- 61 groundwater samples (three seasonal rounds from 16 monitoring wells; 4 rounds from one well and five rounds from 1 well including 4 duplicate samples) representative of historic fill area/background conditions.

MCP Compliance - On-going Environmental Studies

Currently, MCP response actions are being managed under an IRA. IRA Status Report #3 was submitted on November 16, 2017. Unless regulatory closure activities are achieved prior to May 2018, an IRA Completion Report or IRA Status Report #4 will be due in May 2018.

2.3 Public Involvement History

On September 25, 2017, Algonquin received a PIP Petition from 16 residents requesting RTN 4-0026243 be designated as a PIP Disposal Site. In accordance with the MCP, 310 CMR 40.1404, the Disposal Site was designated as a PIP Disposal Site, and Algonquin prepared a draft PIP to conduct public involvement activities at the Disposal Site. As part of the PIP Process, TRC, on behalf of Algonquin, provided the PIP Petitioners, the DEP, the Weymouth Board of Health, and the Weymouth Mayor's Office with the following correspondence (sent through the U.S. Mail):

- October 10, 2017 - Petition for PIP Designation Letter for RTN #4-0026243 (acknowledging PIP request)

- October 24, 2017 – Public Involvement Plan - Petitioners Interview Request for RTN #4-0026243

- October 24, 2017 – Notice of a PIP Plan Meeting for RTN #4-0026243 (and 4-0026230)

- October 27, 2017 – Publication of legal notice in the Boston Globe and Patriot Ledger

As part of the initial PIP request, TRC received 4 requests (through email) for interviews from the PIP Petitioners and received a response from the Weymouth Board of Health to clarify information. Petitioners requested interviews by email. On November 3, 2017, TRC contacted the 4 Petitioners by email to gauge their concerns regarding the following:

- Concerns about the nature and extent of contamination;
- Concerns about the routes of exposure and neighborhood health issues;
- Concerns about the site remediation process;

- Concerns about opportunities for public involvement during the remedial response actions; and
- Other concerns.

Three of the four PIP interviewees responded via email, indicating in general, their plan to compile questions/concerns for the PIP meeting. This information is presented in Exhibit I. Specific concerns with regard to the Disposal Site contamination have been received and Responses to Comments are provided in Exhibit I. Exhibit I as part of the draft PIP has been updated to reflect concerns identified at the PIP Meeting and as part of finalization of the draft PIP Plan.

Although the draft PIP had not been presented at the public meeting, the lead PIP Petitioner requested a 20-day extension period on November 7, 2017. Therefore in accordance with 310 CMR 40.1405 (6)(1), the public comment period on the draft PIP was extended an additional 20 days. In addition, Algonquin acknowledged the Holidays during the PIP Comment period and further extended the comment period to January 5, 2018 (53 days).

Concerns associated with the Disposal Site contamination have been received from public officials and are included in Exhibit I as part of the Response to Comments.

3.0 ADDRESSING PUBLIC CONCERNS

The process for assessing and cleaning up disposal sites, as set forth in the MCP (310 CMR 40.0000), is designed to address the effects of the site on health, safety, public welfare, and the environment. Once a release of oil or hazardous materials has been confirmed at a disposal site and Phase I of the remedial response action has been performed, the MCP process may proceed. The process may proceed, as applicable, to:

- Undertake a comprehensive field investigation of the nature and extent of the contamination and evaluation of any risks posed to the public and the environment from the site;

- Identify and evaluate a remedial response action alternative and selection of feasible measures that will achieve a permanent solutions at the site; and

- Implement the selected remedial response actions.

Physical work at a disposal site includes sampling and other environmental field testing, and the implementation of the selected response actions. It may also include the implementation of measures designed to stabilize conditions at the site to prevent the continued migration of contaminants or eliminate an imminent threat to public health, safety, welfare or the environment until planning for the remedial response is underway (i.e., Immediate Response Actions or Release Abatement Measures).

The MCP allows for the closure of a Disposal Site once a Permanent or a Temporary Solution has been achieved. Permanent and Temporary Solutions may be achieved, with or without Conditions, and an Activity and Use Limitation (AUL) that will restrict certain activities and uses of the Disposal Site based on risk.

4.0 PUBLIC INVOLVEMENT ACTIVITIES

In accordance with the MCP, activities undertaken to involve the public in response actions serve two purposes:

- Informs the public about the risks posed by the Disposal Site, the status of response actions and the opportunities for public involvement; and

- Provides an opportunity to solicit the concerns of the public about the Disposal Site and response actions so that, to the extent possible, these concerns can be addressed and incorporated in planning remedial response actions.

To meet each of these objectives, TRC on behalf of Algonquin proposes to undertake specific activities during the remedial response process at the Weymouth CS Disposal Site. These activities are described below.

Informing the Public

TRC, on behalf of Algonquin, will provide Disposal Site-specific information to the public by establishing information repositories; developing and maintaining a Disposal Site mailing list to distribute information about the Disposal Site; and providing advance notification to local officials and residents about Disposal Site activities.

4.1 Information Repositories

Publicly Available Site Files: A file on the Calpine Fore River (as identified in the eDEP database) disposal site is maintained at the Southeast Regional DEP Office. The file contains the documents pertaining to the Disposal Site with the exception of any enforcement-sensitive material. As new MCP reports are developed, copies of the reports are required to be uploaded to eDEP which are available for on-line reviewing. Hard copies of reports are not maintained by DEP. MCP Disposal Site files can be accessed through eDEP at the following:

http://www.mass.gov/dep

For additional Disposal Site specific information, the public may contact the following DEP representative:

Mr. Gerard Martin
BWSC Deputy Regional Director
Department of Environmental Protection
Southeast Regional Office (SERO)
20 Riverside Drive
Lakeville, Massachusetts 02347
(508) 946-2700
Gerard.Martin@state.ma.us

Local Information Repositories: TRC on behalf of Algonquin has established and will maintain two local information repositories to provide Weymouth residents with easy access to information about the Disposal Site cleanup process and results of Disposal Site investigations. The Disposal Site information repository will include copies of information related to the Disposal Site. Information will be sent to the repository by TRC/Algonquin as it is developed. The information repository for the Weymouth CS Disposal Site was originally set up at the Weymouth Public Library at 220 North Street in North Weymouth based on other earlier project documents that were provided to that library which is closest to the Disposal Site. However, in speaking to Library personnel, Disposal Site files were transferred to Tufts Public Library in late November 2017 and were/are available for public review.

As requested as part of PIP Comments, the information repositories will include the following:

Weymouth Health Department
Town of Weymouth
75 Middle Street
Weymouth, MA 02189
Phone: (781) 335-2000
Fax: (781) 335-3283
Hours: 8:30am - 4:30pm Monday – Friday

Tufts Public Library
46 Broad Street
Weymouth, MA 02188
Phone: (781) 337-1402
Fax: (781) 682-6123
Hours: Monday- Thursday 9AM to 9 PM
Friday: 9 AM to 5 PM
Saturday: 9 AM to 5 PM
Sunday: closed

The PIP requirements in the MCP identifies the following requirements: "Public Involvement Activities conducted at PIP Sites shall focus on the community (ies) in which the Disposal Site is located and shall include other communities which are, or likely to be affected by the Disposal Site." Based on the information presented at the PIP meeting and the investigations conducted to date, the Disposal Site is located in the southwest corner of the North Parcel of the Algonquin Property in the Town of Weymouth. The Disposal Site is roughly coincident with the location of a former 11 million gallon above ground storage tank (AST). The Disposal Site does not encompass the entire Algonquin Property, or the entire peninsula also occupied by Calpine and MWRA. Based on the location of the Disposal Site and the subsurface investigations conducted to date, the Disposal Site does not impact other communities or waterways.

4.2 Site Mailing List

Algonquin and TRC have established a master mailing list for the Weymouth CS MCP Site. Anyone who wishes to be placed on the master list may be added or deleted (if already on the list and wish to be removed) by emailing Kelley Race or Ryan Niles at the addresses listed below. The mailing list will be used to announce upcoming public meetings, distribute fact sheets, provide notices of public comment periods on and the availability of documents in the information repositories, and any other relevant information about the Disposal Site. TRC, along with Algonquin, will maintain the mailing list and update it as necessary.

Anyone wishing to be added to the mailing list can call or write to:

Address: Kelley Race, P.G., LSP (LSP of Record)
Ryan Niles, P.G.
2 Liberty Square, 6th Floor
Boston, MA 02109

Email: krace@trcsolutions.com
rniles@trcsolutions.com

4.3 Notification of Major Milestones and Events

The MCP requires community notification (310 CMR 40.1403) of major planning and implementation milestones at regulated sites. Major milestones requiring notice include:

1) Field work involving the implementation for any IRAs for Imminent Hazards;
2) The implementation of any RAMs;
3) The use of respirators or level A, B, or C protective clothing;
4) Residential sampling; and
5) Phase IV remedial actions.

Community notification is also required at the completion of the following milestones:

1) IRA Completion Statements for Imminent Hazards;
2) Each Phase of the MCP Process (e.g. Phase II, III);
3) Permanent or Temporary Solution Statements (PSS or TSS);
4) Activity and Use Limitations; and
5) Downgradient Property Status (DPS).

Notification of field work involving the implementation for any IRAs for Imminent Hazards will include information on the type of work and its approximate duration. However, at this time, no Imminent Hazards have been identified at the Disposal Site. Notification will be made by TRC, on behalf of Algonquin, to the people on the Notification List by telephone the day before activity is scheduled to begin. Notification at the end of a remedial phase will include a summary of the phase report and information on where the report can be reviewed.

As required by the MCP, notification to the Chief Municipal Officer (CMO) (Mayor) and the Board of Health (BOH) concerning field work activities (as identified above) will include information on the type of work and its approximate duration. Notification will be made by TRC, or if applicable Algonquin, to the CMO and BOH, by first class mail at least three days prior to the start of field work. Notification to PIP Petitioners will be at the end of a remedial phase indicated above and will include a brief description of the phase report and where the community can review the full report (e.g., DEP website). TRC has not included the list of PIP Petitioners (and subsequent people who wish to be added to the list) in this PIP to maintain the privacy of individuals. However, it is our understanding a copy of the PIP Petitioners list has been forwarded to DEP.

In addition, the Weymouth Fire and Police Departments will be notified in situations where public safety is a concern.

4.4 Other Public Involvement Activities to Provide Information

At this time, the PIP Group has requested the addition of a second information repository at the Health Department in the Town of Weymouth as well as publication of meeting notices in the Weymouth News.

5.0 SOLICITING PUBLIC INPUT

TRC and Algonquin will provide opportunities for public input regarding site cleanup decisions by holding public comment periods to provide additional opportunities for oral and written input regarding site cleanup decisions and preparing summaries of comments received during the public comment period and responses to them.

5.1 Public Meetings

TRC and Algonquin will hold public meetings for the milestone response actions. The public will be notified of the public meeting 14 days in advance. Algonquin will place a legal advertisement in the Boston Globe and/or the Patriot Ledger as well as the Weymouth News (as requested by the PIP Group) regarding the meeting date, location, and time of the public meeting; and provide a copy of the advertisement to the PIP Group, the CMO, the BOH, and the DEP. The schedule presented in Exhibit II is subject to change based upon various factors including but not limited to weather.

5.2 Public Comment Periods

TRC and Algonquin will provide specific opportunities for the public to submit comments about documents concerning the Disposal Site. When key documents are available in draft form, they will be provided to the information repository and a notice of their availability will be sent to the PIP mailing list. The notice will include the title of the document, where it is available for review, information about how to submit comments to TRC and Algonquin, and the length of the public comment period. TRC and Algonquin will determine the length of the comment period, which will normally be 20 calendar days, but may be longer if warranted by the complexity of a particular document or if requested by the public.

Comment periods for proposed response actions may be reduced or eliminated (with DEP's review and concurrence) if the nature of the hazard dictates that response actions be performed immediately. Algonquin and TRC will be responsible for providing copies of documents to the information repositories and to the DEP Disposal site file (eDEP), as well as sending out notices of availability of MCP documents (see list below) that have been prepared.

Documents available for public meetings and comment will include as necessary:

- The draft Public Involvement Plan;
- Phase II Scope of Work (Comprehensive Site Assessment, CSA);
- Phase II CSA Report;
- Phase III Remedial Action Plan;
- Phase IV Remedy Implementation Plan;
- IRA or RAM Plans and Completion Statements;
- Temporary or Permanent Solutions Statements; and
- Activity and Use Limitations (AULs).

5.3 Response to Comments

TRC, on behalf of Algonquin, will prepare a summary of comments received on each document available for public comment, and TRC's/Algonquin's responses to these comments. A copy of this response summary will be sent by first class mail to all those who submitted comments (if an address was provided) and will be placed in the information repository and the DEP Disposal Site file (uploaded through eDEP). To date, many of the PIP Comments were received by email, therefore, TRC will provide an email copy of the Response to Comments to the community members who submitted email copies. TRC/Algonquin will also send a notice of availability of the response summary to the mailing list. The summary will be made available prior to Algonquin undertaking the remedial response action submitted for comment, or prior to moving to the next MCP phase.

6.0 SCHEDULE FOR PUBLIC INVOLVEMENT ACTIVITIES

Exhibit II provides a schedule of the public involvement activities listed in Section 5.0, as applicable to date. The schedule specifies the milestones during the remedial response action when public involvement activities will be conducted. The schedule presented in Exhibit II is subject to change based upon various factors including but not limited to weather.

7.0 RESPONSIBILITY FOR IMPLEMENTING THE PUBLIC INVOLVEMENT PLAN

Algonquin is responsible for conducting public involvement activities for this Disposal Site and will utilize TRC to conduct the activities. In this regard, TRC, on behalf of Algonquin, developed the draft PIP to solicit public comment from which the final PIP has been prepared.

8.0 REVISIONS TO THIS PLAN

This PIP may be revised as necessary during the course of the remedial response action process. If revisions are proposed, TRC, on behalf of Algonquin, will place copies of the proposed changes in the local information repository, and will send a notice of the availability of proposed changes to the PIP mailing list. Algonquin will review comments received and revise the PIP as appropriate. The final revised PIP will be placed in the information repository.

Exhibit I

Public Concerns

Concerns Identified By the Community

In a letter dated October 10, 2017 recognizing PIP Designation, TRC, on behalf of Algonquin, requested the PIP Petitioners provide contact information (e.g., email and or phone) for a follow-up interview to collect information on the concerns of the community with regard to the Disposal Site. The CMO and BOH as well as DEP were provided letters as well.

Concerns on the following were requested:

1. *Concerns about the nature and extent of contamination*:

2. *Concerns about the routes of exposure and neighborhood health issues*:

3. *Concerns about the site remediation process:*

4. *Concerns about opportunities for public involvement during the remedial response actions*:

5. *Other concerns*:

In a subsequent letter dated October 24, 2017, we contacted the PIP Group (the CMO, BOH, and DEP were also provided copies of the letters), requesting their concerns (as identified above). TRC received email correspondence from four PIP Petitioners providing contact information. An email was sent to each of the four petitioners on November 3, 2017. The Petitioners indicted they would provide their concerns at the Public Meeting scheduled for November 13, 2017. Based on the PIP Meeting held on November 13, 2017, TRC received several comments. The comments and responses are provided on the following pages and were provided to the community as identified in Section 5.3.

Atlantic Bridge Project, Weymouth, Massachusetts
Public Involvement Plan (PIP) Meeting Comments/Responses
PIP Meeting- November 13, 2017
Comment Period Close: January 5, 2018
Comments Responses Date: January 30, 2018
RTN 4-0026230

TRC Environmental Corp. (TRC), on behalf of Algonquin Gas Transmission, LLC (Algonquin) has prepared the following responses based on comments received and compiled in response to the draft Public Involvement Plan (PIP) Meeting held on November 13, 2017 for the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000), Release Tracking Number (RTN 4-0026230) Atlantic Bridge Project, Weymouth Compressor Station, located at 6 & 50 Bridge Street in Weymouth, Massachusetts (the Disposal Site). For the purposes of MCP assessment and compliance, the Disposal Site, as defined herein (and within the context of the MCP), includes an approximately 1-acre parcel within the approximately 4-acre North Parcel (triangular shaped parcel) of the Property where the planned Compressor Station will be located.

Comments collected at the PIP Meeting and from email and letters are identified below as follows: Comments received are in *italic* and response are in normal font. PIP Petitioners requested an additional 20-day extension and based on the extension falling into the holiday week, Algonquin extended the PIP comment period to January 5, 2018 (53 days).

In preparing the responses to comments, it should be noted that many of the comments requested additional information on the nature and extent of contamination as well as the risk posed by the MCP Disposal Site. In addition, many of the comments were very similar and/or requested similar information.

To date, MCP response action reports uploaded to eDEP and the existing information repository include the following:

- Phase I Initial Site Investigation and Tier Classification (dated July 27, 2017)
- Immediate Response Action (IRA) Plan (dated September 15, 2017)
- IRA Status Reports #1 (dated November 22, 2017)
- IRA Status Report #2 (dated May 22, 2017)
- IRA Status Report #3 (dated November 16, 2017)
- Draft Public Involvement Plan (PIP) (dated November 13, 2017)
- Misc BWSC filing information (see eDEP)

Additional MCP draft documents for the Disposal Site that will be available for public comment with more detailed technical information including the risk characterization will be forth coming (as discussed at the PIP Meeting on November 13, 2017). These additional MCP draft

documents will provide a detailed data analysis and information on contaminant conditions, the Disposal Site boundary, the risk posed by the Disposal Site contamination, and regulatory closure options. Responses to the comments have been addressed based on the information in the MCP reports filed to date and with the understanding that more detailed information will be conveyed at the next PIP Meeting and in the additional draft MCP documents that will be available for public comment.

Section 1 contains the summarized comments, concerns, and questions raised during the November 13, 2017 PIP Meeting. The comments/responses were grouped into categories as identified in the draft PIP and requirements for PIP Plans established by the Massachusetts Department of Environmental Protection (MassDEP). Six categories of comments were assigned, numbered 1 to 6 in Section I. Within each of the six categories, individual comments were assigned a letter. For example, in Category 1 (Comments Related to the Public Involvement Plan/Public Involvement Plan Process), 14 general comments were noted, labeled Comments 1a through 1n in Section I. Responses to each comment are provided directly following each comment. Three TRC note takers were present in the audience and compiled the comments.

Section II includes all email correspondence and was directly cited from the body of the email and or letter attached to the email. Each email received was assigned a number, and if multiple comments were contained within that email, the individual comments were assigned letters. For example, Commenter 7 provided five comments which are designated Comments 7a through 7e in Section II. Responses to each comment are provided directly following each comment. TRC has maintained a list of the commenters and contact information but has not included the identity of the commenter based on the PIP Meeting where several attendees did not wish to provide a name for the sign-in list. Many of the emails contained similar concerns and several were direct copies of other email concerns. TRC and Algonquin, in providing responses, did not delete copies of repetitive email comments. In cases of similar comments, a reference to an earlier comment response has been provided, where applicable. Comments not directly in reference to the MCP process or regulations were included and noted.

Section III includes comments from letters received through US postal mail during the PIP comment period. As for the email correspondence, each letter received was assigned a number, and if multiple comments were contained within that letter, the individual comments were assigned letters. Responses are provided directly following each comment. As discussed above, the identity of the commenters has not been included.

I. Concerns Posed During the November 13, 2017 PIP Meeting

1. Concerns Related to the Public Involvement Plan/Public Involvement Plan Process

1a. The Tufts Library should be used as the information repository.

TRC, on behalf of Algonquin, has established information repositories at the Tufts Library and the Town of Weymouth Health Department, in addition to the North Weymouth Branch Library. The North Weymouth Branch Library was originally selected based on its proximity to the Disposal Site and immediate neighborhood, as well as in consideration of other project-related documents that were historically provided to that library. In discussions with the Tufts Librarian, MCP-related documents at the North Branch were moved to the Tufts Library in Late November 2017.

1b. The 5:30 PM Public Involvement Plan Meeting time was not convenient. The time should be moved to 7:00 PM.

TRC and Algonquin will schedule future PIP meetings at 7:00 pm. The meeting time was selected based on previous project-related meetings and community members asking to attend a meeting directly after work rather than going home first and coming back out again.

1c. The request was made to also publish notices in the Weymouth News.

In addition to notices published in the Boston Globe and Patriot Ledger, Algonquin will publish public meeting notices in the Weymouth News.

1d. Future Public Involvement Plan Meetings should be videotaped and shared with Weymouth, Braintree and Quincy.

TRC, on behalf of Algonquin, will consider videotaping meetings based on the accommodations available at the public meeting space. The meeting was videotaped by members of the PIP group.

1e. The request was made to provide a list of original comments/questions provided at the Public Involvement Plan Meeting in spreadsheet form.

TRC note takers present at the November 13, 2017 PIP meeting have compiled comments which are included in Section I, Comment Categories (and corresponding Responses) 1 through 6.

1f. The Public Involvement Plan states that the comment period may be shortened for immediate response actions. The request was made to commit to not reducing the comment period in these cases.

The Massachusetts Contingency Plan (310 CMR 40.0000) allows for a shortened comment period associated with Immediate Response Actions (IRAs) to address conditions that need to be managed immediately. TRC and Algonquin will continue to follow the requirements of the MCP.

1g. *Concern was expressed that there was inadequate notification for the draft Public Involvement Plan/Public Involvement Plan Meeting, and the draft Public Involvement Plan was released only one business day prior to the meeting. Requests were made for the use of social media and technology for outreach and notification for the public to make the process more transparent and reach more people including the youth, and for the Town to place notices on their website.*

The MCP requires the draft Public Involvement Plan (PIP) "be made available for public review on the date of the public meeting to present it". TRC on behalf of Algonquin complied with the MCP but at the request of a PIP Petitioner provided an "advance copy", prior to the meeting. The MCP requires the use of mail, public notices in a newspaper served by the community and establishment of an information repository for outreach. TRC and Algonquin will follow the requirements of the MCP.

1h. *Requests were made to use more common language and fewer acronyms in the Public Involvement Plan and at future meetings. Commenters felt that the process needs to be explained better, and that there were not enough details in the Public Involvement Plan.*

The elements of a PIP are identified in the MCP. TRC on behalf of Algonquin followed the requirements of the regulations. TRC provided a list of acronyms in the slide presentation materials provided at the PIP meeting but understands the complexity of the terms. TRC will use less acronyms at future meetings. The PIP is not a document where significant technical details are provided as the document is a general overview for the public process required. Future MCP documents will provide detailed Disposal Site information as required in the regulations. All MCP documents submitted to date are available on MassDEP's website, the North Weymouth library repository and will be provided to two additional repositories at the Town of Weymouth Health Department and the Tufts Library, as requested by the public.

1i. *A request was made to clarify the yellow and red symbols on Figure 3 in the Public Involvement Plan.*

The yellow symbols are monitoring wells and the red dot symbols in the yellow circle are soil boring locations. These symbol references were provided in the legend at the bottom of Figure 3.

1j. The public questioned where to find historical and current technical information on the site. The request was made to add links to the Public Involvement Plan of where on-line information can be found.

On page 4-1 of the draft PIP, a link to MassDEP's on-line MCP Site files was provided. The link to MassDEP is as follows: http://www.mass.gov/dep. (http://public.dep.state.ma.us/SearchableSites2/Search.aspx). The Release Tracking Numbers (RTNs) for the MCP Disposal Sites are identified as 4-0026230 and 4-0026243 and the Disposal Sites are located in the Town of Weymouth.

1k. A commenter questioned if email could be used for comments.

At the PIP meeting, the speaker indicated comments on the PIP could be provided by email. On page 4-2 of the draft PIP and on slide 1 and 17 of the November 13, 2017 presentation, email addresses for comments were provided.

1l. There were a number of questions posed concerning the next steps of the Public Involvement Plan Process. The questions included: When will the next meeting be held? What will its purpose be? When will technical information be presented such as the remedial plan and the health risks?

The next public meeting will be held after completion of the PIP Comment Responses and finalization of the draft PIP. At the draft PIP Meeting, TRC indicated responses to comments and the Final PIP will be finalized by January 30, 2018. We anticipate a future public meeting in February or March depending upon the availability of MassDEP staff and other presenters. The purpose of the meeting will be to discuss the details of the subsurface investigations conducted to date, discuss the site-specific risk assessment, present the Immediate Response Action Completion Report, identify regulatory closure options including a Permanent Solution with Conditions and the Activity and Use Limitations to be imposed on the Disposal Site.

1m. Who oversees the Public Involvement Plan Process?

The PIP process is part of the requirements of the MCP. The MCP is regulated by the MassDEP. In 1993, a privatized program was implemented whereby the

requirements and provisions of the MCP are overseen by a Licensed Site Professional (LSP). Based on the classification of the Disposal Site as a Tier II Site, the PIP process is overseen by an LSP.

1n. Comments were made that the notification process was not sufficient outside the immediate area and should extend to Quincy, Braintree and Hingham, including publication of notices in local newspapers in these communities, setting up information repositories in these communities, and holding PIP Meetings in Quincy. Local newspapers, libraries and schools were suggested. The concerns stemmed from the impacts of climate change on spreading the contamination, the connection of the communities by the waterways, and the proximity of the communities to one another.

