Kings Cove Conservation Restriction Area

82-90 Bridge Street
Weymouth, Massachusetts
Release Tracking Number (RTN) 4-26230

PREPARED FOR

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PREPARED BY

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Introduction

On behalf of Algonquin Gas Transmission, LLC (Algonquin), Vanasse Hangen Brustlin, Inc. (VHB) has prepared this Phase IV Remedy Implementation Plan (RIP) for the Kings Cove Conservation Restriction Area of the Disposal Site (hereafter the KCCRA) located at 82-90 Bridge Street in Weymouth, Massachusetts (the Disposal Site and the KCCRA are shown on **Figure 1**).

The KCCRA comprises approximately 4 acres of the Disposal Site and is bounded to the north by a Massachusetts Water Resources Authority (MWRA) pumping station, to the east by Kings Cove, to the south by Bridge Street (Route 3A), and to the west by the remainder of the Disposal Site. The KCCRA is further divided into two areas for the purpose of this Phase IV RIP:

- KCCRA - Upland which includes the area above Mean High Water (MHW) in the KCCRA; and
- KCCRA – Shore which is the portion of the KCCRA below MHW.

The KCCRA – Upland portion of the KCCRA is referred to herein as the Upland portion of the KCCRA, and the KCCRA – Shore portion of the KCCRA is referred to herein as the Shore portion of the KCCRA. A Disposal Site Plan showing KCCRA features is included as **Figure 2.**

The Disposal Site including the KCCRA is identified by the Massachusetts Department of Environmental Protection (MassDEP) by Release Tracking Number (RTN) 4-26230.

This Phase IV RIP meets the specifications at 310 CMR 40.0870 of the Massachusetts Contingency Plan (MCP) relating to the design, construction and implementation of the preferred Remedial Action Alternative for the KCCRA as identified in the Phase III Remedial Action Plan.

1.1 Contact Information

Algonquin is responsible for response actions at the KCCRA which is owned by Calpine Fore River Energy Corporation and subject to a Conservation Restriction held by the Town of Weymouth. Contact information for the potentially responsible party, Licensed Site Professional (LSP) of record, and KCCRA property owner is as follows:

Potentially Responsible Party Contact:	Alana Clark, P.Ag. Senior Advisor Environment Safety and Reliability Enbridge Pipelines, Inc.
Address:	10175 101 St. NW Edmonton, Alberta T5J 0H3
Telephone:	587.545.4075
Licensed Site Professional:	Katherine Kudzma, LSP #8688 Director, Site Investigation & Remediation
Address:	Vanasse Hangen Brustlin, Inc. 260 Arsenal Place #2 Watertown, MA 02472
Telephone:	617.607.1704
Property Owner Contact:	Cheryl Hess Calpine Fore River Energy Center
Address:	9 Bridge Street Weymouth, MA 02191
Telephone:	302.468.5312

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Background

2.1 Site Location and Description

The approximate center of the Disposal Site including the KCCRA is located at 42˚14'41'' north latitude and 70˚57'48'' west longitude. The KCCRA is identified by the Town of Weymouth as Parcel 6-63-3. The KCCRA is owned by Calpine Fore River Energy Corporation and is subject to a Conservation Restriction held by the Town of Weymouth.

The KCCRA was created through the placement of fill material in the early 1900s. At the northern limit of the KCCRA, there is an existing rip rap revetment which extends north along the Kings Cove shoreline to the top of the peninsula. Rip rap is not present in the southern portion of the KCCRA and there is evidence of erosion. The KCCRA slopes steeply down to the water and extends approximately 90 feet east of the MHW line.

According to the April 2, 2024 MassDEP Phase 1 Site Assessment Map, provided as **Figure 3**, no portion of the KCCRA is located within an Area of Critical Environmental Concern, habitat for state-listed rare species, or a vernal pool (Certified or potential). The KCCRA is currently used for recreation pursuant to a Conservation Restriction granted to the Town of Weymouth and registered at the Norfolk County of Deeds on March 17, 2009. A copy of the Conservation Restriction is included as **Appendix B**.

2.2 Site History

Prior to the 1900s, Kings Cove and the surrounding area were flowed tidelands. In the 1920s, a north-south oriented timber bulkhead was constructed within Kings Cove and the area behind the bulkhead was filled in connection with the construction of a coal-fired power station located south of Bridge Street. Based on review of available historical documents, the rip rap along the northern and northeastern portion of the KCCRA was placed in connection with the construction of the natural gas

fired power plant south of Bridge Street authorized under DEP License No. 8449, and associated public access improvements within the KCCRA. The following sections present further details of the KCCRA history. The following sections present further details of the KCCRA history.

Bulkhead Construction and Filling

As presented in the Phase III Remedial Action Plan (RAP) (TRC, 2023), in 1922, Edison Electric Illuminating Company of Boston (Edison Electric) was granted a license to fill an area including the KCCRA. This license was listed as License No. 276, *To Build and Maintain Pile and Timber Bulkheads, Build Pile Wharf, Fill Solid and Dredge*, dated December 15, 1922, and included a plan showing the location and bulkhead construction details (Edison, 1922). Edison Electric began by construction a north-south oriented bulkhead and then filling the flowed tidelands behind the bulkhead.

Based on a drawing that was attached to License No. 936, dated August 7, 1928, the bulkhead was constructed approximately 10 feet to the west of the KCCRA's eastern property line. Filling behind and up to the bulkhead appears to have continued into 1938, based on a 1938 aerial photograph and a plan recorded March 29, 1938, associated with License No. 1896. A 1955 aerial photograph depicts additional filling. The bulkhead is not present in the aerial photographs taken in 1955 and later. The above referenced drawings and historical aerial photograph are included in Appendix A of the Phase II Comprehensive Site Assessment (CSA) (TRC, 2022a). The location of the former bulkhead relative to current KCCRA conditions is shown on **Figure 2**.

Kings Cove Shoreline Rip Rap

There is existing rip rap along the northern limits of the KCCRA, which serves as an effective erosion barrier for the fill in that portion of the KCCRA. Where rip rap is not present, evidence of erosion and exposed fill is visible along the southern end of the shoreline. There is thick scrubby vegetation along most of the bank.

Kings Cove Conservation Restriction Area

The KCCRA was improved in approximately 2006 in response to a request by the Weymouth Conservation Commission and the MassDEP Bureau of Resource Protection in connection with the issuance of a Chapter 91 license for the construction of the new power plant to the south of Bridge Street (DEP License No. 8449). The KCCRA includes an upland portion with paved walkways, landscaping, grassed areas, and a shoreline area along Kings Cove. Section 3.1 of the Phase II CSA contains additional information about the KCCRA (TRC, 2022a).

2.3 Release History

The following documented releases of oil and/or hazardous materials (OHM) have been reported at the KCCRA as detailed below by RTN:

- **RTN 4-26230** was issued in July 2016 following the identification of evidence of a historical release of petroleum in soil at the Compressor Station portion of the Disposal Site. The subsequent RTNs have been linked to this primary RTN 4-26230. A Phase II CSA Report was filed in January 2022 and is discussed in more detail in **Section 2.4.1**. A Partial Permanent Solution was filed for the Compressor Station portion of the Disposal Site in 2022 (TRC,

2022b). A Phase III RAP was filed for the KCCRA portion of the Disposal Site in August 2023 and is discussed in more detail in **Section 2.4.2**.

- **RTN 4-28186** was assigned in response to the identification of a potential Imminent Hazard (IH) condition due to concentrations of arsenic in shallow soil at the KCCRA. An IH evaluation concluded that these arsenic concentrations did not present an IH condition and that the arsenic identified was associated with the use of coal ash as a fill material as generally described in Section 2.1 above.
- **RTN 4-28615** was assigned in December 2021 in response to the identification of a potential IH condition due to concentrations of arsenic and total chromium in the top six inches of the fill material below MHW at the KCCRA. An IH evaluation concluded that the concentrations of arsenic and chromium in fill material below MHW at the KCCRA do not present an IH condition.
- **RTN 4-28676** was assigned in January 2021 in response to the identification of a potential IH condition associated with concentrations of arsenic in the top 12 inches of fill within the Upland portion of the KCCRA. An IH evaluation concluded that the concentrations of arsenic in the top 12 inches of fill within the Upland portion of the KCCRA do not present an IH condition.

Sample collection locations within the KCCRA are shown on **Figures 4, 5, and 6**. RTNs 4-28186, 4-28615, and 4-28676 have been administratively linked to primary RTN 4-26230 and remaining response actions will be tracked under this RTN.

2.4 Site Investigations

Previous environmental investigations of the KCCRA have been conducted under RTNs 4-26230, 4-28186, 4-28615, and 4-28676. Details of previous investigations and associated reports can be found in the Phase II CSA (TRC, 2022a). Relevant investigation data is included as **Appendix C**. Environmental investigations associated with the KCCRA are described in the following sections.

2.4.1 Phase II CSA

The Phase II CSA included the advancement of soil borings, installation of groundwater monitoring wells, and excavation of test pits. Samples of soil, groundwater, surface water, fill below MHW, and surface water were collected and a Stage I Ecological Risk Characterization (ERC) was completed. Details of these investigations and findings are included in the Phase II CSA report (TRC, 2022a). Sample collection locations within the KCCRA are shown on **Figures 4, 5, and 6**.

Conclusions from the Phase II CSA included the following:

- Fill is heterogeneous due to large scale reworking and regrading and contains a wide range of material and construction debris.
- Laboratory analysis of the clinkers present within the Shore portion of the KCCRA indicated that the potential future breakdowns of the material into sand and sediment-size material does not pose a foreseeable human or ecological risk.

- Based on assessment of estimated shellfish arsenic concentrations at the KCCRA compared to calculated acceptable shellfish arsenic concentrations, shellfish from the KCCRA would not be safe for consumption.
- The Human Health Risk Characterization results indicated that additional response actions are warranted to control or mitigate exposure at the KCCRA under potential future unlimited use conditions. The risk characterization is further described in **Section 2.4.1.1**.
- No OHM were detected in surface water samples from the Shore portion of the KCCRA at concentrations in excess of applicable water quality criteria or screening benchmarks; therefore, no ecological risk has been identified for aquatic organisms.
- Vanadium was detected in excess of the ecological Apparent Effects Threshold (AET) in 90% of the sediment samples collected from the Shore portion of the KCCRA. However, based on the estimated exposure doses received by indicator species, the concentrations of polycyclic aromatic hydrocarbons (PAHs), antimony, arsenic, barium, beryllium, chromium, lead, nickel, and vanadium in sediment were not expected to result in adverse impacts to wildlife that forage on aquatic invertebrates or shellfish within the Shore portion of the KCCRA.
- With the possible exception of vanadium in sediment, a Condition of No Significant Risk to the environment exists within the Shore portion of the KCCRA.
- Further erosion of the Upland portion of the KCCRA could expose fill containing higher concentrations of arsenic so alternatives to reduce the possibility of such erosion should be evaluated.

2.4.1.1 Method 3 Human Health Risk Characterization Summary

A Method 3 Human Health Risk Characterization was completed as part of the Phase II CSA (TRC, 2022a).

The Method 3 Human Health Risk Characterization concluded that a Condition of No Significant Risk to Human Health currently exists at the KCCRA. However, it also concluded that future conditions may present a significant risk to human health in the following scenarios:

- Visitors exposed to arsenic in fill at depths greater than 3 feet in the Upland portion of the KCCRA; and
- Residents exposed to arsenic and lead in fill in the Upland portion of the KCCRA.

Both of these scenarios could be effectively addressed with the implementation of an Activity and Use Limitation (AUL).

In addition, as alluded above, the Method 3 Human Health Risk Characterization concluded that further erosion in the area of eroding fill in the southeastern area of the Upland portion of the KCCRA could expose fill containing higher concentrations of arsenic in the Upland portion of the KCCRA. Furthermore, additional response actions were warranted to reduce the possibility of such erosion.

2.4.2 Stage II ERC

A Stage II ERC in 2022 was conducted to further evaluate the potential ecological risk to aquatic invertebrates (e.g., shellfish and aquatic worms) associated with exposure to certain metals and PAHs

in fill material present in the Shore portion of the KCCRA. The complete Stage II ERC is included as Appendix B of the Phase III RAP (TRC, 2023).

The conclusions of the Stage II ERC included:

- The relative absence of soft-shell clams in the KCCRA is not related to the presence of metals or PAHs in fill material within the Shore portion of the KCCRA, based on the scarcity also observed in nearby areas not affected by conditions in the KCCRA.
- There is no evidence of biologically significant harm to aquatic invertebrates living in the Shore Portion of the KCCRA related to the presence of metals and PAHs in the fill material.
- Based on assessment of sediments from within the KCCRA and nearby, the poor aquatic habitats are due to the current and historical heavy industrial use in the area and are unrelated to the presence of metals and PAHs in the fill material with the Shore portion of the KCCRA.
- Based on laboratory testing of aquatic invertebrates, impaired growth and reproduction were observed in those exposed to fill material samples from the Shore portion of the KCCRA relative to those not exposed. However, none of the aquatic invertebrates exhibited increased mortality.
- Fill material containing nickel and/or vanadium at concentrations exceeding the ecological AETs makes up less than 1 percent of the aquatic habitat in Kings Cove. Therefore, there is no potential for biological harm to the populations of aquatic invertebrates in Kings Cove associated with the concentrations of nickel and/or vanadium in fill within the Shore portion of the KCCRA now or in the future.
- Because there is no potential for biologically significant harm to aquatic invertebrates in Kings Cove associated with nickel and/or vanadium concentrations in the KCCRA, a Condition of No Significant Risk to the environment exists.

2.4.3 Phase III RAP

A Final Phase III RAP was submitted in August 2023 (TRC, 2023). The purpose of the Phase III RAP was the identification, evaluation, and selection of remedial action alternatives that can potentially achieve the remedial action objectives for the KCCRA. Remedial action objectives were developed, in part, based on information presented in the Phase II CSA (TRC, 2022a).

The remedial action objectives were:

- To address the potential future risk to visitors who might be exposed to arsenic in fill at depths greater than 3 feet and potential residents of what is now the KCCRA who might be exposed to arsenic and lead in fill at all depths in the Upland portion of the KCCRA. The remedial action objective is to achieve a Condition of No Significant Risk for these potential future exposures.
- To address the potential that further erosion in the southeastern area of the Upland portion of the KCCRA could expose fill containing higher concentrations of arsenic. The remedial action objective is to control this potential source of arsenic.

- To remove an area of fill below MHW which contained nickel and vanadium at concentrations exceeding the AETs. This objective was identified despite the existence of a Condition of No Significant Risk.

The preferred Remedial Action Alternative for the Upland portion of the KCCRA was to extend the existing stone revetment and record an AUL. A description of the plan for implementation of the remedial alternative can be found in **Section 3.0**.

The preferred Remedial Action Alternative for the Shore portion of the KCCRA and the fill below MHW was to excavate an area of fill below MHW with off-Site disposal of the fill if necessary. In addition, this Phase IV RIP includes a new element of the Remedial Action Alternative, which consists of the placement of cobble to create a gradual surficial transition between the dredging area and the revetment. The cobble will help dissipate wave energy within the waterbody and intertidal areas to protect the new revetment, while also providing an improved benthic surface for organisms within the intertidal zone.

A description of the plan for implementation of the Remedial Action Alternative can be found in **Section 3.0**.

3

Phase IV Remedy Implementation Plan

3.1 Scope of the Phase IV RIP

This RIP has been prepared to describe the engineering concepts and design criteria to be used for the design and construction of the preferred Remedial Action Alternative to achieve a Condition of No Significant Risk and a Permanent Solution. The elements of the Phase IV RIP include:

- Objectives of the remedial action, including performance requirements, requirements for achieving a Permanent or Temporary Solution (whichever is applicable), and the projected timeline for achieving such a Permanent or Temporary Solution.
- Significant changes or new information related to KCCRA conditions that were not already included in previous submittals, and a narrative of the Disposal Site CSM.
- Disposal Site maps showing existing and proposed Site features.
- A description of the characteristics, quantity, and location of environmental media or materials to be treated or otherwise managed, including a description of methods for management or disposal of waste materials or soils generated as part of construction of the Remedial Action Alternative.
- A description of the conceptual plan of the activities, treatment units, facilities, and processes to be used to implement the preferred Remedial Action Alternative.
- Relevant design and operation parameters, including design feature for control of OHM spills and accidental discharges.
- Identification of site-specific characteristics which may affect or be affected by the design, construction, or operation of the preferred Remedial Action Alternative.
- A description of measures to avoid deleterious impact on environmental receptors and natural resource areas, or where it is infeasible to avoid any such impact, a discussion of measures to minimize or mitigate any impact.

- A general description of inspections and monitoring to be performed during construction of the Remedial Action Alternative.

Each of these elements will be addressed in the following sections.

3.2 Engineering Design

The goals, design, and proposed methods to implement the remedy will be described in the following sections. An overview of the KCCRA is depicted on **Figure 2**. Construction plans are included as **Appendix D**.

3.2.1 Remedial Goals and Requirements [310 CMR 40.0874(3)(b)(1)]

As discussed in **Section 2.4.1**, the Phase II CSA concluded that additional response actions are warranted in the KCCRA to address potential future exposures to arsenic and lead in eroding fill in the Upland portion of the KCCRA. In addition, although a Condition of No Significant Risk has been achieved for contaminants in fill below MHW, MassDEP has indicated a preference to remove an area of fill below MHW containing nickel and/or vanadium at concentrations exceeding the AETs. Therefore, the overall goals of the Phase IV RIP are to reduce potential human and ecological exposure to Site contaminants, achieve a Condition of No Significant Risk to human health, safety, public welfare, and the environment for current and foreseeable Site uses, and to support the filing of a Permanent Solution with Conditions for the KCCRA. This will be accomplished by construction of the preferred Remedial Action Alternative, which will stabilize eroding fill and include the removal of an area of fill below MHW containing elevated concentrations of vanadium and nickel. Following the implementation of the Remedial Action Alternative, an AUL will be filed which incorporates use limitations and maintenance requirements for maintaining a Condition of No Significant Risk at the KCCRA.

On March 30, 2022, MassDEP modified the interim deadlines that were previously established for the KCCRA, specifically, this Draft Phase IV RIP was to be submitted by April 28, 2024, and a Permanent Solution Statement was to be submitted by April 28, 2025. Depending on the timing of approvals and permits necessary to implement the preferred Remedial Action Alternative, Phase IV implementation could begin in Fall 2025 and be completed by Winter 2025. An AUL and Permanent Solution with Conditions would then be filed within approximately one year of the implementation of the preferred remedial action. Therefore, a request to extend the Permanent Solution Statement interim deadline will be made by Algonquin since the permitting timeline makes the current deadline infeasible.

3.2.2 Additional Site Information and Conceptual Site Model [310 CMR 40.0874(3)(b)(2)]

No new information such as soil and/or groundwater testing data has been collected from the KCCRA since the submittal of the Phase III RAP. The KCCRA conditions have not changed since the submittal of the Phase III RAP.

Per the MCP, a conceptual site model (CSM) is a site-specific description of how contaminants entered and may be transported in the environment, as well as routes of exposure to receptors. A detailed CSM

for the Disposal Site is included in Section 8 of the Phase II CSA (TRC, 2022a). This section is intended to summarize the elements of the CSM specific to the KCCRA.

- The constituents of Concern (COC) at the KCCRA are pyrogenic PAHs and metals. The source of these COCs is the approximately 2 to 8 feet of fill containing coal, coal ash, clinkers, and building material debris that was placed in the 1920s and 1930s.
- Visitors may be exposed to COCs in soil through incidental ingestion, dermal contact, and the inhalation of fugitive dust released from near-surface impacted soil where or when that soil is exposed. There is limited potential for terrestrial ecological receptors to be exposed to contaminants in soil at the KCCRA.
- Concentrations of COCs in groundwater do not exceed applicable MCP Method 1 groundwater standards; however, the potential exists for low-level exposure to OHM in groundwater during excavation activities. There are no drinking water supply wells at or near the KCCRA.
- Concentrations of COCs identified in surface water, sediment, and clinkers identified in the Shore portion of the KCCRA are consistent with a Condition of No Significant Risk. KCCRA visitors could be exposed to low concentrations of COCs in surface water and sediment through incidental ingestion and/or dermal contact.
- Ecological receptors are potentially exposed to COCs in surface water and/or sediment via ingestion and direct contact. Wildlife exposures include ingestion of sediment, biota, and food chain/bioaccumulation. As summarized in **Section 2.4.2**, potential ecological and food chain exposures were assessed during a Stage II ERC.
- Soil vapor migration is not a likely exposure route and COCs would not readily migrate along a preferential pathway such as subsurface utilities. There are also no enclosed or occupied structures within the KCCRA where a vapor intrusion pathway might result in an accumulation of impacted soil vapor.

3.2.3 Disposal Site Map [310 CMR 40.0874(3)(b)(3)]

The KCCRA boundary is depicted on **Figure 1**. Soil boring, soil sample, monitoring well, and test pit locations in primarily the Upland portion of the KCCRA are shown on **Figure 4**. Surface water and fill sampling locations in the Shore portion of the KCCRA are shown on **Figure 5**. The KCCRA preferred Remedial Action Alternative elements are depicted on **Figure 6** and the permitting plans included as **Appendix D**.

3.2.4 Description of Media to be Treated and/or Managed [310 CMR 40.0874(3)(b)(4)]

This section describes the characteristics, quantity, and location of environmental media or materials to be treated or otherwise managed.

The environmental media that will be managed and/or treated are fill and sediment. Sea water which drains from stockpiled fill and sediments may also require management.

Subsurface fill has been previously documented to include fine to coarse sand containing lesser amounts of gravel and/or silt, and anthropogenic fill materials (e.g., bricks, clinkers, coal). As noted

previously, relevant Massachusetts regulations define "sediment" as all material below MHW. Accordingly, the sediment below MHW is primarily comprised of fill material including clinkers and bricks. The COCs in the sediment to be managed at the Shore portion of the KCCRA are nickel and vanadium. The COCs in the soil to be managed at the Upland portion of the KCCRA are arsenic and lead. Based on the results of surface water sampling conducted as summarized in the Phase II CSA, no COCs were identified in surface water exceeding water quality criteria or screening benchmarks.