The PIP requirements in the MCP identifies the following requirements: "Public Involvement Activities conducted at PIP Sites shall focus on the community (ies) in which the Disposal Site is located and shall include other communities which are, or likely to be affected by the Disposal Site." Based on the information presented at the PIP meeting and the investigations conducted to date, the Disposal Site is located in the southwest corner of the Algonquin Property in the Town of Weymouth. The Disposal Site is roughly coincident with the location of the 11 million gallon former above ground storage tank (AST). The Disposal Site does not encompass the entire Algonquin Property, nor the remaining peninsula occupied by Calpine and MWRA. Based on the location of the Disposal Site and the subsurface investigations conducted to date, the Disposal Site does not impact other communities or waterways.

2. Comments Related to the Nature and Extent of Contamination

2a. Historically the Fore River Shipyard dumped oil onto the ground indicating widespread oil may be present. In addition, petroleum contamination was noted in the MWRA tunnel borings in 2001, indicating that petroleum has migrated. The request was made for a full assessment of the peninsula/north parcel and full restoration of the north parcel/Fore River Basin.

Sixty soil borings (some completed as monitoring wells) and three test pits were installed at the Algonquin Property (north parcel). Of these, the three test pits are located outside of the Disposal Site area, and approximately 26 soil borings are located outside of the Disposal Site area. Petroleum contamination was not detected in the borings/test pits located outside of the Disposal Site area. In regard to the MWRA petroleum contamination, this site is located approximately 300+ feet east of the Disposal Site, along Kings Cove. Several borings were installed between the MWRA tunnel (along Kings Cove) and the Disposal Site.

Petroleum was not found in these borings indicating that there is no connection between the petroleum detected along the MWRA tunnel boring and the Disposal Site.

2b. A question was posed as to whether it is typical for releases to occur at tanks.

Based on TRC's experience, some releases do occur from tanks.

2c. What type of testing was performed for PAHs? Were PAHs present and at what levels?

Seventeen PAHs were analyzed as part of the Extractable Petroleum Hydrocarbon (EPH) analysis, an approved MassDEP analytical method for the characterization of petroleum and petroleum-related constituents. The PAH analytical results are presented in the analytical tables in the Phase I Initial Site Investigation (ISI) report available on eDEP (under the RTN) and in the information repositories.

2d. The public commented that there is a concern about metals, not just petroleum.

Historically, metal contaminant concentrations were detected in soil that exceeded applicable MCP cleanup standards (e.g., arsenic concentrations of up to 228 mg/kg). The concentrations were attributed to the presence of coal/coal ash, which was observed during boring advancement and test pitting on the Property and Disposal Site. Earlier consultants achieved regulatory closure for the site and opined that metal contaminant concentrations identified were not reportable to MassDEP due to an MCP reporting exemption for coal/coal ash. Review of available historical maps indicate that the Property consisted of significantly less upland area and was undeveloped in the 1800s. Tideland filling activities occurred in approximately the late 1910s/early 1920s. The source(s) of the material used to fill the subject Property is unknown; however, an off--Property source(s) of material would have been required given that much of the current footprint of the Property was tidal until at least 1917. Information included in a Response Action Outcome Report (MCP regulatory closure) from 1997 for the Property indicates that the Property received some coal ash from Edgar Station that was reused as fill; however, such filling would have been ancillary to the previous filling of the tidelands and received from an off-Property source as no power generating operations or activities associated with the Edgar Station occurred at the Property. In addition, based on the Property history and observed surface and subsurface conditions, there is no evidence that the Disposal Site or surrounding Property functioned as a permitted landfill, historic municipal landfill/dump, burn dump or illegal landfill. The Historic Fill present at the Property (based on filling of the

Property almost 100 years ago) contains coal, clinkers, and coal ash. These materials were observed by both past consultants (in the 1990s) and also during TRC's recent subsurface investigations. In addition, based on the review of past reports, TRC also identified arsenic concentrations consistent with historical concentrations. Additional information on the Historic Fill present at the Property (including the metals concentrations) will be presented at the next PIP Meeting. Conditions for soil/fill management and to control exposures will be placed on the Property as part of the MCP closure process.

2e. *Concerns were voiced that the extent of the contamination was not fully identified and the scope of the investigation appears to be very narrow. The public questioned when the data were collected, how the site boundary was drawn, how deep the contamination extends, how far the site contaminants have traveled, whether there are impacts to the harbor, and the lack of borings/wells in some locations (e.g., on the east side of the former tank).*

The topography of the Property indicates that grades were raised above natural, pre-existing conditions. Historical documents, including topographic maps, indicate the Property was filled sometime in the late 1910s/early 1920s. To evaluate Disposal Site conditions, TRC oversaw the installation of sixty-three (63) soil borings (some completed as monitoring wells) and three (3) test pits that were installed at the Algonquin Property (north parcel). The locations of the borings and monitoring wells are across the entire triangular (north parcel) approximately 4-acre parcel. Of the sixty borings (60), twenty-six (26) are located outside of the Disposal Site. The three test pits are also located outside of the Disposal Site area. Thirty-four (34) borings (some completed as monitoring wells) are located within the approximately 1-acre Disposal Site. The next PIP Meeting will include a discussion of the sampling approach for soil and groundwater, the nature and extent as well as the fate and transport of contamination, and the Disposal Site boundary.

2f. *Commenters indicated that they did not feel there was adequate testing of air and soil, and the entire site was not investigated (e.g., the ash heap). They indicated the need for expanded testing to determine who is being affected by the pollution.*

See Responses to Comments 2a and 2e.

2g. *Related to groundwater, questions were raised why there was no groundwater monitoring between 1997 and 2015, and how can it be stated that the groundwater is not contaminated if there is oil floating on it. How will the oil below sea level be managed?*

No groundwater testing was conducted between 1997 and 2015 because the previous MCP site had achieved regulatory closure in 1997. Dissolved contaminant concentrations in groundwater above applicable standards have not been identified even though petroleum (including free product) has been identified at the Disposal Site. Based on the collection of several rounds of groundwater measurements, the type of petroleum identified at the Disposal Site is highly viscous and is not migrating.

3. Concerns about Routes of Exposure and Neighborhood Health Issues:

3a. One commenter pointed out that this is an environmental justice community with concerns about disease and cancer, and therefore, the site should be cleaned up.

The Disposal Site is regulated under the MCP and Disposal Site closure will require meeting the applicable regulatory requirements.

3b. The public wants to know the toxic nature of these materials to humans and the environment.

A draft risk assessment has been performed for the petroleum contamination associated with this Disposal Site, and will be available for review as part of the PIP process. The methods and results of the draft risk assessment will also be discussed at the next PIP Meeting. Although the petroleum contamination in soil and groundwater does not pose a current risk to humans or the environment, based on criteria established in the MCP, the presence of free phase petroleum material (also called light non-aqueous phase liquid) at a depth of at least 10 feet below ground surface requires that an Activity and Use Limitation be placed on the Property to maintain a condition of no significant risk in the future. Although the Historic Fill has not been evaluated in the risk assessment, there will be additional conditions placed on the Property to minimize exposure to the Historic Fill contamination such as the placement of a clean soil layer over the Historic Fill. In addition, the use of a Health and Safety Plan and a Soil and Groundwater Management Plan will be required when any work that disturbs soil or groundwater at the Property is performed to protect workers performing the work and others near the Property.

4. Concerns about the Site Remediation Process:

4a. Questions were posed concerning the impact of remediation/disturbance on the contamination including: How will leaching of the metals into the river be controlled? How will exposure of residents to dust be prevented? How will water sprayed for dust suppression be prevented from flowing into the bay? How will the community be protected during soil disturbance? How will public safety be protected?

Disturbance of soil and/or groundwater at the Property will be managed under a Soil and Groundwater Management Plan and applicable MCP requirements that consider public safety and the environment will be met.

5. Concerns for Opportunities for Public Involvement During the Remedial Response Actions:

5a. The public wanted to know what recourse they had if their comments/concerns were not adequately addressed, or if they disagreed with the remedial plan. What happens in these cases?

Comments made on the process and MCP documents will be evaluated and considered for incorporation into final plans/reports. Commenters can include MassDEP on comments who can further evaluate if warranted.

6. Other Concerns:

6a. The public expressed concern that the LSP of Record/TRC works for/is paid by Enbridge, has appeared at Conservation Commission meetings on behalf of Enbridge, and participated in the writing of resource reports for the compressor station application process. The public perceives a conflict of interest, is concerned that an unbiased/honest evaluation will not be performed, and is uncomfortable providing comments to an LSP working for Enbridge. How can the public be sure the process is true and not just a paper exercise?

An LSP is an environmental scientist or engineer experienced in the assessment, cleanup and management of oil and hazardous material contamination. The role of the LSP is to work with the site owner/potentially responsible party (associated with the release/Disposal Site) to prepare and execute a scope of work that will satisfy the state requirements to address the contaminated site/property (as set forth in Massachusetts General Law c. 21E and the Massachusetts Contingency Plan [MCP]). The LSP is contracted by the site responsible party.

As cited from the LSPA website, the Role of the LSP is as follows: “Those private parties (individuals, corporations, or other entities) who are financially responsible under Massachusetts law for assessing and cleaning up confirmed and suspected hazardous waste sites must retain an LSP to oversee the assessment and cleanup work to bring a site into compliance with the MCP. The LSP's role is to direct the assessment, characterization, and, to the extent necessary, the cleanup process in a manner consistent with the requirements of the MCP and other relevant regulations and laws. In doing this, the LSP renders professional opinions at specific phases of the process, often referred to as LSP Opinions.”

Under the Law, LSPs are required to uphold a Response Action Performance Standard (RAPS). RAPS is defined in the MCP as: *"...the level of diligence reasonably necessary to obtain the quantity and quality of information adequate*

to assess a site, to evaluate remedial action alternatives and to design and implement appropriate remedial action..."

LSPs are required, as part of their license, to adhere to the requirements of the MCP. Working for the site owner/potentially responsible party is necessary as part of the privatization process and does not represent a conflict of interest.

Based on the LSPA website: "In 1993, Massachusetts created a model program that privatized the cleanup of hazardous waste sites in the Commonwealth. Licensed Site Professionals (LSPs) are authorized by the Commonwealth to work on behalf of Property owners, operators, and other responsible parties to oversee the assessment and cleanup of contamination that has been released into the environment." "This privatized system has significantly reduced the backlog of contaminated properties, including redevelopment of brownfield sites, by authorizing LSPs to assess risk and implement cleanups. Between 1983 and 1993, the state reported the closure of only 630 sites. From 1993 to the present, LSPs have closed over 30,000 sites by restoring them to a condition where they meet the environmental standards for business, commercial/ retail, industrial, institutional, open space or housing."

6b. *The public expressed disappointment and concern that DEP was not present at the meeting and is not being involved. The same was expressed concerning EPA. What is the process for DEP to not use an LSP or to work with an LSP that does not have a conflict of interest to obtain an independent assessment? Does DEP review the scientific content of the work?*

MassDEP has indicated they will be present at the next PIP meeting. Further questions regarding MassDEP's involvement should be directed to MassDEP.

6c. *Members of the public felt that this site should be a Tier 1 site rather than a Tier 2 site. The criteria used to classify the site and the rationale used to determine the site is Tier 2 need to be clarified.*

Site Tier Classification is described in detail in the MCP (310 CMR 40.0520) and is generally based on the location of contamination and receptors potentially exposed to that contamination. TRC utilized the MCP requirements to classify the Disposal Site as Tier II.

6d. *One commenter asked that the difference between a Brownfields site and an MCP site be clarified. Who is liable for the contamination?*

A Brownfields as defined by the EPA is a location where "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant". Based on this definition, the Disposal Site is considered a "Brownfields" site. Liability

for contamination is the responsibility of the potentially responsible party as defined in M.G.L. c. 21E.

6e. *One commenter asked what role the Governor plays and whether he has concerns.*

TRC cannot provide responses for the Governor.

6f. *A comment was made that Quincy owns part of the site.*

The Disposal Site is located entirely within Weymouth.

6g. *One commenter stated that the ownership of the property is under litigation, and response actions at the site should be halted until ownership is settled since the MCP places responsibility for the site on the owner.*

TRC and Algonquin do not comment on pending litigation.

6h. *The question was posed as to whether or not the results of this investigation, the seriousness of the pollution, or safety concerns can be used to stop the station construction.*

There are many Disposal Sites across the Commonwealth and within Weymouth that are contaminated and have reached regulatory closure. Many of these Disposal Sites are returned to productive use and utilize Activity and Use Limitations to maintain a level of no significant risk.

6i. *One commenter asked why the station application was not withdrawn when the oil was identified in 2016.*

See Response to Comment 6h.

II. Email Comments and Questions

7a. *The effort to involve the public is suspect, when most residents did not receive the PIP report developed by TRC prior to the first meeting. Further, TRC chose to hold the meeting on a weekday at a time when most working adults are not yet home. Notice of the meeting was minimal. We were told that TRC "complied" with regulations. However, any good faith effort would take into account that regulations may be outdated and that most residents would not notice a newspaper blurb. Any future public involvement must be much more broadly advertised. I was horrified to hear that your commitment to residents was to do the minimum possible. Is "minimum necessary" your plan going forward? If so, I am very concerned that your bias will lean towards the company you are being paid by, and not acting in a neutral manner by actively seeking public involvement. In fact, it appears very much to be a conflict of interest to work for Spectra/Enbridge and also act in a neutral and fair manner to those who may be as yet uninformed, or even in opposition to the project. Even more alarming, is that this paid association was not made clear in any*

of the material provided. It was residents that pointed this out. It is my opinion that residents should be entitled to a fair process, and that an unbiased company should be hired for the cleanup plan and public involvement process.

See Responses to Comments 1b, 1g, and 1n. Also, see Response to Comment 6a. Algonquin, the LSP and TRC are required to conduct MCP response activities in accordance with state laws and regulations. The regulations listed in the MCP are universal to all companies undergoing assessment and remediation activities ("response actions").

7b. *The PIP is being limited to Weymouth residents, but, in fact, the site and cleanup of the site impacts residents from other communities, most particularly Braintree and Quincy, but also any community that shares the waters in and near Boston Harbor where the after-effects of cleanup might well be felt, and any commuter that passes the site via the Fore River Bridge.*

See Response to Comment 1n.

7c. *How is it possible that the draft PIP is provided, but there will be no comment period available for the final version? This provides a means for TRC to "interpret" resident comments as they so choose and provide the missing technical data that none of us has seen. The document provided was almost exactly the process published by DEP – were you paid for duplicating this?*

As stated in the Response to Comment 6a, TRC is required to conduct MCP response activities in accordance with state laws and regulations. The draft period, comment period and finalization of the PIP Plan are prescribed in the MCP regulation 310 CMR 40.1400, which specifies a series of actions and performance standards on how to involve the public in the site assessment and cleanup process.

7d. *Are you working for the correct party? Due to the illegal sale of the north parcel by Calpine, and the lack of agreement from the Town of Weymouth, I suggest that Spectra/Algonquin does not own the parcel. This issue must be addressed prior to any cleanup plan.*

See Response to Comment 6g.

7e. *It was not well explained to us why the borings and results presented were only in the vicinity of a former tank. It is my understanding that this parcel has a long history of industry utilizing hazardous materials and that the entire site contains pipes, tunnels and buried materials throughout. The limited area you presented is completely*

unacceptable. The public must be informed of all potential contaminations, not just those you pick and choose. Any construction on this site has the potential to disperse toxins of many varieties into the air, water and soil. I am not a technical expert, but I know that others will elaborate on this. Again, "minimum necessary" is not acceptable.

See Responses to Comments 2a, 2d and 2e. Subsurface data collected to date are available in the Phase I ISI and the IRA Status Reports, available on eDEP and in the information repositories.

8a. *Having experienced the San Francisco earthquake in October of 1989, I am more than concerned the impact an earthquake will have on the site of the proposed compressor station site. The most heavily damaged section of San Francisco during the earthquake of 1989 was in the Marina District. Much like the proposed compressor station site, the Marina is built on low lying ocean bay front land.*

Unlike Weymouth, and surrounding areas, San Francisco and much of California expect earthquakes and has built and prepared its infrastructure in an effort to protect its citizens and to minimize the risk of property damage. Despite best efforts to protect citizens and property, several blocks of the Marina District were decimated and on fire for many hours after the earthquake. The liquefaction caused gas and water lines to rupture. Several blocks and dozens of homes were destroyed by the violently shifting earth, and because the firefighters did not have access to water to extinguish the fires due to ruptured lines. The air was full of toxins and pollutants during and after the fires raged.

I am extremely concerned as to the impact and toll liquefaction would have at/on the site of the proposed compressor station to human health and safety, and to the wildlife both on land and in the water. I am also concerned if the contamination is disrupted by way of liquefaction, how the contaminants will react should they come in contact with the many emissions, chemicals, toxins, pollutants, etc., known and not known to be in the area.

TRC has evaluated contamination at the Property and at the Disposal Site in accordance with the applicable MCP regulations. Discussion of earthquakes and the implications of their impacts is outside the MCP assessment process.

8b. *I respectfully request that you provide information as to how the identified contamination at the site of the proposed compressor station will be contained as a result of liquefaction. It would be useful if you would provide data from known areas that have experienced liquefaction on and around low lying coastal areas with*

similarly heavy contaminants as those found on the site of the proposed compressor station.

See Response to Comment 8a.

8c. *I appreciate that earthquakes in the northeast may not seem like an immediate concern or consideration, but in August 2011 we experienced both Hurricane Irene and an earthquake within the same week. My point being, that the fragile heavily contaminated North Parcel has been and is likely to be susceptible to extreme unpredictable events.*

Over this past weekend we experienced a weather event reported by many as a Bomb Cyclone. Several of the neighborhoods feet from the site of the proposed compressor station experienced extreme flooding. When will you know if the proposed compressor station site was impacted in anyway by the Bomb Cyclone? When and how will you determine if the contaminants were disrupted by the Bomb Cyclone? Will the record cold temperatures we are experiencing and eventual thawing of the North Parcel disrupt/shift any of the many known contaminants?

TRC has evaluated contaminant conditions during high tide and low tide conditions as well as different seasonal events, including King Tides. Tidal and seasonal conditions have not substantially impacted contaminant movement. Groundwater contaminant concentrations above applicable standards have not been detected in the several seasonal rounds of data collection in 2016 and 2017. In addition, the petroleum is highly viscous and thicker than a "molasses-like" material that coats the inside of the monitoring wells and the field equipment used during measurements. This material is considered to be highly weathered, not recoverable due to the viscosity, and has very limited migration potential (e.g., micro-scale mobility). Data are included in the Phase I ISI and IRA Status Reports, available on eDEP and in the information repositories. In addition, Algonquin employees inspected the property the day after the winter storm (Bomb Cyclone) and found no evidence of flooding or storm surge impacts.

9a. *I am appalled at the level of casual disregard for our health and safety exhibited by the submission of an Environmental Assessment that did not include assessments of the air quality at the actual proposed site, which used water quality data from the 1990's and deliberately only sampled a few soil spots on the proposed site, just enough to determine there was existing pollution but not enough samples to thoroughly determine the extent of the hazardous condition of the proposed site! A representative from Spectra stated at a Weymouth Conservation Commission public hearing on the proposed compressor station application that this was all just a paper exercise...well our lives and our community are NOT a paper exercise!*

See Responses to Comments 2a, 2d and 2e. The work conducted at the Property and Disposal Site was conducted in accordance with the MCP.

9b. *The long list of conflicts of interest between Spectra/Algonquin and the third party contractors is well documented. The fact that FERC discounts these conflicts is no surprise since FERC also has conflicts of interest with these third party contractors. FERC's own handbook listed the construction of a new structure in a proposed project as a reason an Environmental Impact Statement should have been done. FERC has since changed their own rules after breaking them! Mass DEP has allowed Spectra/Algonquin to edit their own application requirements that allowed them to increase the amount of toxins released into our neighborhood! Mass DEP is supposed to be protecting the citizens of the commonwealth not streamlining the application process for projects that will pose a known health risk to its citizens!*

See Response to Comment 6a.

9c. *I would like to know in detail how this proposed compressor site was given the Level II designation? If an EIS had been done, as it should have been, would the air quality in the heavily industrialized Fore River Basin been tested instead of using AQ data from other parts of the state? Would current WQ data have been required instead of using WQ data from the 1990's? And finally, if this extremely hazardous, toxic site had been thoroughly assessed in the first place (and ALL pertinent contaminants were accurately noted in the reports) would this proposed compressor station site have received a more appropriate Level designation to reflect the accurate, timely and complete data assessment of the proposed site?*

TRC has collected subsurface data at the property including 13 groundwater samples collected in 2016 (including 2 seasonal rounds from 6 monitoring wells) and 78 groundwater samples collected in 2017 (including 3 seasonal rounds from 24 monitoring wells). These data were utilized in the Phase I ISI and IRA Status Report evaluations. Compounds detected in the groundwater are less than the applicable MassDEP standards.

9d. *I would also like to know how our state government can abdicate on site responsibility for the protection of the health and safety of my family and neighbors to a company that has a vested financial interest in the streamlining of this proposed project for a private corporation that stands to profit considerably at our expense?*

See Response to Comment 6a.

10a. Commenter Subject Line: PIP contamination of Proposed North Weymouth

Compressor Site; email body: How are You Going to Address this Issue?

See Response to Comment 6a.

10b. *Commenter Subject Line: PIP contamination of Proposed North Weymouth Compressor Site; email body: How are you planning to remove these and where will you dispose of them?*

TRC is evaluating regulatory closure options at this time. Further MCP response actions will be discussed at the next PIP Meeting.

10c. *I have concerns about the routes of exposure and health issues in my neighborhood. The maze of the pipe allows the flow of pollutants to transfer throughout the site and ultimately to the outflow. These issues are very concerning to me when I live and breathe in my neighborhood.*

Because the petroleum contamination associated with this Disposal Site is located greater than 3 feet below ground surface, direct contact with the impacted soil under current conditions is prevented. In addition, chemical analysis of groundwater samples indicates that the detected concentrations of petroleum-related compounds are less than standards developed by the MassDEP for the protection of surface water bodies (e.g., the Weymouth Fore River). This information will be provided in the risk assessment for the Disposal Site and presented at the next PIP Meeting. Although the risk assessment did not specifically evaluate the Historic Fill (based on the exemption for notification and therefore further evaluation), a locked fence prevents direct contact with fill contaminants and the presence of asphalt and overgrowth (weeds, grasses, low shrubs) along with the lack of activity within the fenced area prevents the generation and release of dust that may contain Historic Fill contaminants. Therefore, there is minimal, if any, transfer of contamination (petroleum or Historic Fill-related) to the surrounding area under current conditions.

11a. *Regarding the PIP for the cleanup of the proposed Weymouth compressor station site (Release Tracking Numbers 4-26230 and 4-26243), I have the following question: I see no boring data or field notes for the GZA borings B100 - B110 (except for B-105). Whether or not the borings appear to be clear, field notes and boring data need to be provided to prove that is the case. I request that you provide this information.*

Sampling locations (borings, test pits, monitoring wells) outside of the Disposal Site were not included in the initial Phase I ISI since contamination above applicable standards was not identified. Boring log data for locations within the Disposal Site and outside of the Disposal Site will be provided in a future MCP report. Applicable

groundwater field data summary sheets were provided in the Phase I ISI.

12a. As the proposed site for the Weymouth Compressor Station is not "capped" and contaminates have been found in the soils, has there been any calculations and/or discussion concerning the contamination of surrounding waters and/or groundwater in the area? If so, what are the results?

See Responses to Comments 9c and 2g. The groundwater data collected to date are included in the Phase I ISI and IRA Status Reports available on eDEP and in the information repositories. Although metals (e.g., arsenic) have been identified at concentrations exceeding MCP soil standards, these standards are based on potential human health risk caused by direct contact exposures to arsenic and not on the potential for arsenic to migrate from soil into underlying groundwater resources. In order to evaluate more fully the potential of arsenic to migrate from soil to groundwater, TRC reviewed the MCP Numerical Standards Development Spreadsheets, which were prepared by MassDEP as a basis for determining MCP reporting and cleanup standards, factoring in both direct contact and migration from soil to groundwater. The spreadsheets indicate that MassDEP determined that arsenic does not readily migrate from soil to groundwater under natural conditions (i.e., it has low solubility). The same is true for many of the other metals and PAHs identified at lower concentrations in soil at the Property. These compounds tend to adhere to the organic matrix of the soil rather than migrate to the aqueous phase. Although there are conditions under which compounds with a low potential to migrate could impact groundwater, this Property lacks significant concentrations of compounds in soil and groundwater (e.g., solvents) that could increase the migration of compounds with low solubility to groundwater.

12b. As groundwater flows in different directions depending on levels and seasons, has there been any seasonal groundwater analysis completed? In other words, has the groundwater surrounding the proposed contaminated site been analyzed during Spring, Fall, Winter, and Summer?

See Responses to Comments 9c and 2g. Groundwater sampling has been conducted in August 2016, November 2016, January 2017, March 2017, and June 2017. In addition, 39 groundwater gauging events in which depth to groundwater and direction of groundwater flow have been measured were conducted during 2016 and 2017.

12c. What is the level of the groundwater (from the surface) under the contaminated site during the spring, fall, winter and summer?

Depth to groundwater ranges from 10 to 13 feet below ground surface. Also see

Response to Comment 12b.

12d. Have the soils and/or groundwater been analyzed for contaminants which are not listed as "necessary"? If so, which ones?

Data collection at the Property is based on the potential contaminant sources and historical Property use. TRC has collected soil, groundwater, and free petroleum product samples for metals, volatile petroleum hydrocarbons including target volatile organic compounds, extractable petroleum hydrocarbons including target polyaromatic hydrocarbons, and petroleum finger printing, among other specialty petroleum-related tests.

12e. When was the AST containing the 6,000 gallons of fuel additive removed? Where did this AST go (i.e. was it disposed of properly)?

A review of historic photographs indicates that the tank was removed sometime before April 2005. An application and permit to move the 6,000-gallon fuel additive AST from the Property to the Sprague Energy facility at 728 Southern Artery, Quincy, Massachusetts was issued on October 9, 1997.

12f. Did this 6,000-gallon fuel additive AST have secondary containment? If so, what type?

Historic figures show the placement of the 6,000-gallon AST within the berm surrounding the 11 million-gallon AST.

12g. What was the exact chemical or chemical make-up of the fuel additive that was located on the site (i.e., in the 6,000 gallon AST)? Was this fuel additive (chemical or chemicals) found in the soil and/or groundwater samples?

The 1997 application and permit states that the tank was used to store a multi-component diesel fuel additive, and hand-written notes on an historic figure suggest the additive may have contained acetone. Between May 1991 and January 1992, soil and groundwater samples were collected from the vicinity of the fuel additive tank and analyzed for volatile organic compounds, semi-volatile organic compounds, and total petroleum hydrocarbons. One volatile organic compound (toluene), several polyaromatics hydrocarbons, and total petroleum hydrocarbons were detected in soil, but at concentrations below MCP reporting threshold. For groundwater, no volatile, semi-volatile or petroleum-related compounds were detected.

During TRC's investigations, photoionization detector (PID) readings measured during field screening of soil borings conducted in 2016 and 2017 did not indicate the presence of a source of volatile compounds in soil at the location of the former 6,000-gallon fuel additive tank. In addition, TRC collected samples for metals, volatile petroleum hydrocarbons including target volatile organic compounds, extractable petroleum hydrocarbons including target polyaromatic hydrocarbons, and petroleum finger printing, among other specialty petroleum-related tests. Contaminant concentrations in groundwater were not detected above applicable MCP standards. Soil did contain contaminant concentrations above applicable MCP standards. The data collected to date are included in the Phase I ISI and the IRA Status Reports, available on eDEP and in the information repositories.

12h. What are the specific health and environmental risks of this fuel additive?

See Response to Comment 12g. Based on hand-written notes located on an historic map, the fuel additive may have contained acetone which is a volatile compound of low toxicity. No evidence of acetone or other volatile compounds in soil or groundwater above MCP reporting thresholds was reported in historic documentation. The risk assessment prepared for the Disposal Site evaluated the potential risk posed to human health, safety, public welfare, and the environment from the detected fuel-related contaminants. See Response to Comment 3d for additional information.

12i. Has anything been considered concerning flood control during storms? If so, what has been considered and/or written? Has there been any consideration for chemical contamination movement from the contaminated proposed site to other areas?

The contamination is located at a depth of at least 10 feet below ground surface. To date, 39 groundwater gauging events have been conducted during 2016 and 2017 to monitor depth to groundwater and the seasonal fluctuation of groundwater as well as the potential movement of petroleum. Based on gauging data collected in 2016 and 2017, the petroleum contamination is not migrating beyond the area of the Disposal Site. In addition, chemical analysis of groundwater samples indicates that the detected concentrations of petroleum-related compounds are less than standards developed by the MassDEP for the protection of surface water bodies (e.g., the Weymouth Fore River).

12j. Was this proposed site flooded in any way during or after the recent (Jan. 4, 2018) winter storm?

Neither TRC nor Algonquin were present during the recent storm, however, no reports of flooding on the Disposal Site or Property were received. Algonquin employees inspected the property the day after the winter storm and found no evidence of flooding or storm surge impacts. TRC also monitored groundwater seasonal impacts during recent Kings Tides, the very highest, predictable, naturally-occurring tides. No flooding of the Disposal Site was observed.

12k. Is there any water infiltration from the rivers into the groundwater under the contaminated site? Has there been any analysis concerning this?

To date, 39 groundwater gauging events (in addition to seasonal groundwater sample collection) have been conducted during 2016 and 2017 to monitor groundwater elevation and the seasonal fluctuation of groundwater. Groundwater measurements indicate the groundwater moves slowly to the northwest toward the Weymouth Fore River.

In addition, see Responses to Comments 12i and 12d.

12l. Is there any water infiltration from the groundwater under the contaminated site into the rivers? Has there been any analysis concerning this?

See Responses to Comments 12k, 12i and 12d.

12m. If Enbridge/Spectra considers itself to be a "good neighbor", shouldn't this company be doing everything it can to ensure the safety of its residential and business neighbors? Shouldn't the company do analysis (air, water, soil, and vapor) whether or not it is regulated by the federal AND Massachusetts governments?

Spectra/Algonquin is required to follow the MCP regulations with regard to investigation and closure of this Disposal Site.

12n. If Enbridge/Spectra considers itself to be "environmentally concerned", shouldn't this company be more focused on its environmental responsibilities concerning the contaminated site?

See Response to Comment 12m.

12o. As Governor Baker has asked for a Comprehensive Health Impact Assessment, isn't it prudent to wait for this assessment before anything is

removed or remediated from this contaminated proposed compressor site?

Assessing this Disposal Site is prudent to evaluate whether the petroleum contamination poses an imminent hazard (see Response to Comment 15c) or current risk (see Response to Comment 3b) to humans or the environment that should be appropriately addressed. As detailed in the above noted Responses, the Disposal Site does not pose an imminent hazard or a current risk to humans or the environment, and any possible future risks will be managed with an Activity and Use Limitation with additional conditions stipulated to minimize exposure to the Historic Fill-related contamination. These actions will not interfere with the Comprehensive Health Impact Assessment.

12p. *Will there be a public comment hearing/meeting after the CHIA is completed?*

TRC can only comment on the requirements of the MCP, and not on a CHIA.

12q. *It is certainly hoped that ALL the contaminated soil will be removed from the proposed site before anything else is done. It is also hoped that any contaminated groundwater will be purified before anything else is done. Is this true?*

The MCP allows for a Disposal Site to achieve a Permanent Solution (regulatory closure) even if contamination remains as long as no Imminent Hazards are present, current Disposal Site use is associated with No Significant Risk (as defined by the MCP), and appropriate precautions are implemented to control future Disposal Site activities including an Activity and Use Limitation and any other Conditions necessary for the Property (e.g., Historic Fill management).

12r. *Concerning dust control during any soil removal processes, how will Enbridge/Spectra ensure that rain water will not infiltrate the soil resulting in further contamination of the groundwater and/or flowing into the river water?*

Dust control during future activities will be managed under a Soil and Groundwater Management Plan and will be consistent with the requirements of the Activity and Use Limitation placed on the Disposal Site as well as other Conditions necessary for the Property (e.g., Historic Fill management).

13a. *I, like many other citizens, are profoundly worried about the inadequacies and discrepancies pertaining to the process of siting the proposed compressor station in Weymouth. I share all of the same concerns the residents in the area have, including the lack of integrity, transparency and honesty with regard to the entire process thus far. This project has not be properly vetted and considerations have not been made*

for the health and safety of those residents, who are already dealing with an elevated and unacceptable level of pollution and contamination in the area as it is. These agencies who review and issue permits for these kinds of projects are failing miserably the people they are supposed to protect, because they are only catering to the greedy corporations at the expense of the people.

Comment noted.

13b. *I think that before NEW, unnecessary infrastructure is permitted and built, the obligation to repair and maintain existing, eroding and crumbling infrastructure needs to be done.*

http://www.ack.net/news/20180105/catastrophic-failure-of-sewer-main-shuts-down-pumping-stationsewage-flowing-into-nantucket-harbor

Comment noted.

13c. *I also think that climate change is a very real threat which needs to be taken and dealt with seriously. Continuing to pollute the environment, contaminate natural resources and poison animals and people is only going to further escalate it, which is irresponsible and foolish. In contributing to it, by neglecting to take REAL ACTION, we are antagonizing something that will lead to our imminent demise. This is about more than lifestyle; it's about LIFE ITSELF.*

http://www.bostonglobe.com/metro/2018/01/05/official-boston-breaks-tide-record/UPbwDxgF0QXNOWvB9bcQ7L/story.html?event=event25

Comment noted.

14a. *I am sure you have heard from many PIP members who found themselves frustrated by the public meeting on Nov. 13, 2017. Frankly, there was little information given, as you said yourself, "you were there to listen". How can the public comment on this process when the process is hidden and presented in many capital letters that mean little to the general public?*

As part of the PIP process, the first meeting is intended to provide a broad overview of the public involvement process. The initial PIP meeting and materials were prepared to comply with the regulations and to provide a high-level picture of the MCP process, general information regarding the Disposal Site contamination, and information on where existing technical documents for the Property can be found.

Additional MCP documents with more technical information will be provided during the PIP process.

14b. We all know the site is badly contaminated from years of dumping by the Boston Edison Co. of coal and other poisonous trash; then the mysterious loss of millions of gallons of oil from the above ground tank on the parcel. Needless to say digging into this ground will allow much of the contamination to surface and move with the wind and water into the environment as it already has in the past.

See Responses to Comments 4a and 12o.

14c. Those involved with the PIP, all from local neighborhoods, would like an outside ISP who is not paid by the company who is building the compressor station. These Weymouth, Braintree and Quincy residents are already impacted by Fore River Basin businesses. Those driving over the Fore River Bridge are also at risk.

See Response to Comment 6a.

14d. I would hope that further investigative work at the site will be fully explained to us involved in the PIP process. It is a mockery and a waste of money to follow regulations that only confuse and do not protect the public.

See Responses to Comments 1h and 1l.

15a. In Section 2.2 Release History - On Site and Nearby Sites of the Draft Public Involvement Plan (November 13, 2017) is incomplete.

There is no mention of the oil contamination found in the excavation of a pit during work done for the MWRA tunnel on October 10, 2001. The RTN 4-3021150 file on MADEP Contaminated Sites describes the visible petroleum found there. Why was this information not included in the release history? Not publishing the results of this excavation is a serious error as it indicates that the oil in the North Parcel is not only found under the location of the former Above Ground Storage Tank which had held 11,256,000 gallons of Number 2 fuel oil but is found in other locations in the North Parcel. The oil found in RTN 4-3021150 is north of the AST and indicates that oil does migrate. The PIP petitioners request complete investigation and cleanup of the entire North Parcel in light of the migration of oil found at the far end of the peninsula during construction of the MWRA pumping station. A study of oil contamination limited to the area around the footprint of the former oil storage tank is insufficient and misleading.

See Response to Comments 2a and 2e.

15b. The Phase 1 Initial Site Investigation Report indicates not only the extent of the oil contamination, but the boring logs also reveal the extent of the complete pollution throughout the whole site, from surface level to 18 feet down. The logs show the actual makeup of the fill which composes the entire site: heavily contaminated burner chamber bricks from the former Edgar Coal Plant, slag or clinkers from the residue of the burning of coal, coal ash and coal. This kind of fill contains heavy metal contamination of arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, titanium and vanadium. These are all toxic and pose a dangerous threat to human health. The PIP petitioners, who all live in the nearby area, recognize the "historic" nature of these pollutants but do not accept that this "historic" designation reduces their danger to human health. This is a toxic waste site and should not be disturbed. If the LSP is responsible for protecting human health, why is the contaminated fill not mentioned?

See Responses to Comments 2d and 3b. This Property is similar to many locations along industrial waterfronts (e.g., Boston etc.) where "filling" of tideland to create upland has been documented. Additional information concerning the Historic Fill present at the Property will be presented at the next PIP Meeting and in upcoming MCP documents. Although the risk assessment did not specifically evaluate the Historic Fill (based on the exemption for notification and therefore further evaluation), groundwater results indicate the Historic Fill is not leaching contaminants above the applicable MassDEP standards, a locked fence prevents direct contact with fill contaminants and the presence of asphalt and overgrowth (weeds, grasses, low shrubs) along with the lack of activity within the fenced area prevents the generation and release of dust that may contain Historic Fill contaminants. Therefore, there is minimal, if any, transfer of contamination (petroleum or Historic Fill-related) to the surrounding area under current conditions.

15c. In Section 2 of Chapter 21E, an Imminent Hazard is defined as: "Imminent hazard," a hazard which poses a significant risk of harm to health, safety, public welfare, or the environment if it were present even for a short period of time. The PIP petitioners disagree with the TRC assessment that "...at this time, there are no Imminent Hazards identified at the Site." None? TRC provides no information how this determination was made. In light of the contamination of oil as well as the contaminated fill, this toxic waste site contains many imminent hazards. Please provide the evidence for your assessment that there are no imminent hazards present.

For soil, an imminent hazard condition is applicable to soil contaminants located within the top 12 inches of the ground surface. Because the petroleum

contamination associated with this Disposal Site is located greater than 3 feet below ground surface, direct contact with the impacted soil under current conditions is prevented and an imminent hazard condition for soil is not present. In addition, the Disposal Site is surrounded by a locked fence, providing additional assurance that there will be no contact with any on site regulated material. Chemical analysis of groundwater samples indicates that the detected concentrations of petroleum-related compounds are less than standards developed by the MassDEP for the protection of surface water bodies (e.g., the Weymouth Fore River), indicating that an imminent hazard condition is not present for groundwater. This information will be provided in the risk assessment for the Disposal Site and presented at the next Public Involvement Plan meeting. Although the risk assessment did not specifically evaluate the Historic Fill, an imminent hazard condition is also not present associated with the Historic Fill because the locked fence prevents trespassers from entering the area and coming into contact with the fill contaminants. In addition, the presence of asphalt and overgrowth (weeds, grasses, low shrubs) along with the lack of activity within the fenced area prevents the generation and release of dust that may contain Historic Fill contaminants. Therefore, an imminent hazard condition associated with Historic Fill is not present.

15d. The TRC Report states that the area under the proposed gas compressor building and auxiliary buildings are without any infrastructure that would serve as a conduit for the migration of pollutants throughout the whole area. However, maps of the project site show a maze of pipelines and tunnels directly abutting the project site. The Spectra pipeline proposal itself shows the pipelines to the compressor station crossing this maze of pipes. The PIP petitioners disagree with your assessment that the pollutants will not move. How do you propose to prevent any spread of these pollutants throughout the area, into the Fore River and into the King's Cove?

Algonquin's proposed plans in the area of the petroleum contamination contemplate horizontal piping running at depths less than 8 feet below grade. Petroleum contamination in the area of the Disposal Site was identified at depths of 10 feet and greater. Based on the petroleum contamination at greater depths than the horizontal piping, the piping will not be in contact with the petroleum contamination and migration is not anticipated. In addition, the petroleum in the soil and groundwater is highly viscous and has limited mobility based on extensive testing conducted.

15e. Pease send me the field notes from all of the borings done by GZA Geo Environmental, Inc. from March 29 to April 20, 2016. In the report attached there is only one field note labeled "Chain of Custody", that from boring B105.

The attached report indicates both in the text and on the map of Figure 1 that there

were many other borings examined for oil contamination:

"Borings were installed across the property in areas where proposed building foundations are being considered as well as in areas where subsurface utilities may be located. One of these borings was located in the area of the former 11,256,000 gallon #2 fuel oil tank."

All field notes should be part of this report whether oil was found or not during the examination. These missing field notes make the report incomplete. It is important for the Public Involvement group to have all this information for our evaluation of the oil contamination at the North Parcel in Weymouth.

See Response to Comment 11a.

16a. *This parcel qualifies for a Tier 1 designation. Please explain in detail why it is designated Tier 2.*

See Response to Comment 6c.

16b. *This parcel has well documented serious toxins, included but not limited to:*

- *coal ash, coal, clinkers, slag at depths to at least 22 feet*
- *oil and petroleum products in approximately the center of the site to at least 19'deep*
- *arsenic toxicity significantly beyond seriously toxic levels*
- *additional chemical toxicity related to prior petroleum storage, coal storage and burning, as well as historic dumping on site*

Some boring testing has been done related and limited to the Enbridge / Spectra compressor station footprint, but only in that limited area. Given the history of the parcel and well documented existing profound levels of pollution and known deadly toxins, far more testing and evaluation needs to be conducted in order to ensure the safety of the families in the surrounding densely populated residential area and the immediately adjacent waters for the protection of not only the fish stock and breeding grounds, but certainly the homes, schools, daycares, and public beaches as well. The coal ash and related toxins as well as arsenic (currently contained) fully comprise the landfill that is that peninsula. The oil

from the massive storage tank has moved throughout the peninsula and is not contained in one small area. It is documented that there is so much oil / diesel in the ground that it not only is an intrinsic part of the soil, but it can literally be seen floating on top of the subterranean ground water.

See Responses to Comments 12o, 9c, 3b and 2d.

16c. *Testing and remediation cannot be limited to one section of the parcel (just the footprint of the proposed site of the compressor station itself). Testing has made it clear that the entire parcel is extensively contaminated with numerous deadly toxins. Therefore if the proposed project is allowed to move forward, it should be completely conditional upon and not approved prior to the entire parcel being professionally decontaminated, and certified as such by an experienced, qualified scientific organization which is a disinterested third party completely unaffiliated with and having no relationship whatsoever, current or prior, with Enbridge, Spectra, predecessor firms, subsidiaries, contractors, or affiliates of either entity. All testing should be done with transparency, with published schedules, testing methods and results proactively shared with the public every step of the way. There needs to be ongoing communication, opportunity for public comment and questions, and a requirement of specific, meaningful, timely responses to the public.*

MCP reports for the Disposal Site are available on eDEP and the information repositories. Several comment responses above provide additional information regarding the commenter's concerns (e.g., Responses to Comments 12q and 9c).

16d. *On that note - I attended the 11/13/17 meeting at Abigail Adams Middle School in Weymouth with regard to this issue. Obviously the fact that a meeting such as this would be scheduled at 5:30 on a work day excluded everyone who commutes to metropolitan Boston for work and could not take a day off for this meeting, and/or has young children who need to be picked up from or taken to extracurricular activities. I naively assumed that since this was a public comment meeting about a "draft" proposal, that the goal was for you to hear / gather comments and concerns from those families who have to live with your decisions, then you would evaluate and respond to those questions and concerns so everyone could be on the same page with full information, understanding etc. However, it quickly became clear that that was in no way the purpose of the meeting -- it really was simply about checking off a box on your list and fulfilling an agenda wherein the families / community are completely irrelevant.*

At effectively the end of the meeting I found myself having to ask for clarification --- this is a meeting about a draft, you are here gathering questions and concerns but will not respond to any at this meeting.... So when do we get answers and

clarification, I asked? Will we meet again when the "final" plan is drawn up and includes responses to our questions and concerns?

No, you said, that would not happen. The only required meeting was that "draft" meeting -not only that but we were admonished that we should be thankful that we were able to actually see the "draft" prior to the actual meeting, because you were not required to provide it prior to. You said you are only required to present the draft to those who actually show up at the actual meeting (therefore no one will be able to provide any meaningful feedback or questions whatsoever, having never seen the draft before.....) and there is no requirement to hold a follow up meeting re your final plan.....

So what is the point of this exercise exactly? Obviously not to hear from anyone actually impacted by your work, obviously no one who actually lives in the community and wants to understand what it is you are doing..... It is seemingly a "hey people ---- we are simply checking a required box, that is all we have to do, so that is all we do" exercise. I think you should just say that, straight out - our community, our questions and concerns do not matter to you.

See Responses to Comments 1b, 1g, and 1l.

16e. Many of us asked about the justification for Tier 2 vs Tier 1 designation. According to the definitions, this should be a Tier 1 project. Please provide details and documentation as to why it is designated Tier 2.

See Response to Comment 6c.

16f. Concerns expressed above are documented existing extreme toxicity, contamination, remediation - we need and deserve very detailed scientific answers from unaffiliated / disinterested professionals, and far more testing to establish the spread and extent of the contamination that will impact our families for generations if you move forward with your plan vs opting for a more appropriate site which is consistent with every other site in the country - so rural / isolated sites.

See Response to Comment 12q.

16g. Please explain the process going forward - what follow up will you do on the heels of the "draft" meeting, how will you communicate with the families impacted by your decisions, what is the timeframe?

See Responses to Comments 1l and 14a.

16h. *Please mail a hardcopy of all interim reports and the "final" report to me immediately upon preparation /completion. If you are unable to do so, please advise me of that fact and the reasons why you cannot provide the report via email and hard copy (US mail) immediately.*

See Response 1j. All MCP documents submitted to date are available on MassDEP's website (http://www.mass.gov/dep. (http://public.dep.state.ma.us/SearchableSites2/Search.aspx) using the RTNs (4-0026230 and 4-0026243 in Weymouth), the North Weymouth library repository and will be provided to two additional repositories at the Town of Weymouth Health Department and the Tufts Library, as requested by the public. Individual copies are not mailed or emailed to ensure community members have equal access to the same information in the same format.

17a. *In the construction of the MWRA pumping station and concurrent piping of said station it is noted that there was oil contamination found (RTN 4-3002387) close to the border of the station and very near the water on Kings Cove. This indicates that the flow of the underground water table is toward the northeast. Notably lacking from your draft report (table 5, Petroleum-Saturated Soil Thickness and Total Petroleum Hydrocarbons Estimates) is any information from wells or borings outside of the original tank area. The proposed compressor station will sit on top of suspected contamination in the northeast corner of the parcel. Why was the contamination reported by the MWRA (2001-2002) not considered in boring sites and wells? Your notes in the PIP meeting of Nov. 13, 2017 state that the oil is not migrating. How was this determined without any boring sites or wells placed beyond the tank area to the northeast (excluding MW204)? (Also see RTN 4-3021150 noting petrochemicals at the MWRA site. This document also notes the northeast flow of groundwater.)*

See Responses to Comments 2a and 2e.

17b. *The DEP site has been searched and there is no clear link between the removal of the diesel tank and additive tank and where the +11M gallons of diesel and +6M gallons of additive went. This is also noted in your draft PIP. Without a chain of custody we cannot assume that the oil and additives were actually removed and not simply dumped on the site. Where can we find the chain of custody documentation that shows the oil being removed, who removed it, and where it ended up? We require this documentation be provided.*

Chains of custody are not used to track removal of materials from a site. Based on the historic photographic record, it appears that the ASTs were removed prior to April 2005. Based on the subsurface investigation program conducted at the Property, petroleum-related compounds were detected in the area of the former AST and at depths of approximately 10 feet below grade.

17c. As noted in the EA and other documentation, the levels of arsenic in the soil exceed EPA standards. The situation on the North Parcel is very similar to the situation in Chesapeake, VA (https://www.southernenvironment.org/news-and-press/news-feed/court-ruling-dominionscoal-ash-illegally-pollutes-virginias-elizabeth-rive) where the Sierra Club argued that the arsenic and other toxins from the coal ash were leaking into the river and violated the Federal Clean Water Act. Both the VA site and the North Parcel have never been capped. Both sites are subject to intrusion by salt water. This will be further exacerbated by projected sea level rise. How are you going to address this? We require that all arsenic be remediated.

See Responses to Comments 12a, 15b, and 15c.

17d. There are a number of recreational beaches along the Fore River, Kings Cove area. There is concern about the flow of contaminates to the beaches. How are you going to prevent this and, after prevention, continue to monitor for possible contamination? Again, the indication from the MWRA is that the flow of oil contamination it toward the northeast.

See Responses to Comments 8c, 12a, 12i, and 15b.

17e. As noted in your reports, the soil is contaminated with clinkers and burner bricks from the Edgar Coal facility. We are able to gather these bricks and clinkers from the park area and from the beach (again, indicating a northeast flow of all contamination). How are you planning to remove this contaminated soil? We require all contaminated soil be removed.

The park and beach are located outside of the Disposal Site. Also see Response to Comment 15b.

17f. The contamination at B105 (MW201) is directly on the planned path for pipelines to the proposed compressor. Any disruption of the soil in digging pipelines will release both soil level contaminants and the oil underneath. How are you planning to address this?

See Responses to Comments 4a and 15d.

17g. Table 5 (as noted above), page 2 notes B107 with LNAPL with thicknesses considered similar to MW201. B107 will be directly under the planned auxiliary building. Where are the field notes on B107?

B107 is located outside the Disposal Site and does not contain LNAPL or contaminant constituents above the MassDEP applicable standards. Also see Response to Comments 2a and 15d.

17h. There are no field notes provided from GZA on any other borings other than B105, 107 in the 100 series. In the 300 series, all borings outside of the tank area are missing field notes. Why? We require all field notes on all borings and MWs whether or not significant levels of oil or soil contamination are present.

See Responses to Comments 2a and 11a.

17i. On July 29th, an MCP Release Notification was filed on B105/MW201. You were aware in early April that there was signification water and soil contamination. Why did you not at least mention this to the Weymouth Conservation Commission at the May 25, 2016 hearing? This gives the appearance of withholding pertinent information at a hearing to determine a required wetlands permit. Although you had 120 days (legally) to notify the DEP, it is curious that you notified them on the last day of the comment period to MassDEP Wetlands in requesting an SOC from said agency.