The volume of soil to be excavated from the Upland portion of the KCCRA during construction of the revetment is estimated at approximately 150 cubic yards. The volume of sediment to be dredged from the area below MHW (i.e., the Shore portion of the KCCRA) as depicted on **Figure 6** to a depth of one foot is estimated at approximately 630 cubic yards. The volume of sea water that may drain from stockpiled sediments has not been estimated but is expected to be minimal. Water that drains from stockpiled sediment will be contained and handled appropriately as noted in **Section 3.2.8.3**.

3.2.5 Conceptual Design [310 CMR 40.0874(3)(b)(5)]

As summarized in **Section 2.4.3**, the Phase III RAP identified a preferred Remedial Action Alternative to achieve a Condition of No Significant Risk for the KCCRA. The preferred Remedial Action Alternative includes dredging of fill within an intertidal area, and extending the rip rap revetment in the northern area of the KCCRA to contain eroding impacted fill. In addition, this Phase IV RIP includes a new element of the Remedial Action Alternative, which consists of placement of cobble to create a gradual surficial transition between the area to be dredged and the revetment. The preferred Remedial Action Alternative has been designed to minimize potential impacts to the Upland area of the KCCRA through construction access directly from Bridge Street, rather than through the KCCRA.

The construction of the preferred Remedial Action Alternative consists of the following:

- Collection of soil/sediment samples for laboratory analysis for determining appropriate disposition;
- Before any construction work begins, installing erosion and sedimentation controls according to the design plans, including controls for in-water work, setting up temporary construction fencing, and selecting dust monitoring locations;
- Dredging during low tide cycles;
- Placing dredged material in a staging area and/or roll-off containers awaiting reuse or disposal;
- Placing clean cobble cover within the dredged area and up to the base of the new revetment;
- Constructing the rip rap revetment, including placing a subset of the dewatered dredged material behind the rip rap;
- Off-site disposal of remaining dredged material;
- Restoration of disturbed construction access and staging areas (loaming and seeding);
- Removing erosion and sedimentation controls.

Plans and details of the Remedial Action Alternative can be found in **Appendix D**. Proposed erosion and sedimentation controls are detailed in **Section 3.2.7**. The dredging operation and revetment

installation are described in more detail below. The exact sequence and schedule will be finalized by the selected remediation contractor.

3.2.5.1 Dredging below MHW

The preferred Remedial Action Alternative includes the removal of an area of fill containing elevated concentrations of nickel and vanadium from below the MHW line in the KCCRA. The removal of the area of fill below MHW is not required to achieve a Condition of No Significant Risk but it could improve the environment for ecological receptors.

Dredging is anticipated to occur only during low tide in order to limit sediment/impacted fill movement and to contain the work area. Prior to excavating materials, the area of dredge will be recreated in the field using GPS in order to adhere to the selected boundaries. A turbidity curtain will also be installed to control migration of suspended fine materials away from the dredged areas. Machinery will access the work area from the beach to remove and transport the sediments to the proposed dewatering location(s) located onsite near Bridge Street. The dredged volume will be replaced with an equal amount of clean cobble stone to restore the dredged area to the preexisting mudline elevation.

All dredged material will be dewatered onsite prior to being transported offsite for disposal in accordance with proper waste handling and transport procedures. Dewatering of each volume of sediment generated during a tidal cycle is anticipated to be complete in approximately 48 hours.

An offsite area outside of jurisdictional resource areas will be used, as needed, for staging dredged material during construction.

3.2.5.2 Rip Rap Revetment Installation

The preferred Remedial Action Alternative will involve containment and armoring of the eroding portions of coastal bank[1] with a rip rap revetment. To allow this work to occur "in the dry," a sandbag cofferdam will be established along the length of the area of the KCCRA between the proposed construction access at Bridge Street and the edge of the existing revetment. The revetment design elements are shown on the plans included as **Appendix D**.

Damage to trees and shrubs will be minimized to the extent possible. Mature trees that can be maintained will be protected to prevent damage during construction. Plants/trees that must be removed as part of construction shall be removed completely and free soil must be shaken and/or brushed off the root system prior to off-site disposal in order to not cross-contaminate waste streams.

The revetment construction will include the following elements:

- Excavation of fill to bring the proposed revetment area to grade per the design plans.
- In areas where backfill is required to support the revetment (landward of the rip rap revetment), a certain volume of the dredged material will be reused for that purpose.
- The reused fill will be covered with a layer of Mirafi RS580i geotextile or equivalent, which will be covered by a layer of orange geotextile fabric (Mirafi 140NL/O or equivalent). If

[1] Refer to design plans in Appendix D for surveyed limits of the coastal bank.

multiple sheets of geotextile need to be connected, they will be overlapped a minimum of 18 inches and secured in place with metal pins.

- The geotextiles will be covered with a layer of clean bedding stone and the larger rip rap.
- Cobble stones will be brought to the base of the revetment to transition to the beach.
- The portion of the revetment closest to the top of the coastal bank will be finished with loam and seed to transition to the riprap.

As noted above, to gradually connect the dredged area to the new revetment area, clean cobble will be placed between the two areas, which will further contain residual slag on the shallow portions of the Coastal Beach.

3.2.5.3 Activity and Use Limitation

An Activity and Use Limitation will be placed on the deed of the KCCRA that will outline restrictions and requirements for future activities and uses of the KCCRA, including conditions for accessing soils and maintaining the revetment. The implementation of the preferred Remedial Action Alternative with an AUL would achieve a Permanent Solution with Conditions without "active" operation and maintenance systems (as defined by the MCP), although future routine inspections and maintenance will be required per the AUL to confirm the integrity of the revetment.

3.2.6 Relevant Design and Operation Parameters [310 CMR 40.0874(3)(b)(6)]

The design and operating parameters to be implemented during the implementation of the preferred Remedial Action Alternative include the construction steps described in **Section 3.2.5**. As noted in **Section 3.2.5.2**, the revetment will be constructed as follows from bottom to top:

- Reused dredged material (as needed to meet design base grade);
- Layer of woven geotextile Mirafi RS580i (or equal);
- Layer of "warning indicator" orange geotextile Mirafi 140NL/O (or equal);
- An approximately 1-foot-thick layer of bedding stones;
- An approximately 2.5-foot-thick layer of larger rip rap.

The area dredged below MHW will be restored with clean cobble, which will also be placed between the dredged area and revetment.

Details showing the revetment cross-section and dredged area typical fill section are provided as part of the permitting planset in **Appendix D**.

The use of a revetment is a proven method of preventing further erosion in a coastal setting and will thereby achieve a Condition of No Significant Risk by preventing future exposures to eroded fill. The Mirafi RS580i (or equal) was selected as a geotextile because it provides high reinforcement strength and soil retention capabilities. The tensile modulus for a typical roll is approximately 54,000 pounds per foot, and the polypropylene resin performs well in marine environments. The Mirafi RS580i is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids. The installation of Mirafi 140NL/O, or equal, was identified as beneficial as a warning indicator due to its high visibility orange color and additional reinforcement in the revetment layers. The Marafi materials are expected to prevent exposure to impacted soils below the layers as well as provide a visual

warning to assist with future revetment inspections. Product specifications of these materials are included in **Appendix D**.

3.2.7 Design Features for Control of OHM Releases [310 CMR 40.0874(3)(b)(7)]

The preferred Remedial Action Alternative will include soil and sediment excavation and management, as well as potential dewatering effluent management. To minimize risks to nearby receptors during these activities, the following procedures will be implemented:

3.2.7.1 Erosion and Sediment Control

An erosion and sedimentation control program will be implemented to minimize temporary impacts to wetland resource areas during the construction phase of the preferred Remedial Action Alternative. The program incorporates Best Management Practices (BMPs) specified in guidelines developed by MassDEP and U.S. Environmental Protection Agency (EPA).

Proper implementation of the erosion and sedimentation control program will:

a) minimize exposed soil areas through sequencing and temporary stabilization;
b) establish a permanent vegetative cover or other forms of stabilization as soon as practicable.

The following sections describe the controls that will be used and practices that will be followed during construction. These practices comply with criteria contained in the NPDES Construction General Permit (CGP) for Discharges from Large and Small Construction Activities issued by the EPA.

Structural Controls

Structural erosion and sedimentation controls to be used in the KCCRA include sandbag cofferdams, a turbidity curtain, and stabilized construction exits.

Sandbag Cofferdam

Sandbags will be utilized to create a cofferdam around the revetment construction area to protect Kings Cove from potential sediment inflow as a result of the work. The cofferdam will also establish a work area "in the dry" for the construction of the revetment.

Turbidity Curtain

An anchored turbidity curtain with a weighted bottom will be installed seaward of the dredge limits within the KCCRA to control migration of suspended fine material away from the dredged areas. The turbidity curtain will be attached to vertical poles installed within the waterway using ring connectors, which will allow vertical movement of the turbidity curtain as water levels change during tidal cycles.

Stabilized Construction Exits

Stone anti-tracking pads will be installed at the southern construction access point to the work area to prevent the offsite transport of sediment by construction vehicles. The stabilized construction exits will be at least forty feet long and will consist of a 4-inch thick layer of crushed stone (1.5 inches in

diameter). The stone will be placed over a layer of non-woven filter fabric. The anti-tracking pads will remain in place until the proposed work is complete.

3.2.7.2 Dust Control Measures

Fugitive dust is particulate matter that is generated from the natural or mechanical disturbance of soil and rock. Generation of fugitive dust generally depends upon the specific type of operations, the silt and moisture content of the soil, local meteorological conditions (i.e. wind speed and precipitation amount) and emission controls that are applied. The quantity of fugitive dust generated is proportional to the area of land being worked and the level of construction activity on the land. Fugitive dust emissions could be generated during site preparation/excavation operations and the related on-site vehicle traffic.

The generation of fugitive dust will be minimized, as required by the site-specific Action Levels discussed in section 3.2.7.3 below, by implementing dust mitigation measures based on monitoring results. Dust mitigation measures that may be implemented include but are not limited to the following:

- Wet suppression to minimize the generation of dust from demolition activities, excavation operations and on-site vehicle traffic.
- Maintaining low vehicle speeds in unpaved areas.
- Anti-tracking pads at the construction entrance as previously noted.
- All trucks that enter the site and later exit on an asphalt surface will be subject to wheel cleaning as the vehicle exits the site, as necessary. This will entail hosing down the truck wheels while the truck is on the gravel tracking pad, just before the truck exits the KCCRA property.
- Construction trucks hauling materials to and from the KCCRA will have their loads securely covered. Loads should not be above the freeboard.
- Street cleaning may be required and will be completed by a mechanical street sweeper during excavation activity, and on an as needed basis during subsequent construction phases. If determined to be necessary, sweeping extents and frequencies will be increased.
- If required, short duration stockpiling of soil (intended for immediate reuse) will be stabilized, and surrounded by erosion controls.
- Existing ground will not be disturbed until required for construction, and areas may be stabilized with gravel or other stabilizing material if dust generation is observed that cannot be controlled with water.
- No storage of construction debris will be allowed on-site, other than in roll-off dumpsters.
- Construction practices will be monitored to verify that unnecessary transfers and mechanical disturbances of loose materials are minimized and that any emissions of dust are minimal.