Boring location, B105 (located approximately 200 feet southwest of the proposed infiltration basin (the area of discussion during the May 25, 2017 meeting, re: infiltration and leaching of metals) was installed on April 12, 2016. A soil sample from a depth 14-17 feet below grade (where visual impacts of petroleum were observed) was collected on April 12, 2016 for laboratory analysis of Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH) with target compounds. Raw analytical data for soil from B105 was received in late April. Monitoring well MW201 was installed on May 12, 2016 and a soil sample was collected during drilling. Once samples are collected they are sent to the analytical laboratory for analysis. When data are received from the laboratory, TRC's internal laboratory data review policy requires that all analytical data must be reviewed by a chemist prior to distribution to ensure its reliability and usability. MassDEP also requires MCP data to be evaluated and a data usability evaluation performed to ensure compliance with applicable testing and reporting methods. The preliminary data received by TRC had not been reviewed or validated by our

chemists prior to the May 25th meeting and therefore, the information could not be released. At the time of the meeting in late May, Calpine was the owner of the Property. The soil data from both B105 and MW201 indicated the presence of petroleum compounds (EPH) above the MCP reportable concentrations and a 120-day MCP notification obligation existed. At the time of the Weymouth Conservation Committee meeting, MassDEP notification requirements were being evaluated by the Property owner, therefore the data could not be presented in a public meeting prior to MassDEP notification regarding the 120-day release notification. LNAPL was not identified in MW201 until July 27, 2016 which required a 72-hour notification. Calpine requested TRC provide verbal and written notification to MassDEP on their behalf in late July for both the 120-day and 72-hour release notifications. Calpine signed the BWSC Forms for notification of the release as the Property owner in late July 2016. Prior to MCP release notification in July 2016, TRC was not providing LSP services for this Property (no BWSC MCP opinions had been rendered).

17j. The maze of existing pipes and planned pipelines for the proposed compressor will allow the flow of pollutants to transfer throughout the site and ultimately to the outflow drains. How will you address/prevent this?

See Responses to Comments 4a and 15d.

17k. The EA notes dust control by spraying of water on the site while constructing. This will send the arsenic and coal ash through the outfall drain into the Fore River and Quincy Bay. What is the plan to contain this?

See Response to Comment 4a.

17l. In a July 14, 2017 letter to Mayor Hedlund, Governor Baker stated that he will require a Comprehensive Health Impact Assessment in the Fore River Basin. In a follow up on December 1, 2017, Senator Patrick O'Connor received a letter from EEA Secretary Matthew Beaton (see attached) stating that air quality permits would not be considered until the results of the CHIA were known. Why is any action or plan being considered prior to the outcome of said CHIA?

See Response to Comment 12o.

17m. What are the specific methods that would be used to keep arsenic, coal ash, and heavy metals from becoming airborne? We require the engineering plans for the prevention of airborne pollutants.

See Response to Comment 4a.

17n. What are the specific extraction methods for removing the oil pollutants? We require the engineering plans for any extraction.

See Response to Comment 12q.

17o. What is your (Enbridge's) legal right to submit a plan based on the fact that the Town of Weymouth has contested the sale of an illegally subdivided parcel to Enbridge by Calpine (https://patch.com/massachusetts/weymouth/weymouth-filed-lawsuit-overcompression-station-land-sale)? This is currently in Land Court having been referred out of Norfolk Superior in October of 2107.

See Response to Comment 6g.

17p. What consideration has been given the contamination of the smelt runs by migrating oil if the soil is disrupted?

See Response to Comment 9c.

17q. Can you explain, given all of the above information/concerns/questions, how you were given a Tier 2 designation? Who makes that decision and what is it based on?

See Response to Comment 6c.

17r. The timing of the draft plan submittal to the public was not prior to the public meeting and did not allow participants time to review said draft plan to assist with formulating pertinent questions/concerns.

See Response to Comment 1g.

17s. There was a decided lack of seriousness to the PIP public meeting. There was no one taking notes--even though you pointed out a person who was to be doing so. This person was being watched and no notes were taken. If notes do exist, we would like a copy of them. There was no one from your company or from Enbridge videoing the meeting. Our filmmaker was approached by your team and asked for a copy of his film. Why? Had he not been there, there would be no concrete documentation of the meeting or the questions and concerns presented there.

See Response to Comment 1e. We requested a copy of the video to confirm that all questions and concerns had been accurately captured by the note takers as the draft PIP meeting is conducted to listen to the concerns and questions from the community

and provide an overview of the MCP process and the contamination identified at the Disposal Site. To date, the filmmaker has chosen not to provide a copy of the meeting. Therefore, we have utilized the extensive notes from the three TRC representatives as a summary of the meeting questions and concerns provided in Section I.

17t. We had an expectation that the DEP would have sent a representative. Why was there none there?

See Response to Comment 6b.

17u. The accessibility to this meeting was non-existent. A meeting scheduled at 5:30 in a suburb of Boston does not allow time for those commuting from work to attend. We were not given the option to reschedule to a later time. This is unacceptable. We require a minimum of thirty days' notice for all future meetings and a 7:00 PM start time.

See Responses to Comments 1b and 1g. As noted below, none of the 16 PIP petitioners requested a specific meeting time or date. As per the MCP, PIP meeting notices are required to be published 14 days in advance of the PIP meetings. Enbridge will follow the requirements of the MCP.

TRC conducted the following PIP notification activities:

- October 10, 2017 - Petition for PIP Designation Letter for RTN #4-0026243 (acknowledging PIP request), Petitioners sent a letter (16 Petitioners, MassDEP and Town).
- October 24, 2017 – Public Involvement Plan - Petitioners sent a letter for an Interview Request for RTN #4-0026243, Petitioners indicated comments would be provided at the PIP meeting.
- October 24, 2017 – Petitioners sent a letter for the Notice of a PIP Plan Meeting for RTN #4-0026243 (and 4-0026230)
- October 27, 2017 – Publication of legal notice in the Boston Globe and Patriot Ledger
- November 13, 2017 - PIP Meeting

17v. All documents must be filed at the Tufts Library (Main Branch). Filing documents at the satellite library in North Weymouth severely limits access as the branch's hours are short, there are no computers on site, and there are no copy machines on site. The main repository for all of this type of information is at the Main Branch according the Head Librarian and the Resource Librarian. Copies should also be filed at the Crane Library in Quincy and the Thayer Library in Braintree.

See Responses to Comments 1a and 1h.

17w. *The 1/2 mile notification zone of this site includes the City of Quincy and the Town of Braintree. No notification of this meeting was given to them. There are two Environmental Justice communities in Quincy (Quincy Point, Germantown) that include senior and low income housing. These communities will be negatively impacted by any clean up and, therefore, require notification from the LSP/Enbridge.*

See Response to Comment 1n.

17x. *In light of all of the above, we request a full and complete clean-up (remediation) of all contamination (oil, arsenic, coal ash, clinkers, burner bricks, etc.) from the North Parcel before any consideration of construction or soil movement. We request a full report on the implementation plan of said clean-up (remediation).*

See Responses to Comments 6h and 12q.

18a. *I have concerns about the nature and extent of the contamination. More specifically, I am wondering where I can find documentation related to the transport of 11 million gallons of diesel oil located at the site? Where was it transferred to?*

The nature and extent of the contamination will be further discussed at the next PIP meeting when the overall Disposal Site conditions are presented as well as the risk assessment. Additional MCP documents for the Disposal Site are under preparation and will be uploaded to eDEP when completed, prior to the next PIP meeting. With regard to the 11 million-gallons of fuel oil, no information was available on MassDEP's website or the Weymouth Fire Department. Boston Edison Company (BECO) was the presumed owner of the North Parcel at the time of regulatory closure and the owner of the 11 million-gallon AST.

18b. *There are a number of recreational beaches along the Fore River, Kings Cove area. My concern is about the flow of contaminants to the beaches. How are you going to prevent this and after prevention further monitor possible contamination?*

See Responses to Comments 8c, 12a, 12i, and 15b.

18c. *How are you planning to remove heavy metal contamination in the clinkers and where will you dispose of them?*

See Responses to Comments 3b and 12q.

18d. How are you planning to remove heavily contaminated burner chamber bricks (From Edison Edgar Plant) in the North Parcel and where will you dispose of them?

See Responses to Comments 3b and 12q.

18e. 16 feet deep borings from Spectra are showing oil (petroleum) contamination. These borings are below sea level; which would cause concern for movement into the Fore River. Have you considered this issue? How are you planning to address this?

See Response 12a, 15b, and 15c. TRC conducted 39 gauging events over 2016 and 2017 and groundwater sampling events in August 2016, November 2016, January 2017, March 2017, and June 2017 where groundwater gauging was also conducted. Both low and high groundwater tables conditions as well as seasonal and high and low tide condition evaluations were conducted. As noted, the petroleum is highly viscous and thicker than a "molasses-like" material that coats the inside of the monitoring wells and the field equipment used during measurements. This material is considered to be highly weathered, not recoverable due to the viscosity, and has very limited migration potential (e.g. micro-scale mobility).

18f. Can you explain how you were given a Tier 2 designation? Who makes the determination and what is it based on?

See Response to Comment 6c.

18g. Governor Baker is requiring a Comprehensive Health Impact Assessment in the Fore River Basin (July 14, 2017 letter to Mayor Hedlund.) Any disruption of the soil on the North Parcel would be premature pending the outcome of the CHIA. Why are you considering any actions on the parcel prior to the CHIA results?

See Response to Comment 12o.

18h. Any disruption of the soil would eliminate the use of the Public Park (walkway) and, therefore, would detract from the health and well-being of the neighborhood. How would allow the utilization of this public facility before and after the remediation period?

Soil activities associated with development of the Property will be contained within the limits of the Property. The Property and security personnel will be utilized to

further restrict access. The Property is fenced and will remain fenced during construction. In addition, soil disturbance activities will be managed through the implementation of a Soil and Groundwater Management Plan (SGMP) which will include provisions for dust control, among other engineering construction specifications. In addition, an Activity and Use Limitation will be placed on the Disposal Site and additional Conditions placed on the Property related to the Historic Fill, requiring the preparation of a Health and Safety Plan and the use of a SGMP for on-Site workers and others in the area.

18i. Any disruption of the soil will cause migration of coal ash, arsenic, and petroleum products that now exist in the soil. Is the clean up to start and end before the possible siting of the compressor station?

See Responses to Comments 4a and 18h. During construction of the project, soils will be managed in accordance with the SMGP identified above. Soils that are not useable on the Property will be disposed of off-site in accordance with applicable regulations. No specific soil remediation will be conducted prior to project construction.

18j. What are the specific methods that would be used to keep arsenic, coal ash, and heavy metals from going airborne? We would like the engineering plans for the prevention of airborne pollutant

See Responses to Comments 4a, 18h and 18i.

18k. What are the specific extraction methods for removing the oil pollutants? We would like the engineering plans for the extraction.

See Response to Comments 18h and 18i.

19a. As I write, the northeast is cleaning up from the first extreme weather event of 2018. Coastal areas throughout our state experienced flooding from the highest tide since the Blizzard of 1978. I am concerned about toxins from the oil contamination leaking into the soil and also the Fore River, should there be a water breach in the future- something likely to happen as we continue to experience rising sea levels and extreme storms. How do you plan to address this issue?

See Response to Comment 8c.

19b. How will you prevent contamination by the oil toxins on the many nearby

beaches? Who will carry out future monitoring of our beaches to ensure the contamination is not spreading- and how will they do so?

See Response to Comment 8c.

19c. I am also concerned about arsenic and other toxins being disrupted and sent airborne or into our waters whether through a decontamination process or if construction were to begin for the compressor. How will you prevent this? How will you monitor the air, water, and beach quality in terms of safety from toxins related to the oil contamination as time goes forward?

See Responses to Comments 4a and 18h.

19d. What methods of pollution removal will be used?

See Response to Comment 18h.

19e. Marine life, human health, and the health of our coastal environment are all at stake. I believe that dealing with the contamination at this site is a delicate matter that must be thoughtfully and meticulously planned and implemented.

See Response to Comment 18h.

20a. Firstly, I am concerned about the heavily contaminated burner chamber bricks (from the Edison Edgar Plant) in the North Parcel. How are you planning to remove these, and where will you dispose of them?

See Responses to Comments 3b and 12q.

20b. Can you please explain how you were given a Tier 2 designation? Who makes the determination, and what is it based on?

See Response to Comment 6c.

20c. The situation at the North Parcel is very similar to the situation in Chesapeake, Virginia, where the Sierra Club argued that the arsenic and other toxins from the coal ash were leaking into the river, and violated the Federal Clean Water Act.

Both sites have never been capped. Both sites are subject to intrusion by salt water.

This will be further exacerbated by projected sea level rise. How are you going to address this issue?

See Responses to Comments 12a, 15b, and 15c.

20d. *There are a number of recreational beaches along the Fore River, Kings Cove area. I am concerned about the flow of contaminants to the beaches. How are you going to prevent this and after prevention further monitor possible contamination?*

See Responses to Comments 8c, 12a, 12i, and 15b.

21a. *Any disruption of the soil by heavy construction equipment will send arsenic, coal ash, heavy metals, and petroleum pollutants onto the recreational beaches of the Fore River and Kings Cove. What methods do you intend to use to prevent this? How do you evaluate the level of contamination containment?*

See Responses to Comments 4a, 18h and 18i.

21b. *Governor Baker is requiring a Comprehensive Health Impact Assessment in the Fore River Basin (July 14, 2017 letter to Mayor Hedlund.) Any disruption of the soil on the North Parcel would be premature pending the outcome of the CHIA. Why are you considering any actions on the parcel prior to the CHIA results.*

See Response to Comment 12o.

22a. *I was present for the public hearing and I do need to state that I believe there is a serious conflict of interest in the selection of the LSP as it would be far more transparent for the LSP to be someone not currently employed by the organization that will be building the compressor station. I feel that the study conducted to date is purposefully limited in scope so as to meet the bare minimal requirements of the law and not conducted in a manner consistent with ensuring the health and well-being of the public and of our environment*

See Response to Comment 6a.

22b. *At the public hearing you were unable to or chose not to explain why the area of the soil samples was as narrow and as shallow as what was conducted. You received testimony at the Hearing that contaminants have been deposited over a vast period of time at a wider and deeper distribution than what this study*

included. Can you explain why the study was not more inclusive so as to consider what further dangerous contamination is present and therefore needing to be cleaned-up? I am requesting that the study of contamination be more comprehensive and responsive that has been done to date.

See Responses to Comments 2a and 12a. In addition, the next PIP meeting will include a description of the entire Property subsurface investigation and the risk assessment performed for the Disposal Site.

22c. *The study done to date does not address at all the impact of rising sea level or of storm surges, both of which will occur and will result in leaching of contaminants into the Fore River and adjacent beaches. Why was this not included in the analysis? I am requesting that the study conduct such analysis and develop a response plan for it. This question was asked at the public hearing and was not answered.*

See Responses to Comments 3b, 8c, and 12a.

22d. *The study done to date does not include any analysis of the disruption to the soil that will inevitably occur once the site turns into a work-site for the building of the compressor. Why was this this not done? I am requesting that the study be extended to include this and to include a response plan for what said analysis concludes.*

The results of the risk assessment performed for the petroleum contamination associated with the Disposal Site indicate that an Activity and Use Limitation is required for the Property to maintain a condition of no significant risk in the future, including the anticipated redevelopment of the Property. Although the Historic Fill has not been evaluated in the risk assessment, there will be additional conditions placed on the Property to minimize exposure to the Historic Fill contamination such as the placement of a clean soil layer over the Historic Fill. In addition, the use of a Health and Safety Plan and a Soil and Groundwater Management Plan will be required when any work that disturbs soil at the Property is performed to protect workers performing the work and others near the Property.

23a. *The public should be involved in the cleanup of the site that Enbridge is hoping to put a compressor station. That parcel area has decades old contaminants already at the site that were never properly cleaned. Coal ash, metals and some radioactive debris. From my experience of the past two years of attending meetings and hearings, FERC allows companies to do what is the quickest and not most ethical cleanups/studies.*

Please allow the public a say. This will impact future generations. We need clean environments in which thousands of people live.

See Responses to Comments 5a, 6h, and 12q.

24a. *I could not possibly state my comments and concerns any better than [Commenter 15] did. I do want to add that this is my home, my neighborhood where I spend a lot of time enjoying the great outdoors. I, as well as all my neighbors, deserve a neighborhood as free of pollution as is humanly possible. I believe omissions of important information from reports and even acknowledgment of some of the pollution without dealing with it in the best way possible to protect human life and the environment is highly irresponsible. These pollutants will move when disturbed and you are entrusted with the highest responsibility to acknowledge the real facts and see that the right thing is done. The right thing is protecting people and environment, not blindly doing what industry says is safe so they can increase their profits. The North Parcel is a contaminated site and all the documentation of that should be included in this process. Building on this site will disturb all this contamination. Industry stating otherwise will not decrease the disturbance. Please do the right thing*

Assessing this Disposal Site is prudent to evaluate whether the petroleum contamination poses an imminent hazard (see Response to Comment 15c) or current risk (see Response to Comment 3b) to humans or the environment that should be appropriately addressed. As detailed in the above noted Responses, the Disposal Site does not pose an imminent hazard or a current risk to humans or the environment, and possible future risks to humans will be managed with an Activity and Use Limitation with additional conditions stipulated to minimize exposure to the Historic Fill-related contamination.

25a. *We are concerned that TRC Companies, Inc. and TRC Environmental Corp. (collectively "TRC") have an impermissible conflict of interest that prevents TRC from serving as LSP for the response actions relative to Release Tracking Number (RTN) 4-26243 (identified by MassDEP as Calpine Fore River) at the proposed Atlantic Bridge Project Weymouth Compressor Station (ABPWCS) located at 6 & 50 Bridge Street, Weymouth, Massachusetts ("the Site"), which is located to the north of Bridge Street in Weymouth, MA. First of all, the Q1 2014 Earnings Conference Call Transcript for TRC Companies, Inc. dated November 6, 2013 includes a description from TRC's Chairman and CEO concerning the contract TRC entered into with Spectra as follows:*

The other project I highlighted is a pipeline project in New York. This is a $3 million to $6 million permitting environmental support construction management services

contract for crude oil and products pipeline. This is right on the heels of another pipeline project that we've been working on in New York for about three years, with the Texas Eastern and Algonquin pipeline project with Spectra, a $1.2 billion well-executed project, which is now online.

We find it difficult to believe that TRC can remain fair and impartial and objective concerning its role as LSP in light of the "$3 million to $6 million permitting environmental support construction management services contract for crude oil and products pipeline" that TRC has with Spectra, the same company seeking to construct the Weymouth Compressor Station.

See Response to Comment 6a.

25b. *Furthermore, not only has your company entered into a seven figure permitting environmental support construction management services contract with Spectra, but you personally have appeared at public hearings on behalf of Algonquin Gas Transmission LLC ("Algonquin") to represent its interests in connection with the proposed Weymouth Compressor Station. According to the meeting minutes from the April 6, 2016 and May 25, 2016 public hearings conducted pursuant to the Massachusetts Wetlands Protection Act and the Weymouth Wetlands Protection Ordinance on Algonquin's Notice of Intent, you appeared on behalf of Algonquin at both hearings. In light of your prior advocacy on behalf of Algonquin in connection with the proposed Weymouth Compressor Station, we fail to see how you can fulfill your LSP mandate to hold "paramount public health, safety, welfare, and the environment in the performance of professional services." See 309 CMR 4.03(1). TRC's contractual relationship with Spectra, your prior representation of Algonquin at public hearings as well as your recent summaries in Immediate Response Action Report #3 that conclude that the LNAPL recovery at the site is not feasible lead us to conclude there is an impermissible conflict of interest with TRC's role as LSP and result in our request that MassDEP conduct an audit of this Site. We request that all of the LNAPL and petroleum contaminated soil be recovered at the Site, especially given the fact that your Algonquin intends to build natural gas infrastructure both above and below the ground at the Site.*

See Response to Comment 6a.

25c. *How many contracts has TRC entered into with Enbridge, Spectra and/or Algonquin, including but not limited to permitting environmental support construction management services contracts?*

This Comment is not relevant to the MCP process at the Disposal Site.

25d. How many projects has TRC worked on with Enbridge, Spectra and/or Algonquin and, for each such project, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25e. How many projects has TRC served as LSP for Enbridge, Spectra and/or Algonquin and, for each such project, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25f. How many projects has Kelley Race, P.G., LSP worked on with Enbridge, Spectra and/or Algonquin, whether Ms. Race was employed by TRC at the time or elsewhere and, for each such project, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25g. How many projects has Kelley Race, P.G., LSP worked on with Enbridge, Spectra and/or Algonquin while Ms. Race was employed by TRC and, for each such project, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25h. How many projects has Kelley Race, P.G., LSP served as LSP for Enbridge, Spectra and/or Algonquin whether Ms. Race was employed by TRC at the time or elsewhere and, for each such project, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25i. How many projects has Kelley Race, P.G., LSP served as LSP for Enbridge, Spectra and/or Algonquin while Ms. Race was employed by TRC and, for each such project, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25j. How many times has Kelley Race, P.G. spoken in public on behalf of Enbridge, Spectra and/or Algonquin whether Ms. Race was employed by TRC at the time or elsewhere and, for each public speaking event, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25k. How many times has Kelley Race, P.G. spoken in public on behalf of Enbridge, Spectra and/or Algonquin while Ms. Race was employed by TRC and, for each public speaking event, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25l. How many times has Kelley Race, P.G. spoken in public on behalf of Algonquin concerning the proposed Weymouth Compressor Station and, for each public speaking event, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25m. How many times has Kelley Race, P.G. spoken in public on behalf of Algonquin concerning the Atlantic Bridge Project and, for each public speaking event, describe the nature, scope and location?

This Comment is not relevant to the MCP process at the Disposal Site.

25n. According to Section 2.2 Groundwater Gauging and LNAPL Recovery in Immediate Response Action Status Report #3, MW-410 and MW-201 each contain LNAPL. Why wasn't another monitoring well located to the northwest of MW-410 and MW-201?

Boring 300 is located north of MW-410 and MW-201. Based on field observations, the boring did not indicate signs of contamination. For example, no odors, soil staining or field screen readings with a photoionization detector indicated petroleum or other volatile organic contamination. Based on no visual or field screening indications of contamination, a monitoring well was not warranted.

25o. Immediate Response Action Status Report #3 states, "IRA Increases in the thickness of LNAPL with micro-scale mobility in monitoring wells are associated with lower groundwater table elevations, and vice versa (e.g., wells are acting as localized sumps, but LNAPL is not recoverable due to viscosity)". (Page 3-3) Were LNAPL measurements taken during low groundwater table elevations? If not, why not?

See Response to Comment 18e.

25p. Immediate Response Action Status Report #3 states, "The configuration of the groundwater contours suggest groundwater has the potential to flow west toward the Weymouth Fore River." (Page 3-3) Is the LNAPL currently going into the Fore River through the groundwater? Could the vibrations from construction and operation of the proposed compressor station affect the amount of LNAPL going into the Fore River through groundwater? Could the vibrations from a blowdown or a gas ignition from the proposed compressor station affect the potential/ amount of LNAPL that could contaminate the Fore River through the ground water?

See Response to Comment 18e. LNAPL is not going into or migrating to the Fore River. TRC installed multiple wells outside of the Disposal Site and none of the wells indicate LNAPL or petroleum impacts in groundwater above applicable MCP standards.

25q. Immediate Response Action Status Report #3 states, "LNAPL with micro-scale mobility thickness has been observed historically at six monitoring wells (MW-201, 406, 407, 410, 414, and 415). During Status Report Period #3, LNAPL was not observed in MW-415." Did the LNAPL move to another area of the property? How is this consistent with micro- scale mobility?

Based on the LNAPL measurements conducted at the Disposal Site, MW-415 generally contained a minimal amount of LNAPL ranging from 0.01 feet to 0.08 feet. Due to the viscosity of the LNAPL and the transmissivity of the oil, the LNAPL may have been "caught up/absorbed" in the soil and sufficient volume to "migrate/flow" into the monitoring well was not available. For the purposes of the investigations and reporting conducted, "petroleum-containing soil" refers to soils observed to contain liquid oil product during boring advancement. "LNAPL with Micro-scale Mobility", where referenced, refers to oil floating on the groundwater surface, as observed/measured in monitoring wells at the Disposal Site. The MCP in 310 CMR 40.0006 defines "NAPL with Micro-scale Mobility" as "a LNAPL with a footprint that is not expanding, but which is visibly present in the subsurface in sufficient quantities to migrate or potentially migrate as a separate phase over a short distance and visibly impact an excavation, boring or monitoring well" (MassDEP, 2014). This definition is consistent with field observations at the Disposal Site, where LNAPL has been observed in only five of twenty-four monitoring wells.

25r. Why isn't another monitoring well located to the northwest of MW-410 and MW-201? Why isn't there a monitoring well located to the west of MW-406 and MW-407?

See Response to Comment 25n.In regard to monitoring well locations west of

MW-406 and MW-407: Immediately west of MW-406 and MW-407 is the access road to the MWRA Station, the Calpine facility and Edgar Station. The access road contains multiple utilities which made it unsafe for drilling. Therefore, monitoring wells were located on the other side of the access road. Monitoring wells MW-417 and MW-416 installed on the other side of the access road did not contain petroleum impacts and are considered upgradient to the petroleum contamination. Based on the petroleum contamination located on the Disposal Site, an Activity and Use Limitation (AUL) will be placed on the Disposal Site. A portion of the AUL boundary will extend into the access road.

25s. Is petroleum contaminated soil currently going into the Fore River? Would the construction and operation of the proposed compressor station affect the amount of the petroleum contaminated soil going into the Fore River?

See Responses to Comments 12i and 12k.

25t. What are the health and environmental implications if the public comes into contact with petroleum contaminated soil?

See Response to Comment 3b.

25u. What are the health and environmental implications if the petroleum gets into the Fore River through the petroleum saturated soil or the LNAPL in the groundwater?

See Responses to Comments 3b and 12i.

25v. Does the petroleum release VOCs and HAPs into the air in its current state? Will it release VOCs and HAPs into the air if petroleum contaminated soil is disturbed during construction and operation of the proposed compressor station?

TRC collected soil samples from several locations with petroleum impacts for analysis of Volatile Petroleum Hydrocarbons (VPH) with target volatile organic compounds including benzene, toluene, ethylbenzene, xylenes, methyl-tert-butyl ether, and naphthalene. All of the VOC target compounds, including the VPH compounds, were less than the applicable MCP regulatory standards and in most cases, were below the laboratory reporting limit for the compound. In addition, the petroleum contamination is located at least 10 feet below ground surface. Future work at the Property will be performed under a Health and Safety Plan for the protection of workers and a Soil and Groundwater Management Plan for the protection of both workers and others in the vicinity of the Property.

25w. Does the petroleum contaminated soil currently spread into the groundwater? Would the vibrations from the construction and operation of the proposed compressor station affect the amount of contaminated soil spreading into the groundwater causing an increase in contamination?

See Responses to Comments 12i and 18e.

25x. As you know, given TRC's contract with Texas Eastern (a Spectra Energy company), there was an explosion on the Texas Eastern in Westmoreland County, PA on April 29, 2016. How would an explosion at or near the proposed Weymouth Compressor Station impact groundwater contamination, pollution of the Fore River and/or the release VOCs and HAPs into the air?

See Responses to Comments 12i and 18e.

25y. As LSP, do you agree that an explosion similar to the explosion on the Texas Eastern in Westmoreland County, PA on April 29, 2016 would necessarily contaminate the groundwater, pollute the Fore River and/or release VOCs and HAPs into the air at the Site?

See Response to Comment 18e.

26a. It has been noted that this site also contains a lot of coal ash. As the Phase I Initial Site Investigation report states, there are at least 1,000 residents who live within a ½ mile of the site. What exactly will be done to ensure the air quality does not jeopardizes the health and welfare of nearby residents should you excavate and clean up this land?

See Response to Comment 22d.

26b. This parcel of land directly abuts conservation land that is used as a public park on Kings Cove Beach. How can you ensure residents that any construction or clean up activity at this site will not impede on the public's right to use this land?

See Response to Comment 22d.

26c. As a follow up, will any construction or clean up activity disrupt the public park and what will Enbridge/TRC do to ensure there is no damage to this public park in the cleanup process and are you willing to fix anything you damage if

you are proposing to disrupt this?

See Responses to Comments 18h and 24a. Project construction at the Disposal Site will need to adhere to the Activity and Use Limitation (AUL) to be placed on the Disposal Site. The AUL will include provisions for the preparation and implementation of a site-specific Health and Safety Plan and a Soil and Groundwater Management Plan (SGMP) for the protection of both on-Site workers and others in the vicinity of the Property. Since the construction project is within the Property boundaries, no disruption to the public park activities are anticipated.

26d. Some of the contamination that was found is reported to be about 16 feet deep. Disrupting contamination which was found below sea level could result in contamination leaking into the Fore River. Weymouth has two public beaches- Wessagusset Beach and Lane Beach along the Fore River. These beaches are used for boating and swimming by Weymouth residents. How will you reassure the public that disrupting the massive amount of contamination for a cleanup will not seep into the Fore River and jeopardize the public's ability to utilize the waterfront?

See Response to Comment 22d.

26e. These samples were taken because Algonquin is proposing to build a compressor station there. You have taken boring samples from the site where the main compressor building will be housed. Compressor stations have many other components including above and underground pipes and auxiliary buildings. How can you ensure the entire parcel is not contaminated and even though soil for where the main building will go was tested, what about the areas that will be dug for pipes and other components?

See Responses to Comments 2a and 2e.

26f. Governor Baker is requiring a comprehensive health impact assessment in the Fore River Basin due to the concern of the health affects the known pollution already in the basin. Will your proposed clean-up of the oil in the soil be done prior to this study or after? It is strongly urged that no decision be made until after the results of the Governor's study are released.

See Response to Comment 12o.

26g. Can you provide detailed engineering plans which outline the specific extraction plans of the contamination to include the proposed company doing

the work,the proposed timeline, and all of the safety precautions that will be used in this process?

See Responses to Comments 3b, 4a, 12q, and 12r.

26h. MassDOT has just re-opened the new Fore River Bridge and is continuing to finish the project. This project is slated to be completed in late spring of 2018. Part of the mitigation and project design of the new Fore River Bridge is to cleanup all of the parks and areas around that bridge. Should MassDOT fulfill their promises overhaul the parking areas for the parks and beautify the surrounding area -something that the residents were promised during the planning phases of the bridge nearly a decade ago- will Algonquin/TRC be willing to damage all of the beautification that will be done by MassDOT this spring to clean up this contamination and be committed to re-beautify the area to the same expectation and standards that were promised to the residents would happen once the Fore River Bridge was completed? You have to understand that those of us who live near the bridge have been living in constant construction and were led to believe that once the bridge was completed,we would finally have some peace, quiet and a nice welcome over the bridge into our neighborhood.

See Responses to Comments 4a, 12q, 12r and 18h.

26i. How long will it take to clean up the parcel using proper standards?

See Responses to Comments 4a, 12q, 12r and 18h.

26j. What is the primary method you will be using to ship out contaminated soil? Truck? Barge? Other?

See Responses to Comments 4a, 12q, 12r and 18h.

26k. If truck is the primary method of removing soil, approximately how many truck loads will be needed to remove the contaminated soil?

See Responses to Comments 4a, 12q, 12r and 18h.

26l. If you are intending to clean up this parcel, where will the new soil come from?

See Responses to Comments 4a, 12q, 12r and 18h.

26m. At what point does the Fore River basin be deemed oversaturated with pollution? Why can you just not leave this parcel of land alone as is and leave it unbuildable? We need some green space around all of the industry around here. It is not wise to build more industry on such a contaminated piece of land which is subject to flooding and other coastal hazards. We have reports that the air quality is exceeding MassDEP standards for various elements and the risk of adding more to the poor air quality in such a residentially dense area is not wise. I urge you to consider the land undevelopable due to its condition and add this contaminated parcel to the Conservation land that already abuts it. It's been beat up enough and the public's health is not work adding more industry to the area.

See Responses to Comments 12q, 12r, and 15c.

27a. I am a resident of North Weymouth and want to express concern about the Proposed Compressor siting in Weymouth. There are many toxins in the soil from decades of past industrial use, and how will the planners overcome the great danger.

See Response to Comment 3b.

28a. Public Involvement: The draft PIP states that notification of public meetings would be made by Algonquin, 14 days in advance, by legal advertisement in the "Boston Globe and/or Patriot Ledger". As the proposed compressor station/MCP site directly impacts the communities of the South Shore, notification should always appear in the Patriot Ledger, Weymouth News, Braintree Forum and Quincy Sun at minimum. What led to the decision to post only in the Boston Globe "and/or" the Patriot Ledger? Why is direct outreach to all impacted communities, regarding public meetings, not presently occurring?

See Response to Comment 1n.

28b. If the goal is to inform and engage the public regarding the MCP site why aren't those responsible for holding/hosting the public meetings making video recordings that can be shared with the public? Videos could easily be made available to local/government access stations. Is there anything that prohibits event hosts from recording and sharing in an effort to engage the public?

See Response to Comment 1d.

28c. Why is a public meeting being held at 5:30? To allow for greater community participation (including those who work 9:00 – 5:00) all future meetings should be held at 7:00. Is there any reason why a 7:00 meeting time could not be established to allow for greater public participation?

See Response to Comment 1b.

28d. The Draft PIP states that Information Repositories will be established at eDEP and Weymouth Public Library in North Weymouth, which operates on a reduced schedule. Please explain why this library was selected? Is there any reason why Tufts Library (operating at full schedule) was not selected and cannot be used as a repository location?

See Response to Comment 1a.

28e. Lastly, in the Draft PIP there is no information pertaining to public involvement of other impacted communities. Specifically, I am referring to the Town of Braintree and the City of Quincy. Both are significantly impacted by the MCP site and I believe that the City of Quincy actually owns land located on that parcel. Why are repositories not also being created at the Thayer Public Library (798 Washington St. Braintree, MA) and the Thomas Crane Public Library (40 Washington St. Quincy MA)? Why are public meetings not being held in the City of Quincy and Town of Braintree? The MCP site is located directly across the channel/river from Environmental Justice communities in Quincy. Most evident is O'Brien Towers (274 units/8 story elderly and disabled complex) and Snug Harbor Family Housing (2-4 bedroom/400 units). Both of these are Federal Housing, managed by Quincy Housing Authority. Individuals in these communities have had little to no opportunity to be heard.

See Response to Comment 1n.

28f. Why haven't parallel public meetings been held at the Snug Harbor Community School (Palmer St. Quincy, MA) to allow the economically disadvantaged, disabled and elderly reasonable opportunity and access to participate in this process? (Spectra scheduled one informational session at the school a few years ago.)

See Response to Comment 1n.

28g. Contamination/Remediation: In the Draft PIP there is specific mention of coal ash and fuel oil contamination. There is mention of the 11 million gallons of diesel oil that was once stored on the site. When and how was this oil removed from the

site and where was it shipped? Who was responsible for removal? MASS GIS has the site listed within a Hurricane Inundation Zone. This means the site may become inaccessible during and/or after a Category 2 hurricane. How will coal ash (arsenic) be contained so that it is unable to contaminate the Fore River in the event of flooding during storms or with sea level rise? What are the plans to remove and dispose of chamber bricks or clinkers that are present at the site? If construction of a compressor station was to begin, specifically how would arsenic/coal ash be contained so that it would not impact neither air or water? How would you gather baseline and ongoing information during a potential construction period? Where would that information be posted for the public to view? What would prevent pollutants (coal ash, petroleum) from entering the bay? How would you gather baseline and ongoing information during a potential construction period? Where would that information be posted for the public to view? How would public access to the waterfront area be impacted during construction? A Comprehensive Health Impact Assessment (Fore River Basin) has been ordered by the Governor. Could CHIA results yield any information relevant to the MCP site? If it could, why is this process continuing without that information?

See Responses to Comments 4a, 6h, 12o and 12q.

29a. At the bottom of page 1-1 of TRC's Draft Public Involvement Plan it says "Based on this privatized program, DEP does not provide direct oversight of the Massachusetts Contingency Plan response actions, but may provide technical screening audits and ensure that public involvement activities and MCP response actions are conducted in accordance with state law and regulations." Is this a true statement that DEP does not provide direct oversight and, if so, why isn't the Massachusetts Department of Environmental Protection directly overseeing the execution of the Contingency Plan?

MassDEP does oversee compliance with the MCP (e.g., by performing compliance audits). The wording "response actions" is what the LSP oversees, as applicable to site categorization.

29b. How can DEP ensure that the MCP response is in fact being conducted according to state law if DEP is NOT directly overseeing the work of TRC and you, personally, as the Licensed Site Professional, given that you are on the payroll of TRC, which in turn is paid by Spectra/Algonquin? This abrogation of responsibility by DEP appears to be a violation of state law. If I were a chicken farmer, I would not hire a fox to protect my hen house.

See Response to Comment 6a.

29c. At the top of page 4-1 of the PIP, it says that in accordance with the MCP, one of the purposes of activities undertaken to involve the public in response actions is, "to inform the public about the risks posed by the Site…" I don't see anything in the PIP about any specific risks posed by the site, especially health risks. It has been well established that there are deadly toxins in the ground in and around the proposed site. If the law calls for the public to be informed of the risks from these toxins, where is that information?

See Responses to Comments 3b and 15c.

29d. The maze of pipes allows the flow of pollutants to transfer throughout the site and ultimately to the outflow. How will you prevent this?

See Response to Comment 15d.

29e. Any disruption of the soil in the building of the compressor station (connection of underground pipes) or in the decontamination process will send arsenic airborne. How will you address this issue?

See Responses to Comments 4a, 18h and 18i.

29f. The Environmental Assessment notes dust will be controlled by spraying of water on the site while constructing. This will send the arsenic and coal ash through the outfall drain into the Fore River and Quincy Bay. What is the level of contamination containment in this type of process?

See Response to Comment 15d. In addition, an Activity and Use Limitation will be placed on the Disposal Site that will require the implementation of a Soil and Groundwater Management Plan that will included detailed engineering specifications for soil management.

29g. Any disruption of the soil by heavy construction equipment will send arsenic, coal ash, heavy metals, and petroleum pollutants onto the recreational beaches of the Fore River and Kings Cove. What methods do you intend to use to prevent this? How do you evaluate the level of contamination containment?

See Responses to Comments 4a, 18h and 18i.

29h. Governor Baker is requiring a Comprehensive Health Impact Assessment in the Fore River Basin (July 14, 2017 letter to Mayor Hedlund.) Any disruption of

the soil on the North Parcel would be premature pending the outcome of the CHIA. Why are you considering any actions on the parcel prior to the CHIA results?

We note that Governor Baker 's July 14th letter requires the completion of a public health impacts assessment "prior to the issuance of any air permits by the Department." See also, Response to Comment 12o.

29i. Any disruption of the soil would eliminate the use of the Public Park (walkway) and, therefore, would detract from the health and wellbeing of the neighborhood. How would you allow the utilization of this public facility before and after the remediation period?

See Responses to Comments 18h and 24a.

29j. Excavation of North Parcel for the MWRA Pumping Station noted oil contamination. Was this information considered in the extent of the contamination?

See Response to Comment 2a.

29k. The DEP docket does not contain any documentation with respect to the closure of the 11 million gallons of diesel oil in the above ground site. Who took the diesel fuel and where was it transferred to. Where can we get this documentation?

We utilized the available on-line MassDEP files to evaluate available site-specific regulatory information. TRC also conducted a review of records at the Weymouth Fire Department. No records regarding the removal of the 11 million gallon AST were identified.

29l. The situation at the North Parcel is very similar to the situation in Chesapeake, VA where the Sierra Club argued that the arsenic and other toxins from the coal ash were leaking into the river and violated the Federal Clean Water Act. Both sites have never been capped. Both sites are subject to intrusion by salt water. This will be further exacerbated by projected sea level rise. How are you going to address this issue?

See Responses to Comments 12a, 15b, and 15c.

29m. There are a number of recreational beaches along the Fore River, Kings Cove area. My concern is about the flow of contaminants to the beaches. How are you

going to prevent this and after prevention further monitor possible contamination?

See Responses to Comments 8c, 12a, 12i, and 15b.

29n. Another concern is the heavily contaminated burner chamber bricks (From Edison Edgar Plant) in the North Parcel How are you planning to remove these and where will you dispose of them?

See Responses to Comments 3b and 12q.

29o. 16 feet deep borings from Spectra are showing oil (petroleum) contamination. These borings are below sea level; the concern is that there could be movement of this contamination into the Fore River. Have you considered this issue? How are you planning to address this?

See Response to Comment 18e.

29p. Can you explain how you were given a Tier 2 designation? Who makes the determination and what is it based on?

See Response to Comment 6c.

30a. If this compressor station is built and neighbors get sick are you going to pay for their health costs and devalue of their homes. And If not. Why since you cause it.

This comment is not relevant to the MCP process or the Disposal Site.

31a. There are a number of recreational beaches along the Fore River, Kings Cove area. Concern is about the flow of contaminants to the beaches. How are you going to prevent this and after prevention further monitor possible contamination?

See Responses to Comments 8c, 12a, 12i, and 15b.

31b. Concern about heavy metal contamination in the clinkers. How are you planning to remove these and where will you dispose of them?

Given the previously discussed Site history (e.g., significant pre-Disposal Site

release filling in approximately the late 1910s/early 1920s), prevalence of coal, clinkers, and coal ash throughout the soil column, and ubiquitous nature of elevated metals detections throughout the subject Property, the detected concentrations of metals, including elevated concentrations of arsenic and vanadium beyond the limits of the Disposal Site are consistent with Historic Fill as defined in the MCP (310 CMR 40.0006). Soils will be managed utilizing a Soil and Groundwater Management Plan (SGMP) in accordance with the Activity and Use Limitation to be placed on the Disposal Site and conditions applicable to the Historic Fill at the Property.

31c. Any disruption of the soil in the building of the compressor station (connection of underground pipes) or in the decontamination process will send arsenic airborne. How will you address this issue?

See Responses to Comments 4a, 18h and 18i.

31d. The maze of pipes allows the flow of pollutants to transfer throughout the site and ultimately to the outflow. How will you prevent this?

See Response to Comment 15d.

31e. Any disruption of the soil in the building of the compressor station (connection of underground pipes) or in the decontamination process will send arsenic airborne. How will you address this issue?

See Responses to Comments 4a, 18h and 18i.

31f. The EA notes dust control by spraying of water on the site while constructing. This will send the arsenic and coal ash through the outfall drain into the Fore River and Quincy Bay. What is the level of contamination containment in the type of process?

See Response to Comment 4a.

31g. Any disruption of the soil by heavy construction equipment will send arsenic, coal ash, heavy metals and petroleum pollutants onto the recreational beaches of the Fore River and Kings Cove. What methods do you intend to use to prevent this? How do you evaluate the level of contamination containment?

See Responses to Comments 4a, 18h and 18i.

32a. The information repository for the Weymouth Compressor Station Site is defined as the North Branch Library located at 220 North Street. This location does not adequately provide the public to easy access to the Site's clean-up documents due to limited operating hours of this branch and its location. The Town recommends that Tufts Library located at 46 Broad Street and the Health Department located at Town Hall, 75 Middle Street, become information repositories too.

In addition, based on the fact residents representing Weymouth, Quincy, Braintree, and Hingham petitioned to have the Site designated as a PIP site, information repositories should be added in their communities. I recommend the Thomas Crane Public Library in Quincy, the Thayer Public Library in Braintree, and the Hingham Public Library, the so-called Central Library, in Hingham, be added as repositories too.

See Responses to Comments 1a and 1n.

32b. Given the technological age we live in, all residents should be able to assess digitally this information without having to physically go to only a few select places to review the information. An easy to use, single, dedicated website should exist with all the relevant filings, reports, and studies for residents to review at any time from any place. The DEP 21E website once had this information somewhat readily available, but recent changes to the statewide www.mass.gov has made accessing this information much more difficult.

If the applicant is not prepared to host this user-friendly website, then the Town will if provided PDF copies of all the relevant 21E files for 6 and 50 Bridge Street, including all filings for every release tracking number on that site. I would ask that either the applicant or DEP provide the Town with a copy of these files, if the applicant is unwilling to create this website as part of the PIP.

See Response to Comment 1a. As required by MassDEP, MCP-related documents are uploaded to eDEP.

32c. The Town is concerned that the nature and extent of the on-site contamination is not truly known due to insufficient evaluation of contamination associated with coal ash. The MCP exempts coal ash fill from MCP notification requirements and it allows elevated metals concentrations in coal ash fill to be classified as background conditions in some circumstances. However, if coal ash fill is not handled properly it could have negative health consequences to area residents, site workers, and the general public. Moreover, the coal ash fill present at 6 and 50 Bridge Street does not appear to qualify as "Historic Fill" under the MCP, and thus must be addressed in the current MCP response

action, as discussed in the next section. It may also be subject to EPA regulatory requirements.

See Responses to Comments 2d and 3b. The 1997 Response Action Outcome (RAO; regulatory closure) report identified concentrations of contaminated soil that exceeded applicable cleanup criteria (e.g., arsenic concentrations), but the concentrations were attributed to the presence of coal ash, which was observed during boring advancement and test pitting on the Property. The 1997 RAO indicated that the identified contaminant concentrations were not reportable to MassDEP due to an MCP reporting exemption for coal/coal ash. The 1997 RAO also indicated that no releases of oil and/or hazardous materials were known to have occurred at this location. TRC observed similar concentrations and similar conditions as were previously opined to reach regulatory closure. Given the previously discussed Property history (e.g., significant pre-Disposal Site release filling in approximately the late 1910s/early 1920s), prevalence of coal, clinkers, and coal ash throughout the soil column, and ubiquitous nature of elevated metals detections throughout the subject Property, the detected concentrations of metals, including elevated concentrations of arsenic and vanadium beyond the limits of the Disposal Site are consistent with Historic Fill as defined in the MCP (310 CMR 40.0006).

32d. The Environmental Protection Agency (EPA) regulates Coal Combustion Residuals (CCR) and their placement within fill. See: 40 CFR Parts 257 and 261; Federal Register Vol. 25, No. 118 (June 21, 2010) (Proposed Rule); Federal Register Vol. 80, No. 74, p. 21302 (April17, 2015) (Final Rule). Based upon risk assessments by the EPA, they have found that mismanaged CCRs present elevated cancer risks for: humans exposed via groundwater-to-drinking water pathway that may occur centuries later; for humans exposed to fugitive dust especially due to the inhalation of chromium; for humans exposed to groundwater-to-surface-water, for example via fish consumption pathway, as well as others. In addition, the EPA also recognizes that risks of CCR may be heightened due to the mechanical compaction of CCRs, the assumption that all CCRs are above the water table, and that surface conditions over time may change.

CCR within fill has the ability to affect the ecosystem, as well. The EPA finds that species directly exposed to CCR have elevated risks due to the selenium, silver, nickel, chromium, arsenic, cadmium, barium, lead, and mercury found within it. In addition, scientific literature has shown other risks such as; elevated selenium levels in migratory birds, fish kills, amphibian deformities, snake metabolic effects, plant toxicity, fish deformities, inhibited fish reproductive capacity, and risks to mammals that uptake these flora and fauna.

Therefore, I recommend that the nature and extent of CCR at 6 and 50 Bridge Street in Weymouth be fully and completely investigated, including further

sampling of metals throughout the site. Following this investigation, appropriate steps to comply with MA DEP and EPA regulations should be identified before any construction is carried out at the site. Failure to perform the sampling will endanger the public's health and the environment.

See Responses to Comments 3b and 12a.

32e. The Town is concerned that the lack of proper scope may create potential routes of exposure that are not being adequately identified at this location. As previously stated, CCRs in the soil may cause many elevated risks to public health and the environment. However, RTN 4-0026230/4-0026243 does not define metals in soil or groundwater as a concern to public health or the environment. I believe a comprehensive site evaluation for elevated levels of metals must occur if the public's health is truly going to be protected.

Although the Historic Fill has not been evaluated in the risk assessment performed for the Disposal Site, there will be additional conditions placed on the Property to minimize exposure to the Historic Fill contaminants such as the placement of a clean soil layer over the Historic Fill. In addition, the use of a Health and Safety Plan for worker protection and a Soil and Groundwater Management Plan for the protection of both workers and others in the vicinity of the Property will be required when any work that disturbs soil at the Property is performed.

32f. While the MCP excludes contamination associated with coal ash from the MCP notification requirements, coal ash is not exempt from regulation under M.G.L. Chapter 21E and the MCP. Contaminants associated with "Historic Fill" including coal ash may be considered "Anthropogenic Background" and excluded from MCP risk assessments. However, material may be considered Historic Fill only if it "does not contain oil or hazardous materials originating from operations or activities at the location of emplacement." 310 CMR 40.0006.

See Response to Comment 2d. The 1997 RAO report identified concentrations of contaminants in soil that exceeded applicable cleanup criteria (e.g., arsenic concentrations), but the concentrations were attributed to the presence of coal ash, which was observed during boring advancement and test pitting at the Site. The 1997 RAO indicated that the identified contaminant concentrations were not reportable to MassDEP due to an MCP reporting exemption for coal/coal ash because the Historic Fill material meets the definition of anthropogenic background as defined in the MCP. The 1997 RAO indicated that no releases of oil and/or hazardous materials were known to have occurred at this location. TRC observed similar concentrations and similar conditions as were previously opined to reach regulatory closure. In addition, as you cite above, *"does not contain oil or hazardous materials originating from operations or activities at*

the location of emplacement." 310 CMR 40.0006. This Property as documented was utilized for storage of materials including coal as associated with Edgar Station and was not an area where "operations" occurred. Given the previously discussed Property history (e.g., significant pre-Disposal Site release filling in approximately the late 1910s/early 1920s), prevalence of coal, clinkers, and coal ash throughout the soil column, and ubiquitous nature of elevated metals detections throughout the subject Property, the detected concentrations of metals, including elevated concentrations of arsenic and vanadium beyond the limits of the Disposal Site are consistent with Historic Fill as defined in the MCP (310 CMR 40.0006).

32g. The 1997 RAO Statement for RTN 3-2387 submitted to MA DEP by Boston Edison Company (available at eeaonline.eea.state.ma.us/EAA/File Viewer/Rtn.aspx?rtn=4-3002387) which addresses contamination at the location of the currently proposed compressor station, describes the site as part of the Boston Edison Company Edgar Station property (seep. 1-1 and Figure 2). The report states (at p. 3-4), "Solid waste (i.e., coal ash and slag from the boilers) was reused throughout the Edgar Station property as fill material." Thus, the coal ash present at the Site does not qualify as Historic Fill, and contamination associated with it, such as elevated levels of arsenic, must be addressed in the risk assessment and response actions for RTN 4-0026230/4-0026243.

See Response to Comment 2d and 32f.

32h. As you are aware the Site is being proposed as the location for a natural gas compressor station by Algonquin Gas Transmission, LLC. Therefore, failure to adequately address the CCR and other contamination at the Site poses significant risks. Exposed CCR fill and fugitive CCR fill dusts, with elevated levels of metals within them, will negatively affect human health and the environment due to the construction of this project. Inevitably CCR fill will be exposed, moved around the site, and be mechanically compacted creating elevated health risks. Similarly, the pool of weathered No.2 fuel oil that triggered the release notification requirements for RTN 4- 0026230/4-0026243 will be affected- and possibly mobilized- by the proposed construction.