3.2.7.3 Air/Dust Monitoring

Dust monitoring will be conducted during excavation activities, including during loading of soils/sediments into containers/trucks at the KCCRA property. Given the coastal environment and since

a portion of the material to be excavated is sediment, dust generation during construction of the Remedial Action Alternative is anticipated to be low.

Perimeter air monitoring will be conducted by VHB personnel to measure particulates that could become airborne in areas of the KCCRA where contamination levels could create exposure to humans or the environment beyond the KCCRA boundary. Air monitoring by conventional real-time particulate sampling procedures (i.e. TSI DustTrak meter) will be implemented to confirm dust concentrations generated as a result of construction (i.e., not background) do not pose a potential risk to the health of the public. Each dust measurement will be taken as a 5-minute average of Particle Pollution $(PM)_{10}$ above the upwind concentration. A portable weather station will be utilized on-Site to determine the current wind direction.

The US EPA has established National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The NAAQS for PM_{10} is 150 ug/m^3 measured as an average over 24 hours. To confirm that the 150 ug/m^3 threshold would be sufficiently protective, the inhalation risk was calculated for on-site workers and fence line residents using the highest average exposure point concentrations (EPCs) developed during the Method 3 Risk Characterization. This evaluation found that the 24-hour NAAQS for PM_{10} of 150 ug/m^3 would be protective of on-site workers and fence line residents.

Therefore, based on these evaluations. The following thresholds will be implemented at the KCCRA during construction:

- **Site-specific Action Level: 100 ug/m^3**. Should this threshold be exceeded (above background levels) within the work area or at a fence line monitoring station, excavation work will temporarily stop, and dust suppression techniques would be employed. The Action Level is applicable to the dust concentration as measured above background concentration. The Action Level is used as a site management tool to give operational staff the ability to implement corrective actions prior to reaching the Work Stoppage Threshold.
- **Work Stoppage Threshold: 150 ug/m^3**. Should the dust suppression measures taken in response to an Action Level exceedance be unsuccessful at reducing dust levels and dust levels exceed 150 ug/m^3 above background levels within the work area or at a fence line monitoring station for more than two hourly dust readings, excavation work will be stopped pending a technical evaluation by the Contractor and VHB. Additional measures will be selected and employed to mitigate dust generation. This threshold is applicable to the dust concentration as measured above background concentration.

Each day, upwind and downwind dust monitoring will be performed so that the upwind dust concentration can be subtracted from the downwind dust concentration to measure impacts from the site work. Background (i.e., upwind) dust concentrations cannot be controlled at the KCCRA, nor should background exposures be included in the evaluation of dust impacts related to implementation of the preferred Remedial Action Alternative.

Monitoring will be conducted at four points at the perimeter of the KCCRA. VHB personnel will also have handheld particulate air monitors to observe dust concentrations in the active work area. This will require potentially selecting dust monitoring locations that are within the area below MHW, therefore, these locations may be subject to change depending on accessibility/water depth. Downwind measurements taken near the edge of the KCCRA will be subtracted from the background concentration to determine the impact from excavation activities (for comparison with the site-specific

Action Level and Work Stoppage Threshold). A record will be maintained on an hourly basis during applicable work of the daily total PM_{10} concentration at the fence line stations.

Although volatile contaminants are not anticipated, the dust monitoring conducted in the work zone will be supplemented by periodic organic vapors monitoring using a photoionization detector (PID). If PID readings are sustained above 5 parts per million per unit volume (ppmV) in the breathing zone for at least 5 minutes, VHB's representative will wait 15 minutes and measure again. If the PID readings are still above 5 ppmV, then the LSP will be contacted to evaluate whether response actions or personal protective equipment (PPE) upgrades are necessary.

Upon completion of Remedial Action Alternative activities involving soil/sediment excavation and handling, the air monitoring will be terminated and the data summarized and reported in the Phase IV Final Inspection Report/Completion Statement.

3.2.7.4 Stockpile Management

Stockpile staging areas for soil/sediment generated during excavation activities will be established in the construction plans. The staging areas will be located on the southeastern edge of the KCCRA, closest to Route 3A. In addition, roll-off containers may be staged in this area to contain soils/sediments prior to off-Site disposal.

Stockpiles containing soil/sediment excavated from the KCCRA will be placed entirely on a base composed of an impermeable material and shall be covered with the same material or other suitable material to minimize the infiltration of precipitation, volatilization of contaminants, and erosion of the stockpile. Polyethylene sheeting (with a thickness of 6 mil) can be used for the base and cover. Any cover material used shall be properly secured and possess the necessary physical strength to resist tearing by the wind. If the soil or sediment has free-draining liquids, a bermed stockpile area will be constructed by placing straw wattles beneath the polyethylene. The contractor shall identify sufficiently wide polyethylene sheets to create a berm without needing to connect or attach individual sheets to one another to create the bermed stockpile area. If the free liquids do not naturally evaporate from the bermed area, then they will be pumped into 55-gallon drums pending characterization.

Should soil/sediment instead be placed in a roll-off container, the top of the container will be covered with polyethylene sheeting or other suitable material. Clean imported material, such as imported fill and cobbles, will be stockpiled on property to the west owned by Algonquin and may be covered to prevent infiltration of precipitation, but only for the purpose of maintaining suitability of the material prior to placement.

Any failure of materials or procedures used in employing the base layer or cover for stockpiled/contained impacted soil/sediments shall be immediately repaired, replaced, or re-secured so as to minimize precipitation infiltration, volatilization, and erosion/runoff of the contaminated media or contaminated debris. All soils and sediments when transported upon public roadways shall be covered to minimize fugitive dust, and if deemed necessary by the LSP, truck tire and undercarriage washing shall be employed to minimize tracking of soils and sediments onto public roadways.

3.2.7.5 Spill Prevention and Response

Implementation of the preferred Remedial Action Alternative will require the presence of heavy equipment; therefore, there is a small risk of accidental discharge due to mechanical/physical failures

of excavation and trucking equipment and/or fueling incidents. Standard operating procedures to prevent accidental releases will include daily inspection of hydraulic lines and reservoirs, and general inspection of equipment which contains fuel, oils and lubricants. Absorbent materials and containers will be kept on-site during Remedial Action Alternative construction to contain incidental spills and/or accidental discharges from excavation and trucking equipment.

3.2.8 Management of Waste Materials [310 CMR 40.0874(3)(b)(8)]

Waste materials generated during implementation and operation of the preferred Remedial Action Alternative may include:

- Excess excavated soil and sediment (including fill materials that cannot be segregated).
- Free liquids captured from soil in designated bermed stockpile areas and sectioned dewatering roll-off containers;
- Debris found in the soils that cannot be shipped to the soil/sediment-receiving licensed facility will be segregated to the extent practicable, then screened for the presence of hazardous materials prior to being transported to an appropriate and licensed facility.
- Personal protective equipment and other similar wastes will be disposed of as ordinary solid waste.

The following sections describe the methods for management and disposal of contaminated environmental media generated as a result of the implementation of the preferred Remedial Action Alternative.

3.2.8.1 Soil and Sediment Sampling/Screening

Prior to being exported from the KCCRA, soil and sediment will be sampled and properly characterized to facilitate identification of an appropriate disposal/recycling facility. The analysis is dependent on the requirements of the disposal/recycling facilities. However, typically analysis will include:

- Volatile organic compounds (EPA Method 8260)
- Semi-volatile organic compounds (EPA Method 8270)
- MCP 14 metals
- Polychlorinated biphenyls (PCBs)
- Total petroleum hydrocarbons (TPH)
- pH/corrosivity
- Ignitability/flashpoint
- Reactive cyanide/reactive sulfide
- Toxicity characteristic leaching procedure (TCLP) for analytes which exceed the EPA "20 times" rule

The disposal destination for excess environmental media is dependent on laboratory analytical results and available options. Relevant shipment documentation, such as soil/sediment weight slips, will be provided in the Phase IV Final Inspection Report/Completion Statement.

Based on the OHM and concentrations detected in the soil and sediment during the pre-characterization program, one or more of the following management categories may apply:

- Massachusetts unlined landfill;
- Massachusetts lined landfill;
- Non-RCRA out-of-state landfill;
- RCRA Subtitle C landfill; or
- In-state recycling/asphalt batching facility;

Soil or sediment will be reused behind the revetment to the extent practicable. The remaining soil and sediment generated will be disposed off-site for recycling, reuse, or disposal. If soil or sediment containing TCLP in excess of the RCRA thresholds is identified, the material will be shipped off-site under manifest to a facility permitted to accept characteristic hazardous waste.

Soil and sediment sampling analysis will be performed in accordance with 310 CMR 40.0017 of the MCP. Procedures and methodologies employed for the collection and analysis of environmental media samples shall consist of the following:

- Methods published by the MassDEP, EPA, the American Society for Testing and Materials (ASTM), the American Public Health Association (APHA), the National Institute for Occupational Safety and Health (NIOSH), and other organizations with expertise in the development of standardized analytical testing methods;
- Modification of published methods, provided that all modifications are completely documented; and
- Unpublished methods, including analytical screening methods, provided that such methods are scientifically valid, are of a known and demonstrated level of precision and accuracy, and are completely described and documented in response action submittals.

3.2.8.2 Soil and Sediment Management

Soil and sediment determined to be not suitable for reuse will be removed and properly disposed off-site based on the applicable management options identified as a result of laboratory testing. In total, an estimated 800 cubic yards of soil and sediment may require management (including export).

Due to the presence of potentially impacted soil and sediment, proper handling and storage techniques will be followed to:

c) minimize the potential for human contact with the contaminated materials,
d) control the further release of contaminants to uncontaminated environmental media, and
e) evaluate re-use or treatment alternatives.

The selected Contractor is required to conduct the excavation in accordance with this Phase IV RIP, the site-specific Health and Safety Plan, their own Health and Safety Plan, and applicable contract specifications. The Contractor will be responsible for contacting DigSafe at least 72 business hours prior to conducting intrusive work and adhering to any other permits and approvals associated with the Remedial Action Alternative components.

Excavated material will be managed using methods to reduce the potential for cross contamination and the Contractor shall not expand the excavation area to remove localized areas of contaminated soil or sediment unless directed by VHB.

Soil containing OHM at levels equal to or greater than the release notification thresholds and are not otherwise a hazardous waste will be managed under the Bill of Lading (BOL) process if they are transported from the KCCRA. Although MCP Reportable Concentrations are not applicable to sediment unless reused in an upland location, sediment will also be transported under the BOL process to maintain consistency in shipping documentation.

Contaminated soil or sediment residuals can only be consigned, conveyed, and/or transported to facilities and locations licensed, permitted, or approved to accept such materials by appropriate federal, state or local authorities. Soils or sediments which meet the criteria defining a listed or characteristic hazardous waste shall, when transported from a disposal site, comply with the requirements of 310 CMR 30.000.

3.2.8.3 Groundwater Sampling and Dewatering

Based on the results of surface water sampling conducted as summarized in the Phase II CSA, no COCs were identified in surface water above the applicable water quality criteria or screening benchmarks. In addition, although metals have been detected in groundwater samples collected at the KCCRA, all groundwater results were below the applicable MCP Method 1 groundwater standards. Therefore, water which drains from soils or sediments is not expected to be impacted with KCCRA COCs in excess of applicable regulatory standards.