See Responses to Comments 3b and 12q.

32i. The proposed Natural Gas Compressor Station may be located on a CCR landfill. Coal and petroleum products are highly flammable in nature, as is Natural Gas. It makes no logical sense to propose a highly flammable natural gas distribution center on a substrate that may have flammable properties itself.

See Responses to Comment 2d and 12q.

32j. Under the MCP, construction at a Disposal Site that has not achieved Permanent Solution status may be carried out only under one of the categories of MCP response actions. See MA DEP Policy #WSC-00-425 (January 2000). Also, future use of a Disposal Site must be addressed in MCP risk assessments. The IRA and Phase I reports submitted to date for RTN 4-0026230/4-0026243 contain no mention of the massive construction project contemplated at the site. This glaring omission must be addressed.

TRC and Algonquin utilize the MCP 310 CMR 40.0000 effective 5-23-14 and updated policies in the management of MCP Disposal Sites. Also see Response to Comment 12q.

32k. Algonquin Gas Transmission LLC, TRC Environmental, and the MA DEP must better inform the public and better define the composition of soils and groundwater around the site to protect public health and the environment. Informational repository sites must be expanded to the minimum of the ones suggested, herein. In addition, the current RTN 4- 0026230/4-0026243 does not adequately sample for constituents of concerns at the site and a full boring program for the presence of metals such as, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, and Thallium must be conducted. Failure to do so may create elevated cancer risks, as found by the EPA's risk assessments of CCR Landfills. (See the discussion in EPA's Proposed Rule in the June 21, 2010 Federal Register, Volume 75, Number 118.)

See Responses to Comments 1n, 2e and 12a.

III. Mail Comments and Questions

33a. In the TRC Public Involvement Plan page 1-1, it states, "the MCP places the responsibility for conducting response actions on the SITE OWNER". Presently, the question of the north parcel legal ownership is being answered in court. "Ownership" implies that it is legally obtained and has complied with all the requirements of the state and local governing departments. The lack of a legally obtained Weymouth subdivision requires a court determination. As such, until the court makes the determination of the legal aspects of the north parcel sale, the PIP process should be halted at its present state, and continued after the legal status of the land is determined and all appeals are exhausted. At that time, an additional public meeting should be held and a comment period extended based on the new timeframe.

See Response to Comment 6g.

33b. TRC and the State of Massachusetts write off the presence of arsenic at the site, as a result of the filling of the area with coal ash. Yet, the arsenic has leached from the coal ash for many years as a result of rain and the influx of water from the Fore River. As a result, the arsenic is a standalone contaminant. If arsenic were to be discovered at another location without the presence of coal, the site owner would be required to clean the site of arsenic. Explain why arsenic which has leached from coal should be treated any different.

See Responses to Comment 2d and 12a. Arsenic was not detected in groundwater above the applicable MCP standards.

33c. Individually, saltwater and arsenic have a corrosive effect. Explain why both of these elements would not have a combined significant impact on the coating of the underground gas pipelines in the proposed North Weymouth location. Please supply documented studies.

See Response to Comment 12a. Arsenic was not detected in groundwater above the applicable MCP standards.

33d. Recently a number of studies on sea level rise show that even an elevated gas compressor station (as proposed) would still be flooded with the more extreme predictions. The studies show many areas of Boston would be under water. Additionally, while Spectra accounted for a minimal sea level rise with the addition of fill, they did not account for wave action which FEMA has stated the location would be impacted by.

This Comment is not relevant to the Disposal Site or MCP process.

33e. TRC has stated that the area under the proposed gas compressor building and auxiliary building are without any infrastructure which would serve as a conduit for the migration of pollutants throughout the area. Yet, the whole area directly abutting the small project site, is a maze of pipelines and tunnels. Additionally, the Spectra gas pipeline proposal shows the gas compressor pipelines crossing the maze of pipes. Explain how Spectra would stop the spread of pollutants throughout the area, Fore River, and King Cove.

See Responses to Comments 4a and 15d.

33f. TRC states that the area of the oil pollution is limited to the area around the leaking tank. Additionally, documents show that the MWRA discovered oil in their excavation in the area of the public walkway and close to the pump station. TRC states that the GZA borings and wells (except B-105) in the area of the proposed gas compressor, blowdown, and auxiliary building, were clean but did not provide supporting field notes. The documentation also states that the groundwater flows in a northeast direction (toward the pump station and

walkway). Explain how the oil from the leaking tank could impact the MWRA location without leaving oil in the GZA boring locations

See Responses to Comments 2a and 12i.

33g. Explain why GZA borings B-100 to B-110 (except B-105) are not supported by field notes as other "clean" borings are?

See Response to Comment 11a.

33h. Explain why spill releases noted in the DEP Table 19 "environmental spills or releases reported to Mass DEP prior to October 1993 - Weymouth Mass.", are not included in the documentation.

Environmental spills and releases prior to 1993 were previously included in MassDEP's Locations to be Investigated (LTBI) list. Many of the release on this list were linked to other release under the revised 1993 regulations or closed. Many of the releases referred to are included in the 1997 RAO report which include an Appendix including a report prepared by the consultant, HMM, where they identify the releases. Many of the release sites on the earlier lists were previously closed or incorporated into another Release Tracking Number (RTN). The historic releases are located on properties (predominantly the former Sprague property and the existing Edgar Station property) which are located outside of the Disposal Site and the Algonquin Property.

33i. Explain why the presence of Charles Race working with the TRC boring team, does not represent a conflict of interest for the supervising LSP Kelley Race.

Personnel with appropriate technical backgrounds were utilized on this project.

33j. The gas compressor station appears to be utilizing the existing drainage system. Will Spectra be installing an oil separator or other cleaning device, and what will the maintenance schedule be?

See Response to Comment 3b.

33k. Will contaminated soil be trucked or moved by barge from the site? Where is the disposal location?

See Response to Comment 12q. The movement of soil off Property will be in accordance with applicable regulations.

33l. Since pipes run by the site of the leaking tank, what effort has been made to ensure that pollutants had not followed the pipelines further from the tank.

See Response to Comment 3b.

33m. Is Spectra liable for injuries or property devaluation resulting from a potential migration of pollutants from the contaminated site?

This comment is not relevant to the MCP process.

33n. If Spectra is proposing to raise the elevation of the proposed gas compressor station site to protect it from sea level rise, will the site have to be capped "prior to bringing in fill"?

The import of clean fill may be considered a cap, as applicable to construction. The Disposal Site will have an Activity and Use Limitation placed on it and conditions for Historic Fill management will be required for the Property.

33o. Page 4-1 of the PIP document states the" publically available site files" are available to the public with the exception of "any enforcement -sensitive material". No explanation of ‘‘enforcement- sensitive material", is stated. Please provide a general description.

TRC and Algonquin do not have access to the MassDEP enforcement – case sensitive documents. These are MassDEP-generated enforcement proceedings.

33p. Page 4-1 of the PIP document states, "as new reports are developed, copies of the report are required to be uploaded to eDEP". However, it does not state how soon after the reports are developed, will they be online?

Once a draft document is available for uploading, it will be provided to eDEP and the information repositories. Also see Response to Comment 33s.

33q. Page 4-3 of the PIP document notes that TRC will notify the CMO and BOH of upcoming field work "by first class mail, at least three days prior to the start of field work. Since first class mail takes 2 days to deliver, that would leave one day for the Town of Weymouth officials to receive the notice and inform the impacted residents. That is not enough notification. One week is a more acceptable time

The reference to notification of the CMO and BOH is cited from the MCP. Algonquin and TRC will follow the requirements of the MCP.

33r. 4.4 States that "no other public involvement activities have been identified. The abutting Rte. 3A and Fore River Bridge carry 33,000 vehicles per day. Many drivers may have breathing problems. Roadside signage should indicate when arsenic laden dust may be created.

A Health and Safety Plan and a Soil and Groundwater Management Plan will be used whenever soil disturbance occurs at the Property for the protection of both workers and others in the vicinity of the Property. The preparation and use of these Plans will be required by the Activity and Use Limitation and other conditions required for the Property. These Plans will include details regarding

work practices to be used to minimize dust generation and monitoring to confirm that dust levels remain at safe levels for workers and nearby people.

33s. Number 5.2 of the PIP Plan states "when key documents are available in draft form, they will be provided to the information depository and a notice of the availability will be sent to the PIP mailing list". "Draft form" means that the document is still subject to change. The public needs to see the "final form"

As required by the MCP, draft documents will be provided to the information repositories and eDEP as applicable. Once the public comment period has ended and public comments incorporated as applicable, the MCP documents will be finalized and uploaded to eDEP and provided to the information repository.

33t. 7.0 states "TRC on behalf of Algonquin has developed this DRAFT PIP to solicit public comment AFTER WHICH we will prepare a "final PIP". A draft means that the "draft plan" is subject to change. Will the public be allowed to comment on the "final PIP"? If not, why not, and what unbiased party would have oversight of the final PIP?

The elements of a PIP are identified in the MCP (310 CMR 40.0000). TRC on behalf of Algonquin followed the requirements of the regulations.

33u. 8.0 Revisions to this Plan: This section states that revisions to the PIP "may be revised as necessary". Additionally, it states that TRC will place proposed revisions in the local information repository and will review comments received, and revise the PIP as appropriate. Will all cleanup activities be put on hold until the comments on the final PIP are reviewed? Will the review of the final PIP be shared with the public?

See Response to Comment 33t.

33v. The Dept. of Energy and Environmental Affairs document entitled "preparing a public involvement plan", states "the Public Meeting section should come before the one on Public Comment Periods. People must be notified of meetings 14 days in advance. If people want meetings during the cleanup process, then the deliverable that would warrant meetings are at a minimum": (in part) responses to public comments must indicate which comments have been incorporated and explain why others have not". On behalf of the residents of East Braintree and the Town of Braintree, I am requesting a public meeting regarding the final PIP revisions, prior to the implementation of PIP actions.

See Response to Comment 33t.

Exhibit II

Public Involvement Activities Schedule

Public Involvement Plan Schedule

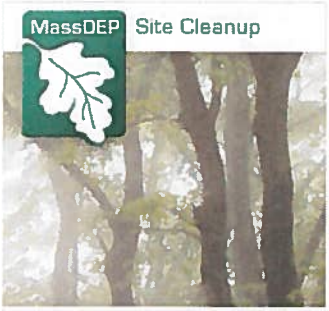
September 25, 2017	Algonquin receives PIP Designation Request
October 10, 2017	PIP Group (Petitioners, CMO, BOH, DEP) sent letter designating the Disposal Site as PIP
October 24, 2017	PIP Group sent letter regarding PIP Meeting including Public Notice
October 24, 2017	PIP Group sent letter requesting contact information for interviews
October 27, 2017	Public Notice of PIP Meeting published in Boston Globe and Patriot Ledger
November 3, 2017	PIP Group (respondents from interview list) sent email regarding providing concerns regarding Disposal Site
November 7, 2017	PIP Petitioner Request to Extend PIP Plan Comment Period (20 days)
November 9, 2017	Algonquin acknowledges extension request for an additional 20 days
November 10, 2017	Advance copy of Draft PIP Plan provided the PIP Group (as requested in email communication)
November 13, 2017	PIP Comment Period extended, as presented at Public Meeting (53 days- extended to January 5, 2018)
November 13, 2017	PIP Meeting- to present Draft PIP
November 14, 2017	Public comment period begins
January 5, 2018	Draft PIP comment period ends
January 30, 2018	Proposed Issuance of Final PIP (PIP finalized within 30 days of the end of public comment period or before) including responses to comments received during the Draft PIP comment period
March 2018	PIP Meeting to Discuss Next MCP Response Actions

Exhibit III

LSP Program Overview

DEP Website Information – Preparing Public Involvement Plan

Preparing a Public Involvement Plan



A to Z Quick Links

Site Cleanup Index

The MCP at 310 CMR 40.1400 specifies a series of actions and performance standards on how to involve the public in the site assessment and cleanup process. To aid parties in interpreting and meeting these requirements, DEP has published a policy on how to prepare a Public Involvement Plan. Although this policy was prepared prior to the promulgation of the new regulations in 1993, with some minor adjustments, it continues to represent the agency's position on what specific steps, products, and procedures are needed to meet the performance standards of the MCP. Public Involvement Plan Interim Guidance for Waiver Sites, Policy # WSC-91-800 (1991).

When using this policy, the following changes need to be made to the Model Public Involvement Plan to conform to the most recent version of the MCP:

Cover Page

The cover page should include a Prepared By (usually the LSP) and Prepared For (PRP) statement, and both should have a contact name and phone number for more information.

Introduction

- Note that the PRP now receives the petition and designates the site a PIP site, not DEP.
- The sites are not Waiver sites, but either Tier I or Tier II.
- The explanation of the MCP process needs to be revised to include the concept of privatization and LSPs. DEP no longer directly oversees the cleanup of sites.

Addressing Public Comments

The citation for the new MCP has changed, as have the names of the steps in the process. Phase I of the MCP process is now Tier Classification, not site confirmation. The phased process now includes Phase V and Response Action Outcomes. Interim Measures and Short Term Measures are now Release Abatement Measures and Immediate Response Actions.

Public Involvement Activities

- The citation for the public involvement section of the MCP has changed, as have the purposes stated under 40.1401.
- Waiver information will no longer be placed in the Repository(ies).
- Usually just the local news media will be included on the site mailing list, not regional.
- The biggest change is in the Notification of Major Milestones and Events, which comes from 40.1403. The notification triggers have changed and are now as follows:

  Field work involving

  - the implementation of any IRAs for imminent hazards
  - the implementation of any RAMs
  - the use of respirators or level A,B, or C protective clothing
  - residential sampling
  - Phase IV remedial actions; and

  The completion of each phase of remediation process, including:

  - IRA Completion Statements for imminent hazards
  - each phase
  - Permanent or Temporary Solution Statements
  - AUL
  - DPS
- The Public Meeting section should come before the one on Public Comment Periods. People must be notified of meetings 14 days in advance. If people want meetings during the cleanup process, then the deliverables that would warrant meetings are, at a minimum:

- draft PIP
- Phase II SOW
- Phase II Report
- Phase II Risk Assessment SOW
- Phase III Remedial Action Plan
- Phase IV Remedy Implementation Plan
- IRA or RAM Plans
- RAO (including AULs)

- Public comment periods are required for:
  - draft PIP and any subsequent revisions
  - Phase II SOW
  - Phase II Report
  - Phase II Risk Assessment SOW
  - Phase II Risk Assessment Report
  - Phase III Remedial Action Plan
  - Phase IV Remedy Implementation Plan
  - IRA or RAM Plans and Completion Statements
  - RAO (including AULs)
- Responses to public comments must indicate which comments have been incorporated and explain why others have not.

Schedule

Exhibit II is meant to be a graphic representation of the public involvement activities in the Plan and when in the MCP process they will occur, not specific dates, but an additional schedule with specific timeframes for activities may also be included.

Responsibility for Implementing the Public Involvement Plan

The site is not a Waiver site, and everything regarding the appeal process may be deleted from this section.

Exhibit I

Interview question responses should be documented here under their appropriate heading so somebody reviewing this could tell whether what is in the Plan reflects what people wanted. "Other" is meant to capture those concerns that cannot be addressed under c. 21E or the MCP (and therefore would not be addressed under the PIP process).

When in doubt, contact the Public Involvement Coordinator at your MassDEP Regional Office with any questions regarding public involvement plans.

A Massachusetts Property Owner's Guide to

Hiring a Licensed Site Professional

If contamination has been found on your property, you will need to hire a Licensed Site Professional (LSP) to determine if cleanup work is required. The process for hiring an LSP is very similar to the process you would use to hire any professional who provides a service to you.

The Massachusetts Department of Environmental Protection (MassDEP) has prepared this guide for home and small business owners to answer some of the questions that you may have about LSPs and their role in the cleanup process. It also suggests some things to consider when hiring an LSP.

What is an LSP?

An LSP is an environmental scientist or engineer experienced in the cleanup of oil and hazardous material contamination. The LSP's job is to work with you to develop and execute a scope of work that will satisfy the state requirements to address contaminated property (these requirements are set forth in Massachusetts General Law c. 21E and the Massachusetts Contingency Plan (MCP)..

LSPs are licensed by the state Board of Registration of Hazardous Waste Site Cleanup Professionals (usually referred to as the "LSP Board"), based upon education, experience, and passing an examination on applicable regulations and relevant technical issues. They are required to maintain their licenses by taking numerous educational courses on the evolving regulations and related technical practice issues.

The LSP Board establishes professional standards that LSPs must meet to remain licensed. These standards address technical ability, decision-making experience, and ethical practice. The LSP Board disciplines LSPs whose work does not meet appropriate standards of care.

What will the LSP do?

Your LSP will gather and evaluate information about the contamination on your property. He or she will then recommend a course of action for meeting state requirements. This recommendation will be presented in the form of a written proposal and contract to undertake the work. These proposals do not require MassDEP approval, so work can begin promptly. Once the cleanup is complete, your LSP will submit a final Opinion to MassDEP stating that your property meets the requirements of the MCP.

Opinions may be provided only by an LSP. Environmental scientists or engineers not licensed by the LSP Board may not provide Opinions. They may, however, perform work upon which the Opinion is based.

Does MassDEP get involved?

Although most evaluations and cleanups are performed without direct involvement of MassDEP, there are a few exceptions. MassDEP may respond to environmental emergencies (such as an oil spill), and may also provide oversight or require its approval of response actions during key stages of assessment and cleanup at any site, if conditions warrant. Your LSP will be able to identify such properties.

In addition, MassDEP audits a percentage of all cleanups to demonstrate that the work completed meets the state requirements.

How do I benefit from using an LSP?

Your LSP will guide you through the process. He or she will advise you on state regulatory requirements and recommend actions that are appropriate for your specific situation.

Also, since there is little direct MassDEP involvement, your property can be evaluated and cleaned up, if necessary, as quickly as possible. In general, a faster cleanup will cost you less money. One reason for this is that MassDEP's regulations have built-in incentives: the faster work is completed, the less you pay in annual

Prepared by the Massachusetts
Department of Environmental Protection
June 1999/revised May 2009

MassDEP fees. Your LSP can advise you on the least expensive way to fulfill state requirements.

Hiring an LSP

The following are some suggestions for hiring an LSP:

- Obtain a current list of LSPs from the LSP Board (see telephone number below).
- Evaluate more than one LSP. Obtain a written scope of work and cost estimate from several LSPs, asking for the following information:
  1. State regulatory requirements applicable to your situation;
  2. Actions being proposed to meet those requirements;
  3. The proposed schedule for completing work;
  4. Deadlines and fees that may be imposed by MassDEP; and
  5. The cost of all LSP and related services.
- Ask for and check references. Contact the LSP Board and ask if any complaints resulting in discipline have been filed against the LSPs you are considering.
- Compare the experience and costs of all LSPs.
- Do not base your selection strictly on costs - a more experienced LSP may cost you less in the long run.

The Contract

When you hire an LSP, it is a good idea to obtain a written contract describing the work to be done and specifying all costs. Keep in mind, however, that this contract will provide only an **estimate** of the necessary work and costs, as it is based on the information that is available at the time of the estimate. Once work begins, your LSP may find that the problem is more or less extensive than originally believed. Require your LSP to discuss any project changes with you before proceeding with work.

The contract with your LSP should include all of the following:

- Clear cleanup objectives;
- Specific actions that will be taken to address contamination;
- A proposed schedule for completing work; and
- A budget, specifying:
  1. Fixed costs, either as a lump sum or as unit prices for each item; and
  2. Items to be charged (e.g., laboratory work, equipment and materials, labor hours).
- How changes in the project will be handled.

Neither MassDEP nor the LSP Board has authority over the fees charged by LSPs. Be sure that the contract is clear about the fees that you may be charged.

Changing LSPs

It is possible to change LSPs after work has begun. Once an LSP provides an Opinion to MassDEP, he or she is considered your "LSP-of-Record". If you change LSPs after an Opinion has been filed, your LSP-of-Record is responsible for notifying MassDEP within 21 days.

For more information...

Department of Environmental Protection:
Visit http://www.mass.gov/dep/cleanup

LSP Board: For a list of LSPs, information about licensing requirements, disciplinary history and procedures for filing a complaint call 617-556-1091 or visit http://mass.gov/lsp

Prepared by the Massachusetts
Department of Environmental Protection
June 1999/revised May 2009

FIGURES

LEGEND

APPROXIMATE SITE LOCATION

MASS. COORD. SYSTEM
NAD 1983 - MAINLAND ZONE

ATLANTIC BRIDGE PROJECT
WEYMOUTH COMPRESSOR STATION
BRIDGE ST, WEYMOUTH, MA

ENBRIDGE

SITE LOCUS MAP
RTN's 4-26230 AND 4-26243

PHASE I ISI

TRC
2 Liberty Sq
6th Floor
Boston, MA 02113
(617)350-3444

FIGURE
1

DRAWN BY: AHC
CHECKED BY: RN

DATE:
07/07/2017

FILE: J:\Projects\140143 - Atlantic Bridge\Weymouth Compressor Station\CAD Files\Boring Plan Jan2017_aul2_a.dwg

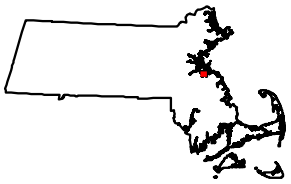
Approximate RTN Location
Approximate RTN Location
Approximate RTN Location
Approximate Lot Boundary
Area not included in Site
Monitoring wells observed on Site

0 150 300 Feet

N

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Massachusetts



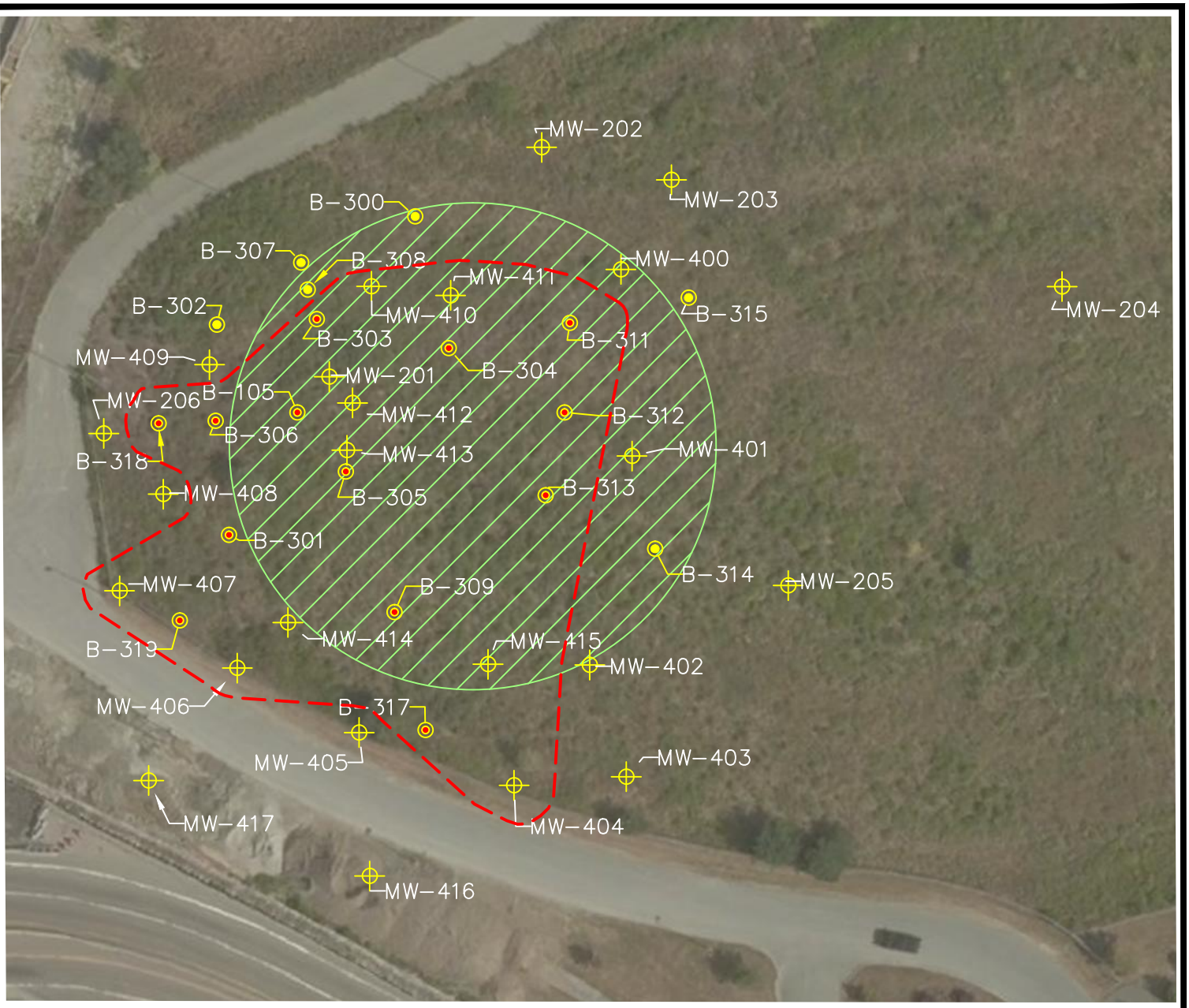
TRC
6 Ashley Drive
Scarborough, ME 04074
(207) 879-1930

SITE LAYOUT PLAN

6 & 50 BRIDGE STREET
WEYMOUTH, MASSACHESETTS

FIGURE 2 | NOVEMBER 2017

V:\PROJECTS\AUGUSTA\Small_Projects\140143_Spectra_Weymouth_MA\MXD\Fig_3_Aerial_Spectra_Weymouth_20161129.mxd



SCALE: 1"=60'

0' 30' 60' 120'

LEGEND

- SOIL BORING
- MONITORING WELL
- APPROXIMATE LOCATION: FORMER ABOVE-GROUND STORAGE TANK 11,256,000-GALLON NO. 2 FUEL OIL
- APPROXIMATE DISPOSAL SITE BOUNDARY

NOTE:
BORING B-316 WAS NOT INSTALLED

MASS. COORD. SYSTEM
NAD 1983 - MAINLAND ZONE

ATLANTIC BRIDGE PROJECT
WEYMOUTH COMPRESSOR STATION
BRIDGE ST, WEYMOUTH, MA

ENBRIDGE

DISPOSAL SITE BOUNDARY
BORING/MONITORING WELL LOCATIONS
RTNs 4-26230 & 4-26243

PHASE I ISI

TRC
2 Liberty Sq
6th Floor
Boston, MA 02113
(617)350-3444

DRAWN BY: AHC
CHECKED BY: RN
DATE: 07/17/2017

FIGURE 3

FILE: J:\Projects\140143 - Atlantic Bridge\Weymouth Compressor Station\CAD Files\Boring Plan Jan2017.dwg

C

Environmental Justice Supporting Documentation

Table C-1. Environmental Justice Population in 1-mile Radius

No	Geographic Area Name	EJ Criteria
1	Block Group 1, Census Tract 4179.01, Norfolk County, Massachusetts	Minority
2	Block Group 2, Census Tract 4194, Norfolk County, Massachusetts	Minority
3	Block Group 6, Census Tract 4179.01, Norfolk County, Massachusetts	Minority
4	Block Group 4, Census Tract 4227, Norfolk County, Massachusetts	Minority
5	Block Group 1, Census Tract 4194, Norfolk County, Massachusetts	Minority and English isolation
6	Block Group 3, Census Tract 4179.01, Norfolk County, Massachusetts	Minority and income
7	Block Group 1, Census Tract 4178.02, Norfolk County, Massachusetts	Minority and income
8	Block Group 2, Census Tract 4179.01, Norfolk County, Massachusetts	Minority and income
9	Block Group 5, Census Tract 4179.01, Norfolk County, Massachusetts	Minority and income
10	Block Group 2, Census Tract 4178.02, Norfolk County, Massachusetts	Minority, income and English isolation

Table C-2. Environmental Justice Population in 5-mile Radius

No	Geographic Area Name	EJ Criteria
1	Block Group 2, Census Tract 4224.02, Norfolk County, Massachusetts	Income
2	Block Group 3, Census Tract 5012.04, Plymouth County, Massachusetts	Income
3	Block Group 2, Census Tract 1007, Suffolk County, Massachusetts	Income
4	Block Group 1, Census Tract 4171, Norfolk County, Massachusetts	Minority
5	Block Group 4, Census Tract 4171, Norfolk County, Massachusetts	Minority
6	Block Group 3, Census Tract 4172.02, Norfolk County, Massachusetts	Minority
7	Block Group 2, Census Tract 4175.01, Norfolk County, Massachusetts	Minority
8	Block Group 3, Census Tract 4175.01, Norfolk County, Massachusetts	Minority
9	Block Group 2, Census Tract 4177.04, Norfolk County, Massachusetts	Minority
10	Block Group 4, Census Tract 4179.01, Norfolk County, Massachusetts	Minority
11	Block Group 1, Census Tract 4179.02, Norfolk County, Massachusetts	Minority
12	Block Group 2, Census Tract 4179.02, Norfolk County, Massachusetts	Minority
13	Block Group 3, Census Tract 4179.02, Norfolk County, Massachusetts	Minority
14	Block Group 2, Census Tract 4180.02, Norfolk County, Massachusetts	Minority
15	Block Group 3, Census Tract 4180.02, Norfolk County, Massachusetts	Minority
16	Block Group 4, Census Tract 4180.02, Norfolk County, Massachusetts	Minority
17	Block Group 2, Census Tract 4180.04, Norfolk County, Massachusetts	Minority
18	Block Group 1, Census Tract 4181.01, Norfolk County, Massachusetts	Minority
19	Block Group 2, Census Tract 4181.02, Norfolk County, Massachusetts	Minority
20	Block Group 1, Census Tract 4191, Norfolk County, Massachusetts	Minority
21	Block Group 4, Census Tract 4191, Norfolk County, Massachusetts	Minority
22	Block Group 1, Census Tract 4196.02, Norfolk County, Massachusetts	Minority
23	Block Group 2, Census Tract 4197, Norfolk County, Massachusetts	Minority
24	Block Group 1, Census Tract 4198, Norfolk County, Massachusetts	Minority
25	Block Group 5, Census Tract 4171, Norfolk County, Massachusetts	Minority
26	Block Group 2, Census Tract 4172.02, Norfolk County, Massachusetts	Minority

27	Block Group 1, Census Tract 4177.04, Norfolk County, Massachusetts	Minority
28	Block Group 1, Census Tract 4192, Norfolk County, Massachusetts	Minority
29	Block Group 2, Census Tract 4193, Norfolk County, Massachusetts	Minority
30	Block Group 2, Census Tract 4182.01, Norfolk County, Massachusetts	Minority
31	Block Group 2, Census Tract 4192, Norfolk County, Massachusetts	Minority
32	Block Group 4, Census Tract 4181.01, Norfolk County, Massachusetts	Minority
33	Block Group 1, Census Tract 4172.02, Norfolk County, Massachusetts	Minority
34	Block Group 3, Census Tract 4171, Norfolk County, Massachusetts	Minority
35	Block Group 1, Census Tract 4179.01, Norfolk County, Massachusetts	Minority
36	Block Group 1, Census Tract 4180.04, Norfolk County, Massachusetts	Minority
37	Block Group 1, Census Tract 4196.01, Norfolk County, Massachusetts	Minority
38	Block Group 3, Census Tract 4180.04, Norfolk County, Massachusetts	Minority
39	Block Group 2, Census Tract 4171, Norfolk County, Massachusetts	Minority
40	Block Group 1, Census Tract 4193, Norfolk County, Massachusetts	Minority
41	Block Group 2, Census Tract 4194, Norfolk County, Massachusetts	Minority
42	Block Group 1, Census Tract 4172.01, Norfolk County, Massachusetts	Minority
43	Block Group 3, Census Tract 4181.02, Norfolk County, Massachusetts	Minority
44	Block Group 4, Census Tract 4172.01, Norfolk County, Massachusetts	Minority
45	Block Group 2, Census Tract 4180.03, Norfolk County, Massachusetts	Minority
46	Block Group 1, Census Tract 4173, Norfolk County, Massachusetts	Minority
47	Block Group 2, Census Tract 4177.02, Norfolk County, Massachusetts	Minority
48	Block Group 1, Census Tract 4180.02, Norfolk County, Massachusetts	Minority
49	Block Group 2, Census Tract 4175.02, Norfolk County, Massachusetts	Minority
50	Block Group 4, Census Tract 4175.02, Norfolk County, Massachusetts	Minority
51	Block Group 1, Census Tract 4176.01, Norfolk County, Massachusetts	Minority
52	Block Group 2, Census Tract 4176.01, Norfolk County, Massachusetts	Minority
53	Block Group 1, Census Tract 4176.02, Norfolk County, Massachusetts	Minority
54	Block Group 2, Census Tract 4176.02, Norfolk County, Massachusetts	Minority
55	Block Group 6, Census Tract 4179.01, Norfolk County, Massachusetts	Minority
56	Block Group 4, Census Tract 4192, Norfolk County, Massachusetts	Minority
57	Block Group 1, Census Tract 4180.03, Norfolk County, Massachusetts	Minority
58	Block Group 2, Census Tract 4181.01, Norfolk County, Massachusetts	Minority
59	Block Group 3, Census Tract 4182.01, Norfolk County, Massachusetts	Minority
60	Block Group 3, Census Tract 4191, Norfolk County, Massachusetts	Minority
61	Block Group 5, Census Tract 4191, Norfolk County, Massachusetts	Minority
62	Block Group 4, Census Tract 4193, Norfolk County, Massachusetts	Minority
63	Block Group 3, Census Tract 4194, Norfolk County, Massachusetts	Minority
64	Block Group 1, Census Tract 4197, Norfolk County, Massachusetts	Minority
65	Block Group 1, Census Tract 4195, Norfolk County, Massachusetts	Minority
66	Block Group 2, Census Tract 4195, Norfolk County, Massachusetts	Minority
67	Block Group 3, Census Tract 4201.01, Norfolk County, Massachusetts	Minority
68	Block Group 4, Census Tract 4221, Norfolk County, Massachusetts	Minority

69	Block Group 3, Census Tract 4222.02, Norfolk County, Massachusetts	Minority
70	Block Group 1, Census Tract 4223.03, Norfolk County, Massachusetts	Minority
71	Block Group 2, Census Tract 4223.03, Norfolk County, Massachusetts	Minority
72	Block Group 3, Census Tract 4223.03, Norfolk County, Massachusetts	Minority
73	Block Group 1, Census Tract 4224.01, Norfolk County, Massachusetts	Minority
74	Block Group 3, Census Tract 4224.01, Norfolk County, Massachusetts	Minority
75	Block Group 1, Census Tract 4225.02, Norfolk County, Massachusetts	Minority
76	Block Group 1, Census Tract 4225.01, Norfolk County, Massachusetts	Minority
77	Block Group 2, Census Tract 4225.01, Norfolk County, Massachusetts	Minority
78	Block Group 3, Census Tract 4225.02, Norfolk County, Massachusetts	Minority
79	Block Group 4, Census Tract 4225.02, Norfolk County, Massachusetts	Minority
80	Block Group 2, Census Tract 4225.02, Norfolk County, Massachusetts	Minority
81	Block Group 4, Census Tract 4227, Norfolk County, Massachusetts	Minority
82	Block Group 2, Census Tract 1006.03, Suffolk County, Massachusetts	Minority
83	Block Group 2, Census Tract 4172.01, Norfolk County, Massachusetts	Minority and English isolation
84	Block Group 3, Census Tract 4172.01, Norfolk County, Massachusetts	Minority and English isolation
85	Block Group 4, Census Tract 4172.02, Norfolk County, Massachusetts	Minority and English isolation
86	Block Group 1, Census Tract 4175.01, Norfolk County, Massachusetts	Minority and English isolation
87	Block Group 4, Census Tract 4175.01, Norfolk County, Massachusetts	Minority and English isolation
88	Block Group 4, Census Tract 4176.01, Norfolk County, Massachusetts	Minority and English isolation
89	Block Group 1, Census Tract 4194, Norfolk County, Massachusetts	Minority and English isolation
90	Block Group 1, Census Tract 4175.02, Norfolk County, Massachusetts	Minority and income
91	Block Group 2, Census Tract 4177.03, Norfolk County, Massachusetts	Minority and income
92	Block Group 3, Census Tract 4179.01, Norfolk County, Massachusetts	Minority and income
93	Block Group 3, Census Tract 4181.01, Norfolk County, Massachusetts	Minority and income
94	Block Group 1, Census Tract 4178.02, Norfolk County, Massachusetts	Minority and income
95	Block Group 1, Census Tract 4182.01, Norfolk County, Massachusetts	Minority and income
96	Block Group 3, Census Tract 4176.02, Norfolk County, Massachusetts	Minority and income
97	Block Group 6, Census Tract 4171, Norfolk County, Massachusetts	Minority and income
98	Block Group 1, Census Tract 4177.03, Norfolk County, Massachusetts	Minority and income
99	Block Group 3, Census Tract 4193, Norfolk County, Massachusetts	Minority and income
100	Block Group 2, Census Tract 4179.01, Norfolk County, Massachusetts	Minority and income
101	Block Group 5, Census Tract 4179.01, Norfolk County, Massachusetts	Minority and income
102	Block Group 2, Census Tract 4198, Norfolk County, Massachusetts	Minority and income
103	Block Group 1, Census Tract 4181.02, Norfolk County, Massachusetts	Minority and income
104	Block Group 2, Census Tract 4224.01, Norfolk County, Massachusetts	Minority and income
105	Block Group 3, Census Tract 4176.01, Norfolk County, Massachusetts	Minority, income and English isolation
106	Block Group 3, Census Tract 4177.03, Norfolk County, Massachusetts	Minority, income and English isolation
107	Block Group 2, Census Tract 4178.02, Norfolk County, Massachusetts	Minority, income and English isolation
108	Block Group 3, Census Tract 4175.02, Norfolk County, Massachusetts	Minority, income and English isolation

Table C-3. Language Spoken Information in 1-mile Radius

No	Geographic Area Name	Language Spoken by at least 5% of people other than English
1	Census Tract 4178.02, Norfolk County, Massachusetts	Chinese
2	Census Tract 4179.01, Norfolk County, Massachusetts	Chinese

Table C-4. Language Spoken Information in 5-mile Radius

No	Geographic Area Name	Language Spoken by at least 5% of people other than English
1	Census Tract 4178.02, Norfolk County, Massachusetts	Chinese
2	Census Tract 4179.01, Norfolk County, Massachusetts	Chinese
3	Census Tract 4179.02, Norfolk County, Massachusetts	Chinese
4	Census Tract 4180.02, Norfolk County, Massachusetts	Chinese
5	Census Tract 4180.04, Norfolk County, Massachusetts	Chinese
6	Census Tract 4180.03, Norfolk County, Massachusetts	Chinese
7	Census Tract 4182, Norfolk County, Massachusetts	Chinese
8	Census Tract 4181.2, Norfolk County, Massachusetts	Chinese
9	Census Tract 4181.01, Norfolk County, Massachusetts	Chinese
10	Census Tract 4177.01, Norfolk County, Massachusetts	Chinese
11	Census Tract 4171, Norfolk County, Massachusetts	Chinese
12	Census Tract 4176.02, Norfolk County, Massachusetts	Chinese
13	Census Tract 4172, Norfolk County, Massachusetts	Chinese
14	Census Tract 4176.01, Norfolk County, Massachusetts	Chinese
15	Census Tract 4175.02, Norfolk County, Massachusetts	Chinese
16	Census Tract 4175.01, Norfolk County, Massachusetts	Chinese
17	Census Tract 4173, Norfolk County, Massachusetts	Chinese
18	Census Tract 1006.03, Suffolk County, Massachusetts	Vietnamese

D

RMAT Report

Climate Resilience Design Standards Tool Project Report

Kings Cove
Date Created: 10/1/2024 12:57:09 PM
Date Report Generated: 10/16/2024 1:21:39 PM
Project Contact Information: Morgan Beals (mbeals@vhb.com)

Created By: mbeals@vhb.com
Tool Version: Version 1.2

Project Summary

Link to Project

Estimated Capital Cost: $1960000.00
End of Useful Life Year: 2075
Project within mapped Environmental Justice neighborhood: No

Ecosystem Service Benefits	Scores
Project Score	Moderate
Exposure	**Scores**
Sea Level Rise/Storm Surge	High Exposure
Extreme Precipitation - Urban Flooding	Moderate Exposure
Extreme Precipitation - Riverine Flooding	Not Exposed
Extreme Heat	High Exposure

Asset Preliminary Climate Risk Rating Summary

Number of Assets: 2

Asset Risk	Sea Level Rise/Storm Surge	Extreme Precipitation - Urban Flooding	Extreme Precipitation - Riverine Flooding	Extreme Heat
Coastal beach	—— Natural Resource project assets do not receive a preliminary climate risk rating. ——			
Revetment	High Risk	Moderate Risk	Low Risk	High Risk

Climate Resilience Design Standards Summary

	Target Planning Horizon	Intermediate Planning Horizon	Percentile	Return Period	Tier
Sea Level Rise/Storm Surge					
Coastal beach	2030				
Revetment	2070	2050		50-yr (2%)	
Extreme Precipitation					
Coastal beach	2030				Tier 1
Revetment	2070			25-yr (4%)	Tier 2
Extreme Heat					
Coastal beach	2030		50th		Tier 1
Revetment	2070		50th		Tier 2

Scoring Rationale - Project Exposure Score

The purpose of the Exposure Score output is to provide a preliminary assessment of whether the overall project site and subsequent assets are exposed to impacts of natural hazard events and/or future impacts of climate change. For each climate parameter, the Tool will calculate one of the following exposure ratings: Not Exposed, Low Exposure, Moderate Exposure, or High Exposure. The rationale behind the exposure rating is provided below.

Sea Level Rise/Storm Surge

This project received a "High Exposure" because of the following:

- Located within the predicted mean high water shoreline by 2030
- Exposed to the 1% annual coastal flood event as early as 2030
- Historic coastal flooding at project site

Extreme Precipitation - Urban Flooding

This project received a "Moderate Exposure" because of the following:

- Maximum annual daily rainfall exceeds 10 inches within the overall project's useful life
- No historic flooding at project site
- No increase to impervious area
- Existing impervious area of the project site is less than 10%

Extreme Precipitation - Riverine Flooding

This project received a "Not Exposed" because of the following:

- No historic riverine flooding at project site
- The project is not within a mapped FEMA floodplain [outside of the Massachusetts Coast Flood Risk Model (MC-FRM)]
- Project is more than 500ft from a waterbody
- Project is not likely susceptible to riverine erosion

Extreme Heat

This project received a "High Exposure" because of the following:

- 30+ days increase in days over 90 deg. F within project's useful life
- Less than 10% of the existing project site has canopy cover
- Located within 100 ft of existing water body
- No increase to the impervious area of the project site
- No tree removal

Scoring Rationale - Asset Preliminary Climate Risk Rating

A Preliminary Climate Risk Rating is determined for each infrastructure and building asset by considering the overall project Exposure Score and responses to Step 4 questions provided by the user in the Tool. Natural Resource assets do not receive a risk rating. The following factors are what influenced the risk ratings for each asset.

Asset - Coastal beach
Primary asset criticality factors influencing risk ratings for this asset:

No score available

Asset - Revetment
Primary asset criticality factors influencing risk ratings for this asset:

- Asset can be inaccessible/inoperable more than a week after natural hazard event without consequences
- Loss/inoperability of the asset would have impacts limited to local area and/or municipality
- The infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.
- Inoperability of the asset would not be expected to result in injuries
- Cost to replace is less than $10 million
- Spills and/or releases of hazardous materials would be moderately difficult to clean up

Project Climate Resilience Design Standards Output

Climate Resilience Design Standards and Guidance are recommended for each asset and climate parameter. The Design Standards for each climate parameter include the following: recommended planning horizon (target and/or intermediate), recommended return period (Sea Level Rise/Storm Surge and Precipitation) or percentile (Heat), and a list of applicable design criteria that are likely to be affected by climate change. Some design criteria have numerical values associated with the recommended return period and planning horizon, while others have tiered methodologies with step-by-step instructions on how to estimate design values given the other recommended design standards.

Asset: Coastal beach — Natural Resources

Sea Level Rise/Storm Surge

Target Planning Horizon: 2030
Intermediate Planning Horizon: Not Applicable

LIMITATIONS: The recommended Climate Resilience Design Standards for the Sea Level Rise / Storm Surge Design Criteria are based on the user drawn polygon and relationships as defined in the Supporting Documents. The projected values provided through the Tool are based on the Massachusetts Coast Flood Risk Model (MC-FRM) outputs as of 9/13/2021, which included GIS-based data for three planning horizons (2030, 2050, 2070) and six return periods (0.1%, 0.2%, 0.5%, 1%, 2%, 5%). These values are projections based on assumptions as defined in the model and the LiDAR used at the time. For additional information on the MC-FRM, review the additional resources provided on the Start Here page.

The projected values, Standards, and Guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence.

Applicable Design Criteria

Projected Tidal Datums: APPLICABLE

Planning Horizon	MHHW	MHW	MTL	MLW	MLLW
	(ft-NAVD88)				
2030	6.5	6.1	1.2	-3.6	-3.8

Projected Water Surface Elevation: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max	Min	Area Weighted Average
			(ft - NAVD88)		
Coastal beach	2030	5% (20-Year)	9.8	9.8	9.8

Projected Wave Action Water Elevation: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max	Min	Area Weighted Average
			(ft - NAVD88)		
Coastal beach	2030	5% (20-Year)	12.1	9.8	10.3

Projected Wave Heights: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max	Min	Area Weighted Average
			(Feet)		
Coastal beach	2030	5% (20-Year)	5.5	0.0	2.4

Return Period Recommendations for natural resource assets and subsequent projected values are provided as a consideration for users, not a formal standard. Users should follow industry best practices for designing natural resource assets in coordination with the appropriate regulatory agencies.

Projected Duration of Flooding: NOT APPLICABLE

Projected Design Flood Velocity: NOT APPLICABLE

Projected Scour & Erosion: APPLICABLE
Methodology to Estimate Projected Values

Extreme Precipitation

Target Planning Horizon: 2030

LIMITATIONS: The recommended Standards for Total Precipitation Depth & Peak Intensity are determined by the user drawn polygon and relationships as defined in the Supporting Documents. The projected Total Precipitation Depth values provided through the Tool are based on the climate projections developed by Cornell University as part of EEA's Massachusetts Climate and Hydrologic Risk Project, GIS-based data as of 10/15/21. For additional information on the methodology of these precipitation outputs, see Supporting Documents.

While Total Precipitation Depth & Peak Intensity for 24-hour Design Storms are useful to inform planning and design, it is recommended to also consider additional longer- and shorter-duration precipitation events and intensities in accordance with best practices. Longer-duration, lower-intensity storms allow time for infiltration and reduce the load on infrastructure over the duration of the storm. Shorter-duration, higher-intensity storms often have higher runoff volumes because the water does not have enough time to infiltrate infrastructure systems (e.g., catch basins) and may overflow or back up during such storms, resulting in flooding. In the Northeast, short-duration high intensity rain events are becoming more frequent, and there is often little early warning for these events, making it difficult to plan operationally. While the Tool does not provide recommended design standards for these scenarios, users should still consider both short- and long-duration precipitation events and how they may impact the asset.

The projected values, standards, and guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence

Applicable Design Criteria

Tiered Methodology: Tier 1

Projected Total Precipitation Depth & Peak Intensity for 24-hr Design Storms: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period (Design Storm)	Projected 24-hr Total Precipitation Depth (inches)	Step-by-Step Methodology for Peak Intensity
Coastal beach	2030	25-Year (4%)	7.3	Downloadable Methodology PDF

Return Period Recommendations for natural resource assets and subsequent projected values are provided as a consideration for users, not a formal standard. Users should follow industry best practices for designing natural resource assets in coordination with the appropriate regulatory agencies.

ATTENTION: This is a Tier 1 project. It is advised to compare the extreme precipitation output values to the NOAA+ methodology to calculate total precipitation depth for 24-hr design storms.

This methodology can be found in the following PDF. (Link).

Projected Riverine Peak Discharge & Peak Flood Elevation: NOT APPLICABLE

Extreme Heat

Target Planning Horizon: 2030
Percentile: 50th Percentile

Applicable Design Criteria

Projected Annual/Summer/Winter Average Temperatures: NOT APPLICABLE

Projected Heat Index: NOT APPLICABLE

Projected Growing Degree Days: NOT APPLICABLE

Projected Days Per Year With Max Temp > 95°F, >90°F, <32°F: NOT APPLICABLE

Projected Number of Heat Waves Per Year & Average Heat Wave Duration: NOT APPLICABLE

Projected Cooling Degree Days & Heating Degree Days (base = 65°F): NOT APPLICABLE

Asset: Revetment — Infrastructure

Sea Level Rise/Storm Surge — High Risk

Target Planning Horizon: 2070
Intermediate Planning Horizon: 2050
Return Period: 50-yr (2%)

LIMITATIONS: The recommended Climate Resilience Design Standards for the Sea Level Rise / Storm Surge Design Criteria are based on the user drawn polygon and relationships as defined in the Supporting Documents. The projected values provided through the Tool are based on the Massachusetts Coast Flood Risk Model (MC-FRM) outputs as of 9/13/2021, which included GIS-based data for three planning horizons (2030, 2050, 2070) and six return periods (0.1%, 0.2%, 0.5%, 1%, 2%, 5%). These values are projections based on assumptions as defined in the model and the LiDAR used at the time. For additional information on the MC-FRM, review the additional resources provided on the Start Here page.

The projected values, Standards, and Guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence.

Applicable Design Criteria

Projected Tidal Datums: APPLICABLE

Planning Horizon	MHHW	MHW	MTL	MLW	MLLW
	(ft-NAVD88)				
2050	7.8	7.4	2.5	-2.4	-2.7
2070	9.7	9.3	4.3	-0.7	-1.0

Projected Water Surface Elevation: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max	Min	Area Weighted Average
			(ft - NAVD88)		
Revetment	2050	2% (50-Year)	12.0	12.0	12.0
	2070		13.8	13.8	13.8

Projected Wave Action Water Elevation: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max	Min	Area Weighted Average
			(ft - NAVD88)		
Revetment	2050	2% (50-Year)	15.0	12.0	13.0
	2070		17.2	13.8	14.9

Projected Wave Heights: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period	Max	Min	Area Weighted Average
			(Feet)		
Revetment	2050	2% (50-Year)	6.5	0.0	3.2
	2070		7.0	0.0	3.4

Projected Duration of Flooding: APPLICABLE
Methodology to Estimate Projected Values

Projected Design Flood Velocity: APPLICABLE
Methodology to Estimate Projected Values

Projected Scour & Erosion: APPLICABLE
Methodology to Estimate Projected Values

Extreme Precipitation Moderate Risk

Target Planning Horizon: 2070
Return Period: 25-yr (4%)

LIMITATIONS: The recommended Standards for Total Precipitation Depth & Peak Intensity are determined by the user drawn polygon and relationships as defined in the Supporting Documents. The projected Total Precipitation Depth values provided through the Tool are based on the climate projections developed by Cornell University as part of EEA's Massachusetts Climate and Hydrologic Risk Project, GIS-based data as of 10/15/21. For additional information on the methodology of these precipitation outputs, see Supporting Documents.