On-site excavations are not expected to require dewatering, since dredging below MHW will be conducted during low tide and the sediments/soils on-Site are anticipated to be well-draining.

As noted previously, if the soil or sediment has free-draining liquids, a bermed stockpile area will be constructed by placing straw wattles beneath the polyethylene sheeting to prevent the liquids from infiltrating or running back into the beach area. If the free liquids do not naturally evaporate from the bermed area, then they will be pumped into 55-gallon drums on secondary containment pallets pending characterization. Alternatively, wet soils/sediments will be placed into a dewatering roll-off container which has a separate section beneath for the collection of drained water. The water would then be pumped into 55-gallon drums prior to shipping the roll-off container. If 55-gallon drums do not provide sufficient capacity for the collection of water drained from the stockpiled or containerized soils, then a fractionation tank will be mobilized to collect these waters. Should there be a need to discharge larger quantities of drained water as part of construction, then an EPA NPDES Dewatering and Remediation General Permit (DRGP) would be obtained.

Containerized water generated from soil and sediment will be tested by VHB to facilitate off-Site recycling/treatment at an appropriate facility. The analysis is dependent on the requirements of the recycling/treatment facilities. Samples will be collected by hand using a plastic bailer submerged into the water contained within the drum or fractionation tank. Should the results of water samples be below applicable MCP regulatory criteria, then on-Site re-infiltration in accordance with Section 40.0045 may be pursued as an option to manage the containerized water under the guidance of the LSP. However, this method of dewatering management will be subject to finding an area landside of the coastal bank within the KCCRA that can accept water for infiltration without allowing water to run back into Kings Cove.

3.2.9 Discussion of Impact to Site Features [310 CMR 40.0874(3)(b)(9)]

This section details the site-specific characteristics which may affect or be affected by the design, construction, or operation of the remedy.

Access to a small portion of Kings Cove Park will be restricted during construction to prevent unauthorized access to areas undergoing construction. The addition of the cobble will make the beach more aesthetically pleasing, and also the removal of material from below MHW could result in an improvement to this environment for ecological receptors. The proposed revetment will be visually consistent with the existing revetment, therefore, there is no anticipated impact on the aesthetics of this area of Kings Cove.

Due to the locations of the OHM-impacted fill, work within wetland resource areas associated with the KCCRA is unavoidable. The preferred Remedial Action Alternative has been designed to minimize hydrological changes to wetland resource areas while still achieving the remedial action objective specified in the Phase III RAP. The preferred Remedial Action Alternative is reviewable under the Massachusetts Wetlands Protection Act and its implementing regulations as a Limited Project [310 CMR 10.24(7)(c)(6)]. Work will be conducted in accordance with applicable federal, state and local environmental permits.

The preferred Remedial Action Alternative will not impact drainage features, utilities, or soil and groundwater characteristics. The preferred Remedial Action Alternative will improve the condition of soils and sediments in the areas in which soils or sediments are removed.

3.2.10 Measures to Prevent Impacts to Receptors [310 CMR 40.0874(3)(b)(10)]

Access to the area in which the preferred Remedial Action Alternative is being implemented will be restricted. Temporary construction fencing will be placed along the western boundary of the southern portion of the KCCRA where Kings Cove is generally accessible via foot. In addition, the access to the KCCRA along Route 3A is already fenced with a locked gate at the proposed construction entrance. The northern portion of the KCCRA is already inaccessible by foot due to the presence of a combination of existing stone revetment and dense vegetation and/or fencing. The eastern edge of the KCCRA is considered inaccessible by foot due to the presence of Kings Cove. Sandbags will also be placed within the KCCRA to prevent wildlife or watercraft from entering the work area.

The area in which the preferred Remedial Action Alternative is being implemented will be fenced to keep unauthorized personnel out of the work zones. Dust monitoring will be conducted to verify that Site workers are not exposed to hazardous levels of dust or associated OHM.

Wetland resource areas will be protected from impacts during implementation of the preferred Remedial Action Alternative through the employment of an erosion and sedimentation control program, which includes provisions to limit erosion through stabilization and prevent sediment from leaving the KCCRA by the use of structural controls. The preferred Remedial Action Alternative has been designed to minimize potential impacts to the Upland portion of the KCCRA through construction access directly from Bridge Street, rather than through the KCCRA.

3.2.11 Construction Inspections and Monitoring [310 CMR 40.0874(3)(b)(11)]

VHB will conduct a pre-construction kick-off meeting prior to implementation of the Remedial Action Alternative to review and discuss the design, schedule, and inspection procedures with the contractor. VHB's LSP representatives will be responsible for performing the following tasks during implementation of the Phase IV RIP:

- Collection of soil, sediment and water samples
- Air/dust monitoring
- Verification of revetment construction such as placement of geotextile and appropriate thickness of stone
- VHB will supervise aspects of construction as it relates to the remedy as follows:
    - Excavation/earth moving, and soil loading and transportation
    - Installation of the geotextile fabric and clean soil cap
    - Screening and inspection of soil stockpiles and roll-off containers

VHB's LSP will visit the KCCRA one to two times a week during the above-noted work to evaluate the implementation of the Phase IV RIP. Following completion of the preferred Remedial Action Alternative, the LSP will conduct a final inspection in accordance with 310 CMR 40.0878.

3.2.12 Construction Plans and Specifications [310 CMR 40.0874(3)(c)]

The following sections contain information on the proposed plans for the construction of the preferred Remedial Action Alternative.

3.2.13 Plans, Specifications, and Procedures

The permitting plans depicting the preferred Remedial Action Alternative elements is provided as **Appendix D**. The revetment will be constructed to achieve a Condition of No Significant Risk as described in **Section 3.2.6**.

3.2.14 Design and Construction Schedule

If applicable approvals and permissions are received, implementation of the preferred Remedial Action Alternative could begin in Fall 2025 and be completed by Winter 2025. An AUL and Permanent Solution with Conditions would then be filed within approximately one year of completion of the work. Therefore, a request to extend the Permanent Solution Statement interim deadline as noted in **Section 3.2.1** will be made by Algonquin since the permitting timeline makes the current deadline infeasible.

3.2.15 Active Operation and Maintenance Applicability

Active Operation and Maintenance (O&M) means activities related to operating and maintaining an Active Remedial System; operating and maintaining an Active Exposure Pathway Mitigation Measure; or conducting an Active Remedial Monitoring Program. Given the nature of the preferred Remedial Action Alternative, Active O&M is not required to test or monitor the initial implementation of the

preferred Remedial Action Alternative. Therefore, Remedial Monitoring Reports are also not applicable to the Remedial Action Alternative.

3.3 Operation, Maintenance and Monitoring Plan [310 CMR 40.0874(3)(d)]

An Operation, Maintenance and Monitoring (OMM) Plan is required when the preferred remedial alternative requires operation, maintenance and/or monitoring activities to ensure its effective performance and integrity and/or achievement of remedial goals. The preferred Remedial Action Alternative does not require active remedial systems or treatment systems, so performance-based monitoring is not applicable. However, applicable elements of the OMM Plan are provided below related to documenting achievement of remedial goals of the preferred Remedial Action Alternative.

3.3.1 Operator Information

The persons responsible for conducting the operation, maintenance, and monitoring activities at the KCCRA are as follows:

- The selected Contractor(s) will be responsible for construction of the preferred Remedial Action Alternative. Upon completion of construction, the Contractor(s) will demobilize all equipment from the KCCRA.
- VHB, on behalf of Algonquin, is responsible for dust monitoring and environmental media sampling during construction of the of the preferred Remedial Action Alternative. VHB's LSP will submit a Phase IV Final Inspection Report/Completion Statement.

Contact information for the LSP was provided in **Section 1.1**. Contact information for Contractor(s) will be made available in the Phase IV Final Inspection Report/Completion Statement.

3.3.2 General Operating Procedures

Since the KCCRA does not contain active remediation systems, general operating procedures are not required. However, the following procedures will be implemented to monitor and document the progress of the implementation of the preferred Remedial Action Alternative:

Periodic Construction Reports

A construction report will be completed periodically with weekly meetings to summarize activities performed and plan for future activities. Additional sketches and notes will be attached as supplemental information.

Progress Photographs

Photographs will be taken during construction of the preferred Remedial Action Alternative to document key activities and serve as a means to record progress.

Dust Monitoring

Dust control measures will be implemented as specified in **Section 3.2.7.2**. Air/dust monitoring will be implemented as described in **Section 3.2.7.3**.

Collection of Environmental Media Samples

All soil, sediment and groundwater samples will be collected, preserved, and shipped under chain-of-custody in accordance with standard operating procedures and laboratory analytical method protocols.

3.3.3 Routine Monitoring and Reporting

Per 310 CMR 40.0874(3)(d)(3), the OMM plan shall include specification of the type, frequency and duration of monitoring, and testing or inspections to ensure and confirm that the Remedial Action Alternative performs as designed. Since the preferred remedial alternative does not have any active systems or involve treatments, performance-related inspections are not required. Instead, achievement of the remedial goals will be confirmed by the following inspections and documentation.

Revetment Data Collection

VHB's LSP representatives and engineers will be present to periodically check on the progress of the revetment and observe that the design is followed and properly implemented. If deviations to the design are required during the implementation of the preferred Remedial Action Alternative, these will be noted in the Phase IV Final Inspection Report/Completion Statement.

Project Reporting

VHB's staff including LSP representatives will be responsible for verifying the implementation of the Phase IV RIP. When the preferred Remedial Action Alternative has been completed, an As-Built Construction Report and Phase IV Completion Statement will be prepared.

3.3.4 Emergency Procedures

Should visually impacted soil be encountered that deviates from known conditions, VHB personnel will screen soil using a photoionization detector (PID) and/or X-ray fluorescence (XRF) unit for screening contaminants of concern. Soil requiring management may be segregated based on field screening, olfactory and visual observations indicative of OHM impacts pending off-site disposal to an approved facility. Additional Emergency procedures are summarized in the Health and Safety Plan included as **Appendix E**.

3.4 Health and Safety Plan [310 CMR 40.0874(3)(e)]

The selected contractor for Phase IV implementation and other contractors as necessary, shall ensure that a worker health and safety plan is implemented to the extent required by the federal Occupational Safety and Health Administration (OSHA) under the Occupational Safety and Health Act of 1970, 29 U.S.C. 651, as amended, and 29 CRF 1910.120(e) and any other applicable federal, state and local law. The health and safety plan should be prepared by a Certified Industrial Hygienist or other qualified Individual appropriately trained in worker health and safety procedures. In addition, the contractor shall conduct all activities at the Disposal Site involving worker contact with contaminated media with OSHA 40-hour trained workers.

3.5 Required Permits and Approvals [310 CMR 40.0874(3)(f)]

The preferred Remedial Action Alternative is anticipated to require several permits as follows:

Agency Name	Permit / Review / Approval	Status
Federal		
US Army Corps of Engineers (USACE)	Section 404 Pre-Construction Notification	To be obtained
US Environmental Protection Agency (EPA)	National Pollution Discharge Elimination System (NPDES) permits for construction storm water and dewatering	May be obtained if required
State		
Executive Office of Energy and Environmental Affairs	Review under the Massachusetts Environmental Policy Act (MEPA)	Environmental Notification Form (ENF) to be filed
Massachusetts Department of Transportation (MassDOT)	Access Permit	To be obtained
Massachusetts Water Resources Authority (MWRA)	8M Permit	May be obtained if required
Department of Environmental Protection (DEP)	Chapter 91 License	To be obtained
	401 Water Quality Certification for intertidal dredging/fill	To be obtained

Agency Name	Permit / Review / Approval	Status
Local		
Weymouth Conservation Commission	Wetlands Protection Act Order of Conditions for work within jurisdictional resource areas. Includes review by the Department of Marine Fisheries (DMF)	To be obtained

In addition, all MCP response actions will be performed under the observation of the LSP or LSP's designated on-Site representatives.