While Total Precipitation Depth & Peak Intensity for 24-hour Design Storms are useful to inform planning and design, it is recommended to also consider additional longer- and shorter-duration precipitation events and intensities in accordance with best practices. Longer-duration, lower-intensity storms allow time for infiltration and reduce the load on infrastructure over the duration of the storm. Shorter-duration, higher-intensity storms often have higher runoff volumes because the water does not have enough time to infiltrate infrastructure systems (e.g., catch basins) and may overflow or back up during such storms, resulting in flooding. In

the Northeast, short-duration high intensity rain events are becoming more frequent, and there is often little early warning for these events, making it difficult to plan operationally. While the Tool does not provide recommended design standards for these scenarios, users should still consider both short- and long-duration precipitation events and how they may impact the asset.

The projected values, standards, and guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Total Precipitation Depth & Peak Intensity for 24-hr Design Storms: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period (Design Storm)	Projected 24-hr Total Precipitation Depth (inches)	Step-by-Step Methodology for Peak Intensity
Revetment	2070	25-Year (4%)	8.6	Downloadable Methodology PDF

Projected Riverine Peak Discharge & Peak Flood Elevation: NOT APPLICABLE

Extreme Heat High Risk

Target Planning Horizon: 2070
Percentile: 50th Percentile

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Annual/Summer/Winter Average Temperatures: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Heat Index: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Growing Degree Days: NOT APPLICABLE

Projected Days Per Year With Max Temp > 95°F, >90°F, <32°F: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Number of Heat Waves Per Year & Average Heat Wave Duration: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Cooling Degree Days & Heating Degree Days (base = 65°F): NOT APPLICABLE

Sea Level Rise/Storm Surge Project Maps

The following three maps illustrate the Projected Water Surface Elevation for the 2030, 2050, and 2070 planning horizons corresponding to the lowest return period (largest design storm) recommended across the assets identified for this project in the Tool. For projects that only have Natural Resource assets, the maps will show the Projected Water Surface Elevations corresponding to the 5% (20-year) return period. Refer to the Climate Resilience Design Standards Output - Sea Level Rise/Storm Surge Section for additional values associated with other assets. The maps include the project area as drawn by the user with a 0.1 mile minimum buffer, but do not reflect the location of specific assets on the site.

LIMITATIONS: The recommended Climate Resilience Design Standards for the Sea Level Rise / Storm Surge Design Criteria are based on the user drawn polygon and relationships as defined in the Supporting Documents. The projected values and maps provided through the Tool are based on the Massachusetts Coast Flood Risk Model (MC-FRM) outputs as of 9/13/2021, which included GIS-based data for three planning horizons (2030, 2050, 2070) and six return periods (0.1%, 0.2%, 0.5%, 1%, 2%, 5%). These values are projections based on assumptions as defined in the model and the LiDAR used at the time. For additional information on the MC-FRM, review the additional resources provided on the Start Here page.

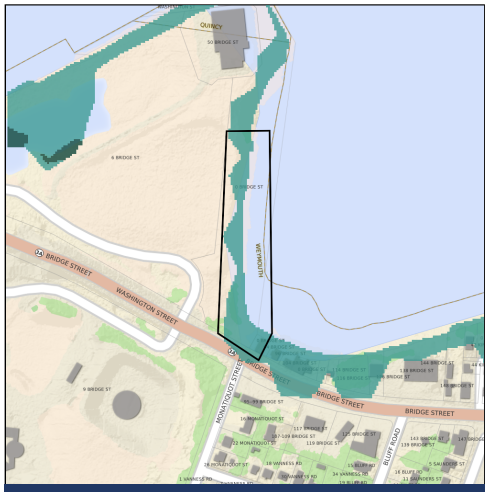
The projected values, maps, Standards, and Guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence.

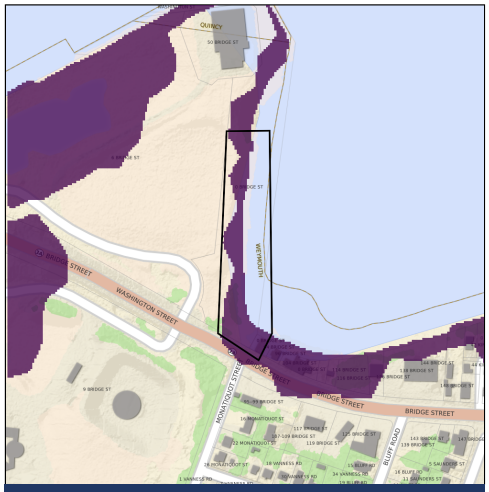
Legend

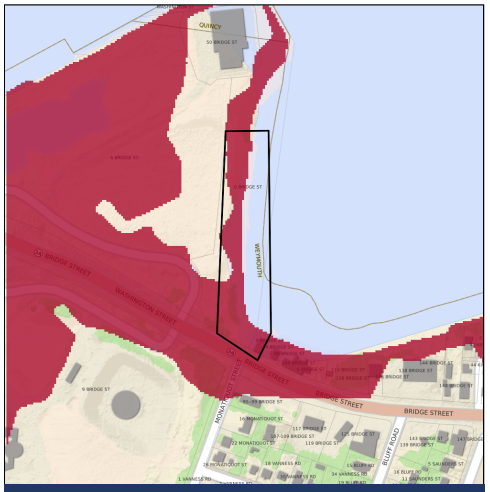
- Project Boundary

Projected Water Surface Elevation (ft-NAVD88)

- ≤ 10.3
- 10.3 - 10.4
- 10.4 - 10.6
- 10.6 - 10.8
- 10.8 - 11.0
- 11.0 - 11.2
- 11.2 - 11.4
- 11.4 - 11.6
- 11.6 - 11.8
- 11.8 - 12.0
- 12.0 - 12.2
- 12.2 - 12.4
- 12.4 - 12.6
- 12.6 - 12.8
- 12.8 - 13.0
- 13.0 - 13.2
- 13.2 - 13.4
- 13.4 - 13.6
- 13.6 - 13.8
- ≥ 13.8







Climate Resilience Design Standards Tool:
Sea Level Rise/Storm Surge Design Criteria
Projected Water Surface Elevation Map: 2% (50-yr)

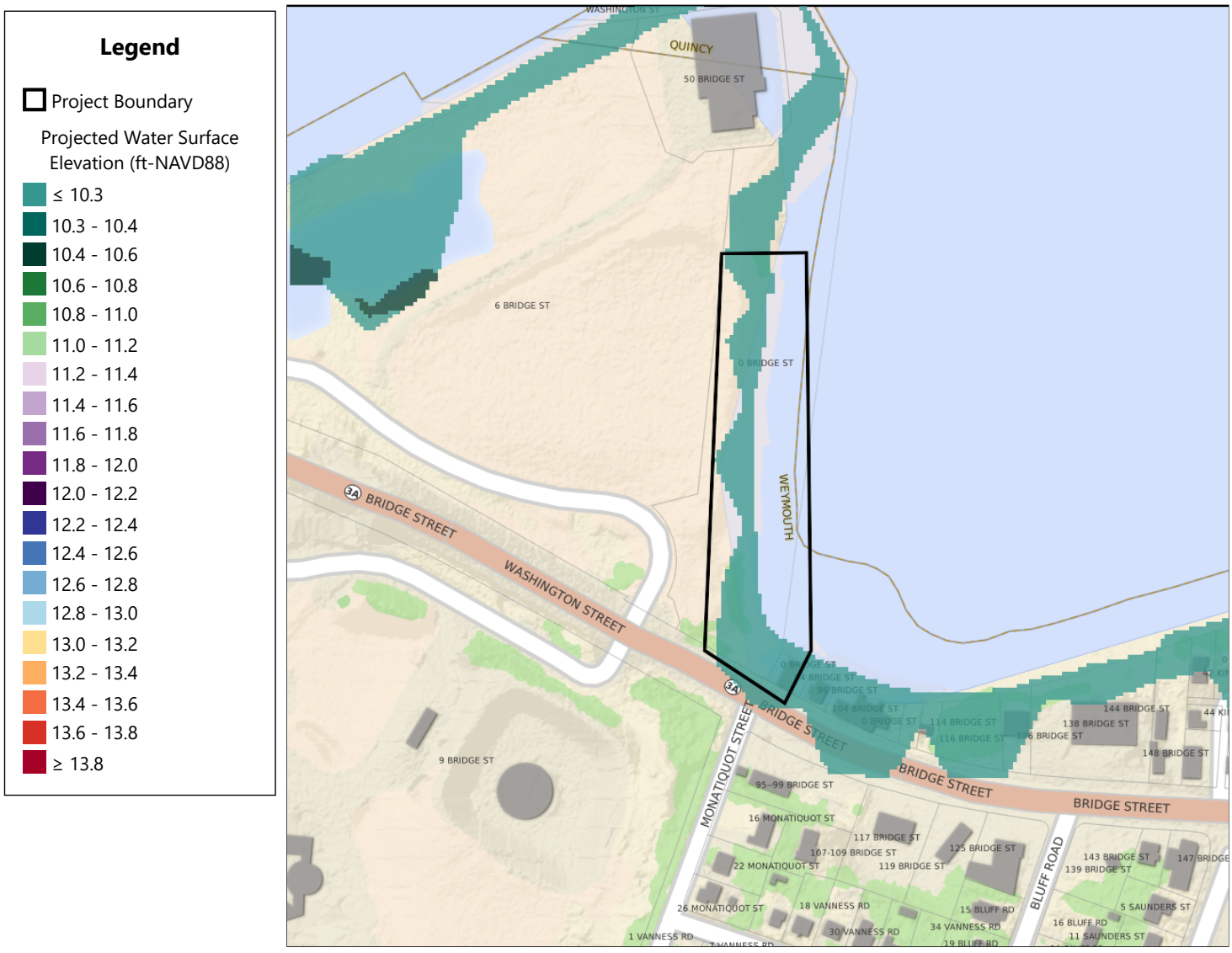
Project Name: Kings Cove
Location (Town): Weymouth

0.25 0.5 1.0 Miles

Created by: mbeals@vhb.com
Date Created: 10/1/2024
Tool Version: 1.3

N

Asset Name	Planning Horizon	Return Period	Max	Min	Area Weighted Average
			(ft-NAVD88)		
Revetment	2030	2% (50-yr)	10.3	10.3	10.3
	2050	2% (50-yr)	12.0	12.0	12.0
	2070	2% (50-yr)	13.8	13.8	13.8



Climate Resilience Design Standards Tool:
Sea Level Rise/Storm Surge Design Criteria
Projected Water Surface Elevation Map: 2030, 2% (50-yr)

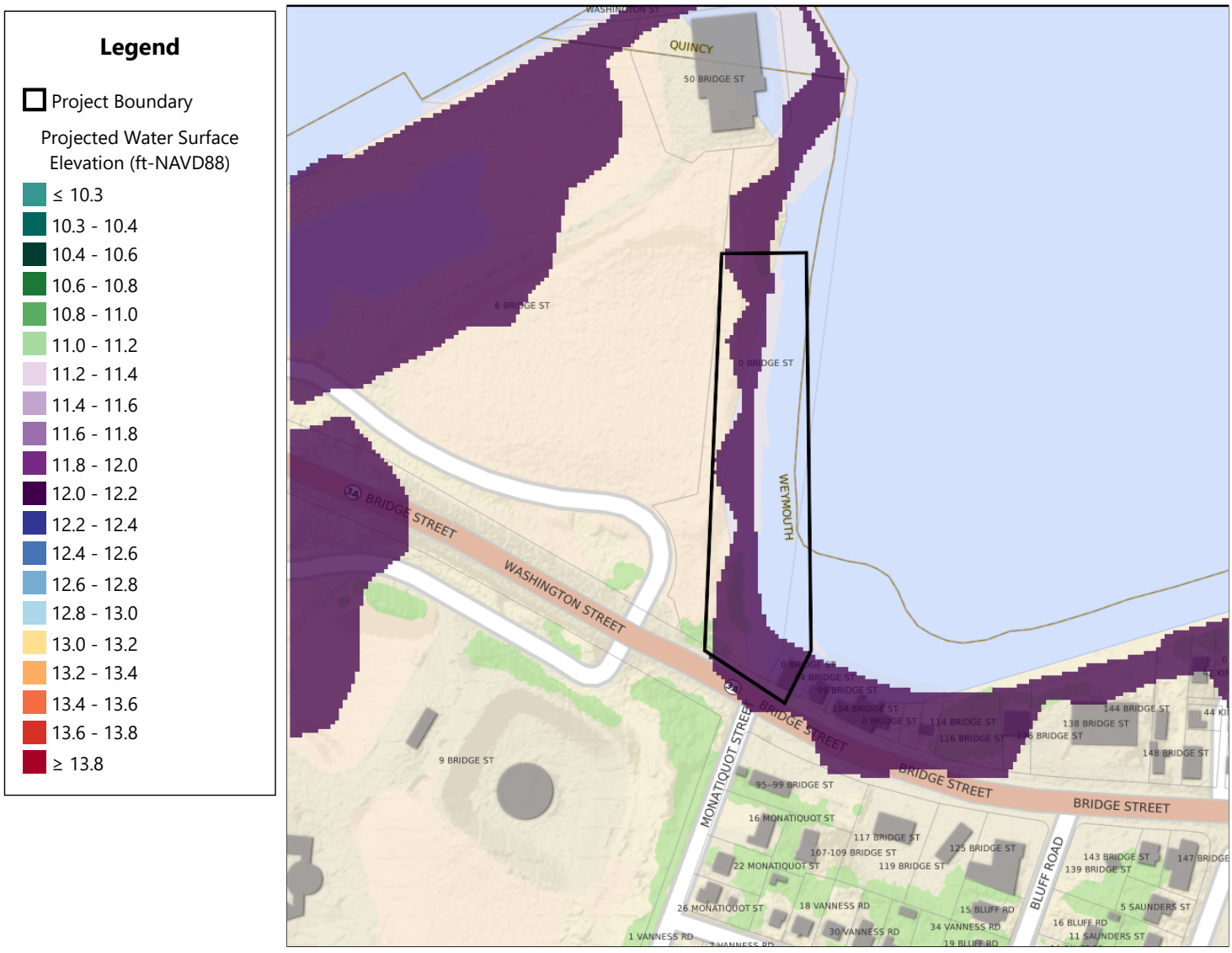
Project Name: Kings Cove
Location (Town): Weymouth

0.05 0.1 0.25 Miles

Created by: mbeals@vhb.com
Date Created: 10/1/2024
Tool Version: 1.3

N

Asset Name	Planning Horizon	Return Period	Max	Min	Area Weighted Average (ft-NAVD88)
Revetment	2030	2% (50-yr)	10.3	10.3	10.3



Climate Resilience Design Standards Tool:
Sea Level Rise/Storm Surge Design Criteria
Projected Water Surface Elevation Map: 2050, 2% (50-yr)

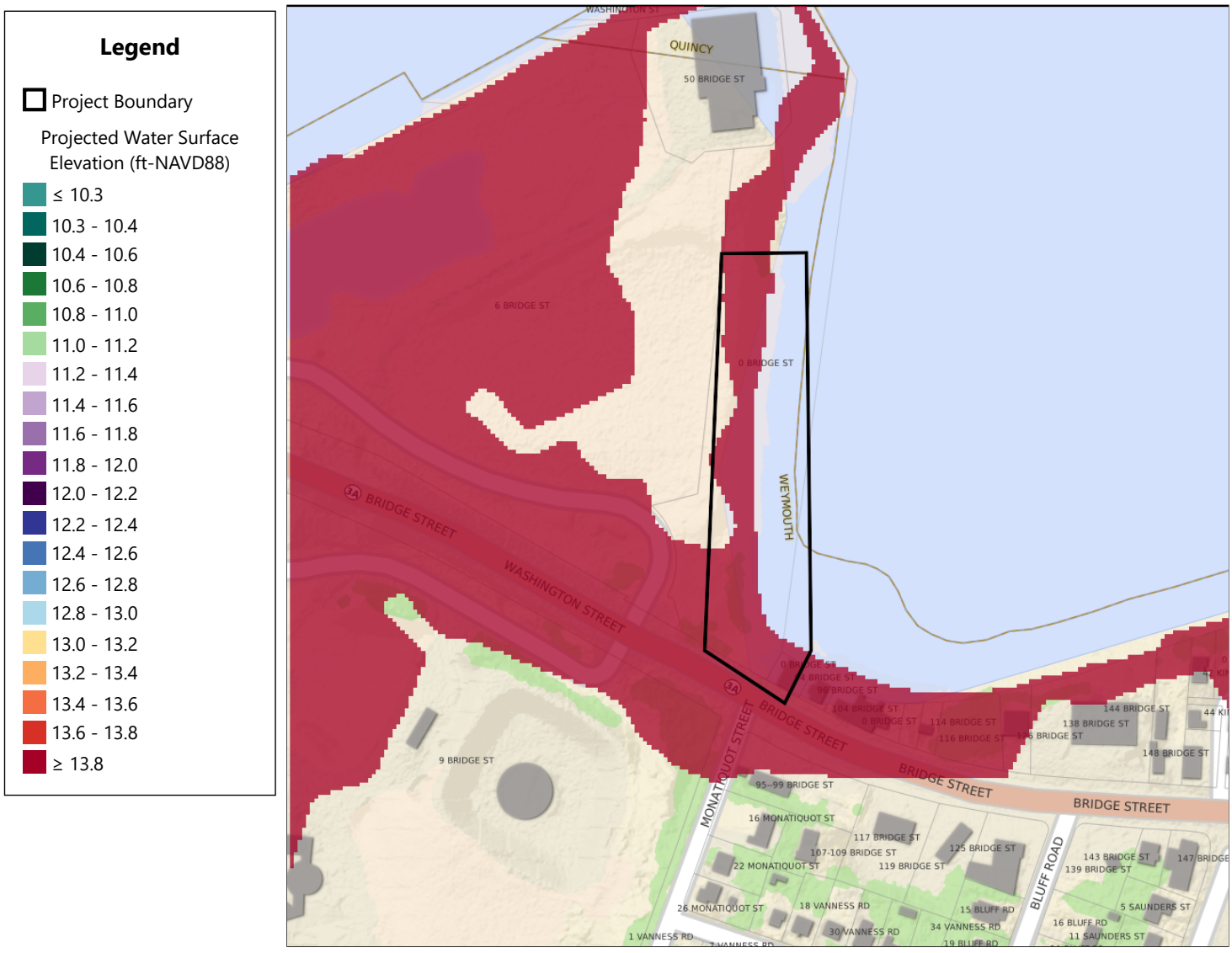
Project Name: Kings Cove
Location (Town): Weymouth

0.05 0.1 0.25 Miles

Created by: mbeals@vhb.com
Date Created: 10/1/2024
Tool Version: 1.3

N

Asset Name	Planning Horizon	Return Period	Max	Min	Area Weighted Average (ft-NAVD88)
Revetment	2050	2% (50-yr)	12.0	12.0	12.0



Climate Resilience Design Standards Tool:
Sea Level Rise/Storm Surge Design Criteria
Projected Water Surface Elevation Map: 2070, 2% (50-yr)

Project Name: Kings Cove
Location (Town): Weymouth

0.05 0.1 0.25 Miles

Created by: mbeals@vhb.com
Date Created: 10/1/2024
Tool Version: 1.3

N

Asset Name	Planning Horizon	Return Period	Max	Min	Area Weighted Average (ft-NAVD88)
Revetment	2070	2% (50-yr)	13.8	13.8	13.8

Project Inputs

Core Project Information

Name:	Kings Cove
Given the expected useful life of the project, through what year do you estimate the project to last (i.e. before a major reconstruction/renovation)?	2075
Location of Project:	Weymouth
Estimated Capital Cost:	$1,960,000
Who is the Submitting Entity?	Private Other VHB Morgan Beals (mbeals@vhb.com)
Is this project being submitted as part of a state grant application?	No
Which grant program?	
What stage are you in your project lifecycle?	Permitting
Is climate resiliency a core objective of this project?	No
Is this project being submitted as part of the state capital planning process?	No
Is this project being submitted as part of a regulatory review process or permitting?	Yes
Brief Project Description:	The Project will implement the preferred Remedial Action Alternative under the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) in the Kings Cove Conservation Restriction Area, as specified in the Phase IV Remedy Implementation Plan (RIP). The Project is proposed in response to the presence of oil and/or hazardous materials (OHM) and includes dredging 630 cubic yards (CY) of sediment/impacted fill within an intertidal area, extending the existing rip rap revetment in the northern area of the Project Site to contain eroding impacted fill, and placing cobble to create a gradual surficial transition between the dredging area and the revetment.
Project Submission Comments:	

Project Ecosystem Service Benefits

Factors Influencing Output

- ✓ Project provides flood protection through nature-based solutions
- ✓ Project reduces storm damage
- ✓ Project improves water quality
- ✓ Project protects fisheries, wildlife, and plant habitat
- ✓ Project protects land containing shellfish
- ✓ Project remediates existing sources of pollution
- ✓ Project provides recreation
- ✓ Project prevents pollution
- ✓ Project provides cultural resources/education

Factors to Improve Output

- ✓ Protect public water supply by reducing the risk of contamination, pollution, and/or runoff of surface and groundwater sources used for human consumption
- ✓ Incorporate strategies that reduce carbon emissions
- ✓ Incorporate green infrastructure or nature-based solutions that recharge groundwater
- ✓ Incorporate green infrastructure to filter stormwater
- ✓ Incorporate nature-based solutions that sequester carbon carbon
- ✓ Incorporate vegetation that provides pollinator habitat
- ✓ Increase plants, trees, and/or other vegetation to provide oxygen production
- ✓ Mitigate atmospheric greenhouse gas concentrations and other toxic air pollutants through nature-based solutions

Is the primary purpose of this project ecological restoration?

No

Project Benefits

Provides flood protection through nature-based solutions	Yes
Reduces storm damage	Yes
Recharges groundwater	No
Protects public water supply	No
Filters stormwater using green infrastructure	No
Improves water quality	Yes
Promotes decarbonization	No
Enables carbon sequestration	No
Provides oxygen production	No
Improves air quality	No
Prevents pollution	Yes

Remediates existing sources of pollution	Yes
Protects fisheries, wildlife, and plant habitat	Yes
Protects land containing shellfish	Yes
Provides pollinator habitat	No
Provides recreation	Yes
Provides cultural resources/education	Yes

Project Climate Exposure

Is the primary purpose of this project ecological restoration?	No
Does the project site have a history of coastal flooding?	Yes
Does the project site have a history of flooding during extreme precipitation events (unrelated to water/sewer damages)?	No
Does the project site have a history of riverine flooding?	No
Does the project result in a net increase in impervious area of the site?	No
Are existing trees being removed as part of the proposed project?	No

Project Assets

Asset: Coastal beach
Asset Type: Coastal Resource Area
Asset Sub-Type: Coastal beach
Construction Type: Restoration or enhancement
Construction Year: 2025
Monitoring Frequency: 5
Asset: Revetment
Asset Type: Dams and Flood Control Structures
Asset Sub-Type: Other Flood Barrier
Construction Type: New Construction
Construction Year: 2025
Useful Life: 50

Identify the length of time the asset can be inaccessible/inoperable without significant consequences.
Infrastructure may be inaccessible/inoperable more than a week after natural hazard event without consequences.

Identify the geographic area directly affected by permanent loss or significant inoperability of the infrastructure.
Impacts would be limited to local area and/or municipality

Identify the population directly served that would be affected by the permanent loss or significant inoperability of the infrastructure.
Less than 5,000 people

Identify if the infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.
The infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

Will the infrastructure reduce the risk of flooding?
No

If the infrastructure became inoperable for longer than acceptable in Question 1, how, if at all, would it be expected to impact people's health and safety?
Inoperability of the infrastructure would not be expected to result in injuries

If there are hazardous materials in your infrastructure, what are the extents of impacts related to spills/releases of these materials?
Spills and/or releases of hazardous materials are expected with moderately difficult cleanup

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts on other facilities, assets, and/or infrastructure?
Minor – Inoperability will not likely affect other facilities, assets, or buildings

If the infrastructure was damaged beyond repair, how much would it approximately cost to replace?
Less than $10 million

Does the infrastructure function as an evacuation route during emergencies? This question only applies to roadway projects.
No

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the environmental impacts related to natural resources?
Impact on natural resources will require remediation/rehabilitation

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts to government services (i.e. the infrastructure is not able to serve or operate its intended users or function)?
Loss of infrastructure is not expected to reduce the ability to maintain government services

What are the impacts to loss of confidence in government resulting from loss of infrastructure functionality (i.e. the infrastructure asset is not able to serve or operate its intended users or function)?
No Impact

Report Comments

N/A