3.6 Property Access Requirements [310 CMR 40.0874(3)(g)]

Calpine Fore River Energy Corporation owns the KCCRA. Therefore, Algonquin will confrm access requirements with Calpine to conduct this work. The Town of Weymouth holds a Conservation Restriction on the KCCRA and permission will be requested from the Town to implement the preferred Remedial Action Alternative. A MassDOT Access Permit will be required to access the KCCRA from Route 3A during construction. No property access issues are anticipated.

3.7 Public Involvement [310 CMR 40.0880 and 40.1403]

In accordance with Public Involvement Activities in Response Actions (310 CMR 40.1403) outlined in the MCP and the Public Involvement Plan (PIP) for the Disposal Site, notice of the availability of this Phase IV RIP is being submitted to the PIP mailing list, Chief Municipal Officer and the Weymouth Board of Health within one week of this submittal. Copies of these letters are included in **Appendix F**.

Copies of this Phase IV RIP have been submitted to the two document repositories for the Disposal Site, the Weymouth Health Department and the Tufts Public Library in Weymouth, Massachusetts, for public review. In addition, the document has been uploaded to the MassDEP database (eDEP) where it can be viewed and downloaded on-line.

In order to solicit public input, VHB and Algonquin will hold a public meeting in May 2024 for this Phase IV RIP. Notice of the Public Meeting will be distributed to the public at least 14 days prior to the meeting. An email notification will be sent to the PIP mailing list. A Legal Notice will be published in English and Chinese in the Boston Globe and the Patriot Ledger as required by the PIP which identifies the meeting date, location, and time of the public meeting. The notice will include the title of the document, where it is available for review, information about how to submit comments to VHB and Algonquin, and the length of the public comment period which will be at least 20 calendar days. Proof of publication of the Legal Notices will be submitted to MassDEP as required by the MCP.

VHB, on behalf of Algonquin, will prepare a summary of comments received along with responses to these comments. A copy of the comment response summary will be included with the final Phase IV RIP in the information repositories and on eDEP. VHB will provide an email copy of the comment response summary to the community members who submitted comments via email. VHB will also send notice of availability of the comment response summary to the PIP mailing list.

Per 310 CMR 40.1403(3)(a), notification will be provided to the Chief Municipal Officer and Board of Health at least three days prior to the commencement of field work related to implementation of the remedial alternative.

3.8 Greener Cleanups Considerations

Greener Cleanup considerations per the MCP Response Action Performance Standards [310 CMR 40.0191(3)(e)] include evaluations of the preferred Remedial Action Alternative's impact on total energy use, air pollutant emissions, water resources, waste materials, and land and ecosystems. Practices are then employed to reduce, to the extent feasible, impacts during Remedial Action Alternative implementation on these five core elements.

The preferred Remedial Action Alternative includes earthwork activities, and the primary goal of soil and sediment management is to limit soil and sediment export to the extent feasible and associated carbon emissions. Greener Cleanup Best Management Practices (BMPs) have been screened and evaluated for feasibility at the KCCRA. Greener Cleanup practices used at the KCCRA are summarized below:

- As discussed throughout this plan, on-site dredged sediment reuse will be attempted behind the revetment to reduce greenhouse gas emissions associated with transportation of sediment off-site.
- When possible, soil samples will be submitted to local, in-state laboratories for analysis in consideration of energy usage and emissions generated during travel.
- Local staff will be used for site visits and sampling activities in consideration of energy usage and emissions generated during travel.
- Trucks will turn off their engines when waiting more than 5 minutes to be loaded to minimize engine idling time.
- Erosion and sediment controls will be implemented to minimize temporary impacts to wetland resource areas.

4

Summary and Conclusions

This Phase IV RIP addresses the design, construction and implementation of the preferred Remedial Action Alternative for the KCCRA portion of the Disposal Site located at 82-90 Bridge Street in Weymouth, Massachusetts. RTN 4-26230 has been assigned to the Disposal Site by MassDEP. The summary and conclusions of this Phase IV RIP are as follows:

- The KCCRA is approximately 4 acres of the Disposal Site and includes two areas known as the Upland portion of the KCCRA and the Shore portion of the KCCRA.
- A Final Phase III RAP pertaining to the KCCRA was submitted to MassDEP in August 2023 presenting a preferred Remedial Action Alternative consisting of extending an existing stone revetment in the Upland portion of the KCCRA; the recording of an AUL; and excavation of an area of fill below MHW with off-Site disposal if necessary. In addition, this Phase IV RIP includes a new element of the Remedial Action Alternative, which consists of the placement of cobble to create a gradual surficial transition between the dredging area and the revetment. The successful implementation of the preferred Remedial Action Alternative will result in a Condition of No Significant Risk for the KCCRA.
- If the approvals and permits required to implement the preferred Remedial Action Alternative have been received, implementation of the preferred Remedial Action Alternative could begin in Fall 2025 and be completed by Winter 2025.
- In total, an estimated approximately 800 cubic yards of soil and sediment may require management (including export) as part of the preferred Remedial Action Alternative.
- The implementation of the preferred Remedial Action Alternative will minimize any impacts to surrounding sensitive receptors. A dust monitoring program and site-specific health and safety plan will be implemented during construction. An erosion and sedimentation control program will be implemented to minimize temporary impacts to wetland resource areas during the construction phase of the Remedial Action Alternative.
- The LSP Opinion and certifications required by the MCP are provided on the electronic BWSC-108 transmittal form submitted to MassDEP via eDEP concurrent with this document.

5

References/Informational Sources

Edison Electric, 1922. License No. 276, *To Build and Maintain Pile and Timber Bulkheads, Build Pile Wharf, Fill Solid and Dredge*, recorded as Book 1542 Page 103, Document No. 15037, dated December 15, 1922.

MassGIS, 2024. Massachusetts Geographic Information Systems (MassGIS), Bureau of Waste Site Cleanup, Site Scoring Map, March 21, 2024.

TRC, 2022a. Final Phase II Comprehensive Site Assessment Report: 54-90 Bridge Street, Weymouth, MA, Release Tracking Number 4-26230, January 2022.

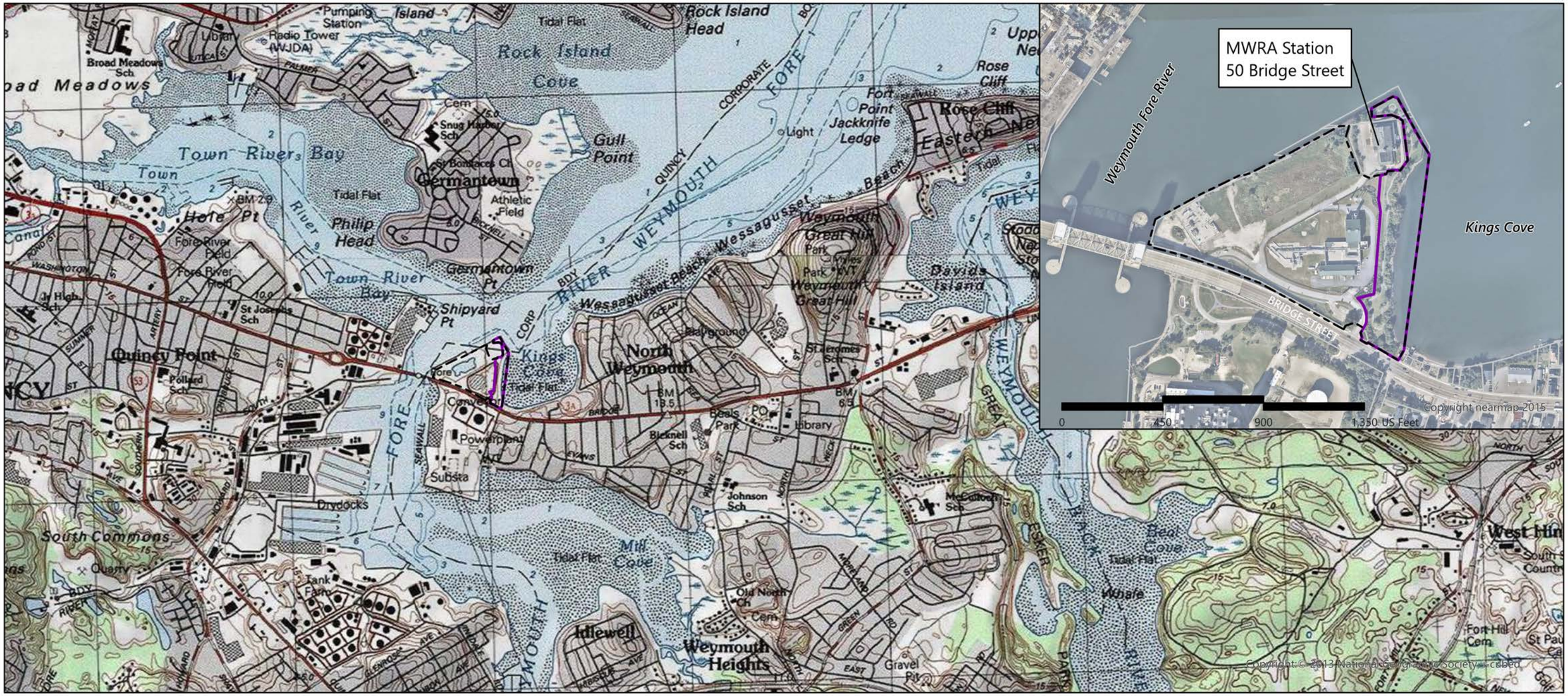
TRC, 2022b. Final Partial Permanent Solution with Conditions Statement: 6, 54 & 56 Bridge Street, Weymouth, MA, Release Tracking Number 4-26230, August 2022.

TRC, 2023. Final Phase III Remedial Action Plan: Kings Cover Conservation Restriction Area: 82-90 Bridge Street, Weymourth, Massachusetts, Release Tracking Number 4-26230, August 2023.

Figures

Figure 1: Site Location and Local Area Map

Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



Source: USGS Topo Map, NearMap Imagery

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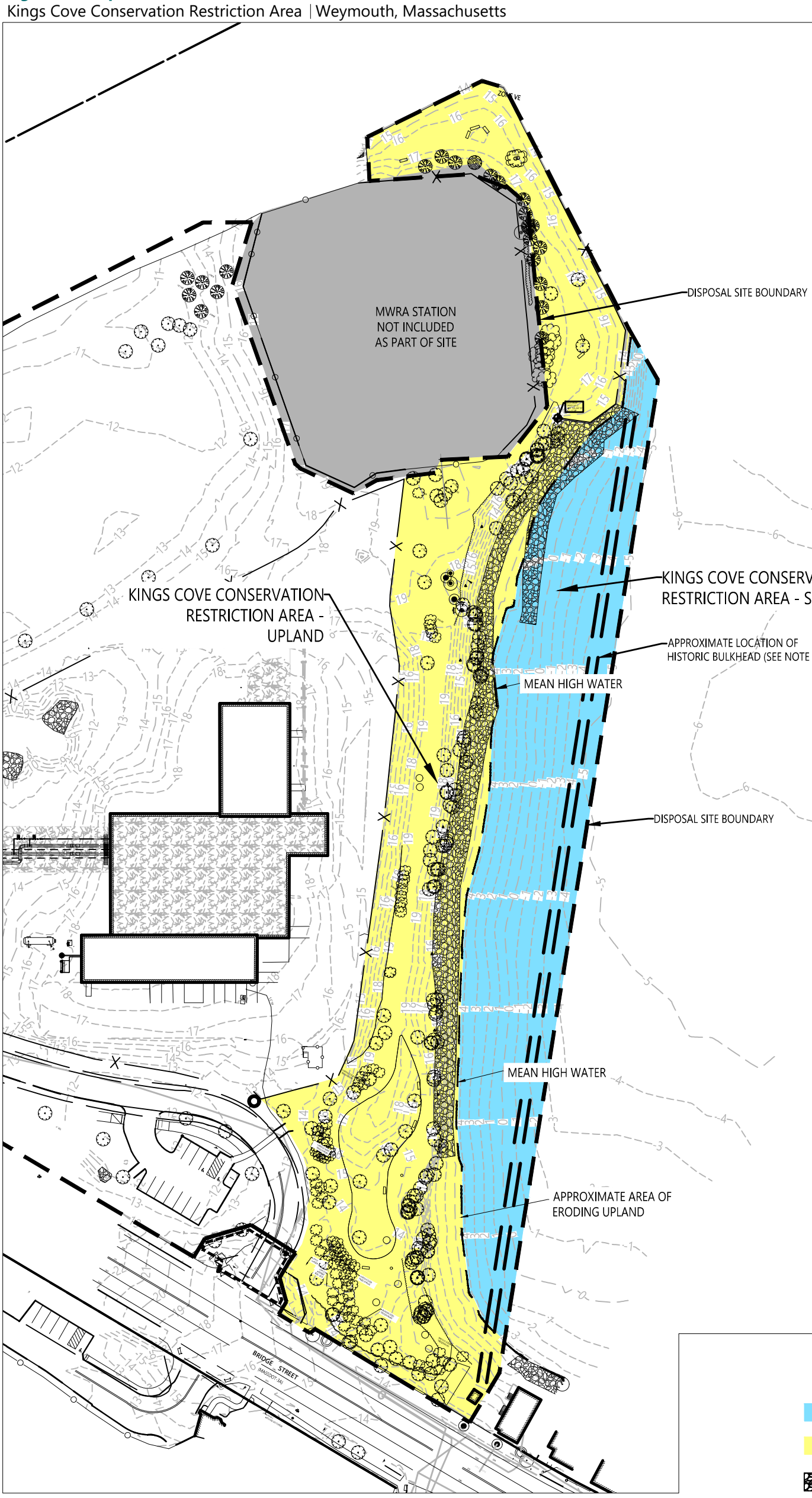
Figure 2 - Disposal Site Plan
Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



0 25 50 100 Feet

Record Owner

ALGONQUIN GAS TRANSMISSION, LLC
A TEXAS LIMITED LIABILITY COMPANY
5400 WESTHEIMER COURT
HOUSTON, TX 77056
BOOK 36146 PAGE 163
PARCEL G–1
PARCEL G–2
LOT B–1
PARCEL AQ 1–A
PARCEL AQ 1–B

General Notes

1) BASEMAP WAS PREPARED FROM A COPY OF A PLAN ENTITLED "ATLANTIC BRIDGE WEYMOUTH COMPRESSOR STATION EXISTING CONDITIONS" PRPEPARED BY VHB FOR ENBRIDGE OF HOUSTON TEXAS, DATED 2020 ORIGINAL SCALE 1"= 60 FT., DWG. NO BB–A–2000.

2) THE PROPERTY LINES SHOWN ON THIS PLAN ARE A COMBINATION OF FIELD EVIDENCE, RECORD PLANS GIS.

3) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE THE RESULT OF AN ON THE GROUND SURVEY PERFORMED IN AUGUST 2014 AND SUPPLEMENTED IN DECEMBER OF 2020.

4) HORIZONTAL DATUM IS BASED ON UTM 19 PROJECTIONS, NAD 1983. VERTICAL DATUM IS BASED ON GPS OBSERVATION IN NAVD 88.

5) BULKHEAD WAS DIGITIZED FROM A DWG. ACCOMPANYING LICENSE NO. 936, DATED AUGUST 7, 1928, RECORDED IN BOOK 1811, PAGE 39; TO MAINTAIN, AS NOW BUILT, BULKHEADS, PILE WHARVES, SIX PILE DOLPHINS, INTAKE WELLS AND A DISCHARGE FLUME, AND SOLID FILLING, AS PLACED, AND TO BUILD AND MAINTAIN ADDITIONAL BULKHEADS AND PLACE ADDITIONAL FILLING. THIS LICENSE, SO FAR AS IT RELATES TO CERTAIN OF THE STRUCTURES ALREADY BUILT AND TO FILLING IN PLACE, IS GRANTED TO RECTIFY ANY DISCREPANCY BETWEEN WORK ACTUALLY DONE AND WORK DESCRIBED IN LICENSES PREVIOUSLY GRANTED: LICENSE NO 177 (1921); LICENSE NO 276 (1922); LICENSE NO 394 (1924) AND LICENSE NO 710 (1926). ORIGINAL SCALE 1"=300FT

Legend

- KINGS COVE CONSERVATION RESTRICTION AREA - SHORE
- KINGS COVE CONSERVATION RESTRICTION AREA - UPLAND
- RIP RAP
- TREE LINE
- 2 — TOPOGRAPHIC BATHYMETRIC CONTOURS
- APPROX. LOCATION OF HISTORIC BULKHEAD
- DISPOSAL SITE BOUNDARY
- MASS. DOT PARCEL
- EOP — EDGE OF PAVEMENT
- CC — CONCRETE CURB
- VGC — VERTICAL GRANITE CURB
- SGE — SLOPED GRANITE EDGE
- BB — BITUMINOUS BERM
- BC — BITUMINOUS CURB
- CHAIN LINK FENCE

Figure 3: MassDEP Phase I Site Assessment Map

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

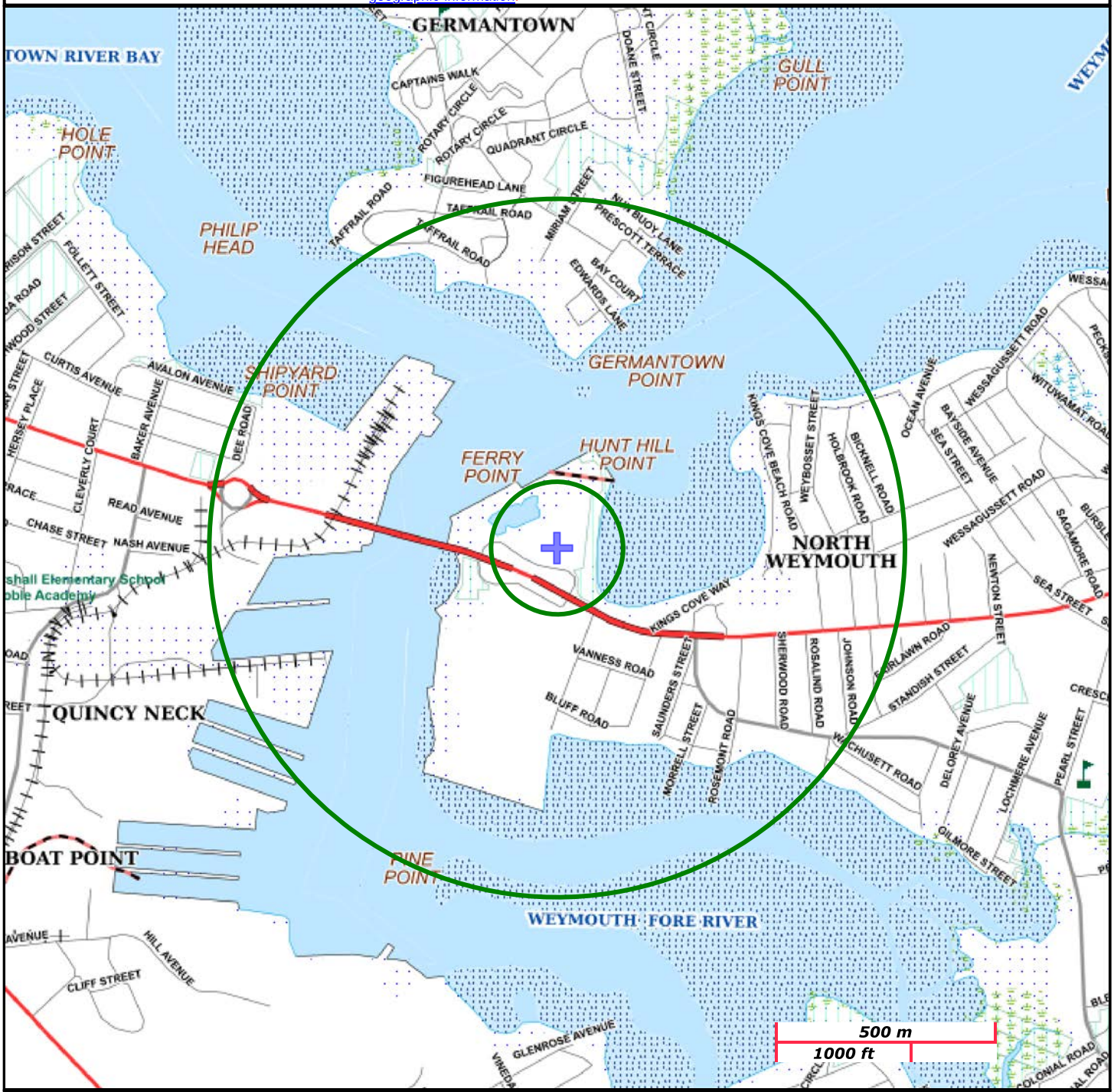
Site Information:

80 BRIDGET STREET WEYMOUTH, MA

NAD83 UTM Meters:
4678776mN , 338029mE (Zone: 19)
April 2, 2024

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

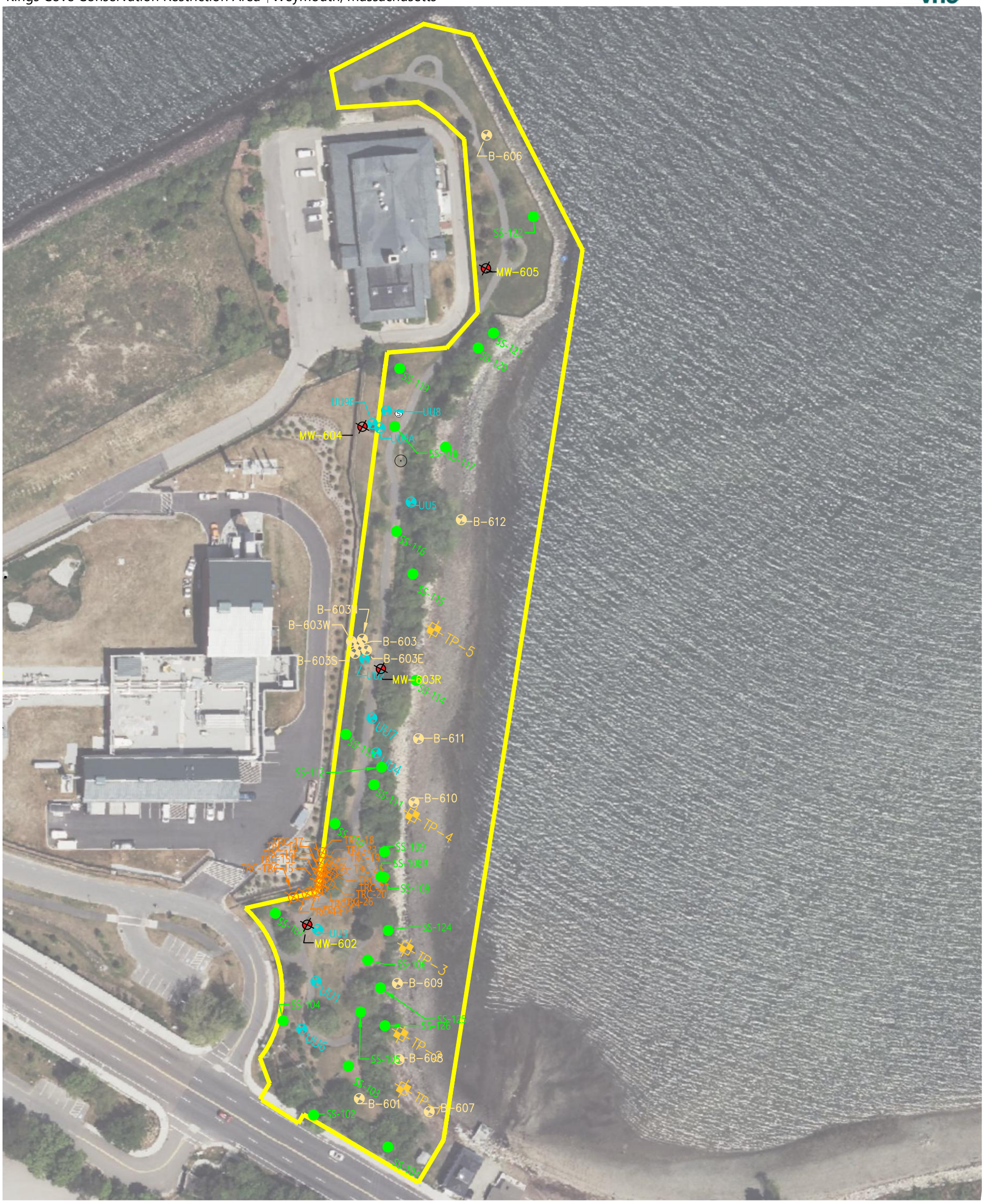
Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

Figure 4 - Site Investigations Plan
Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



General Notes

1. THE PROPERTY LINES SHOWN ON THIS PLAN ARE A COMBINATION OF FIELD EVIDENCE, RECORD PLANS AND GIS.
2. THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE THE RESULT OF AN ON THE GROUND SURVEY PERFORMED IN AUGUST 2014 AND SUPPLEMENTED IN JUNE OF 2020.
3. HORIZONTAL DATUM IS BASED ON UTM 19 PROJECTIONS, NAD 1983. VERTICAL DATUM IS BASED ON GPS OBSERVATION IN NAVD 88.

Legend

- 2016, 2019 & 2020 BORING/MONITORING WELL LOCATION
- 2020 SURFACE SOIL SAMPLE LOCATION
- 2020 BORING LOCATION
- 2020 UNDERGROUND UTILITY SAMPLE LOCATION
- 2020 IMMEDIATE RESPONSE ACTION SURFACE SOIL SAMPLE LOCATIONS
- 2020 TEST PIT LOCATION
- KCCRA BOUNDARY

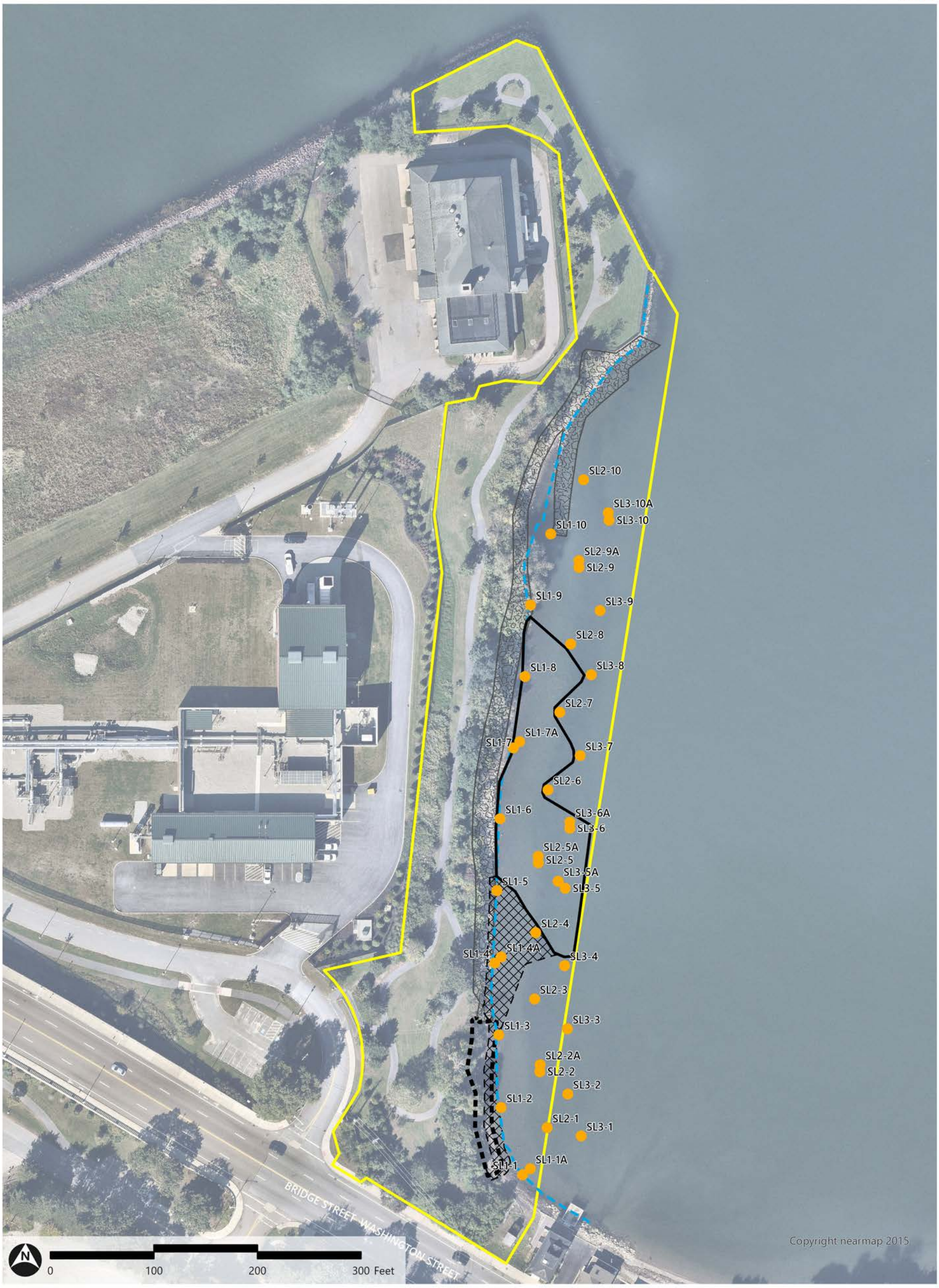
Figure 5: Fill Below MHW Sampling Locations

Kings Cove Conservation Restriction Area | Weymouth, Massachusetts

Source: NearMap Imagery, MassDOT Roads, TRC July 2023 Phase II Remedial Action Plan

Figure 6: Remedial Action Alternative Location

Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



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Source: NearMap Imagery, MassDOT Roads, TRC July 2023 Phase II Remedial Action Plan

Appendix A: List of Acronyms

AET	Apparent Effects Threshold
AST	Aboveground Storage Tank
AUL	Activity and Use Limitation
BWSC	Bureau of Waste Site Cleanup
CSA	Comprehensive Site Assessment
CSM	Conceptual Site Model
ERC	Ecological Risk Characterization
IH	Imminent Hazard
IRA	Immediate Response Action
ISI	Initial Site Investigation
KCCRA	Kings Cove Conservation Restriction Area
LNAPL	Light Non-aqueous Phase Liquid
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MHW	Mean High Water
MWRA	Massachusetts Water Resources Authority
O&M	Operations & Maintenance
OHM	Oil and/or Hazardous Materials
PAHs	Polycyclic Aromatic Hydrocarbons
RAM	Release Abatement Measure
RC	Reportable Concentrations
RIP	Remedy Implementation Plan
RTN	Release Tracking Number
UST	Underground Storage Tank

Appendix B: Kings Cove Conservation Restriction Area Conservation Restriction

Bk 26454 Pg446 #26376
03-17-2009 @ 03:16p

CONSERVATION RESTRICTION

RECEIVED AND RECORDED
NORFOLK COUNTY
REGISTRY OF DEEDS
DEDHAM, MA
CERTIFY
William P O'Donnell
WILLIAM P. O'DONNELL, REGISTER

I. Grantor Clause

FORE RIVER DEVELOPMENT, LLC, a Delaware limited liability company, being the sole owner, for its successors and assigns (the "Grantor") having an address c/o The Schrafft Center, 529 Main Street, Suite 605, Charlestown, MA 02129, acting pursuant to Sections 31, 32 and 33 of Chapter 184 of the General Laws, hereby grants, with QUITCLAIM COVENANTS, to the **TOWN OF WEYMOUTH**, acting by and through its Conservation Commission pursuant to Chapter 40, Section 8C, its permitted successors and assigns (the "Grantee"), for one dollar ($1.00) and other consideration in perpetuity and exclusively for conservation purposes, the following described Conservation Restriction on two (2) parcels of land located in the Town of Weymouth, Massachusetts, constituting of approximately 3.9 acres, said parcels being shown as the Lovell's Grove Parcel (the "Lovell's Grove Parcel") which consists of approximately 1.0 acres and the King's Cove Parcel (the "King's Cove Parcel) which consists of 2.9 acres on the Plan attached hereto as Exhibit A and as more particularly described on Exhibit A-1 attached hereto (the Lovell's Grove Parcel and the King's Cove Parcel are collectively referred to as the "Premises"). For Grantor's title see deed of Sithe Edgar LLC dated January 31, 2001 and filed with the Norfolk Registry District of the Land Court as Document No. 877121. The Premises are part of the overall premises described in such deed and are known as Fore River Station.

II. Background

Grantor has developed, and now operates a 775 megawatt gas and oil fired electrical generating plant (the "Generating Facilities") at Fore River Station. In connection with the permitting of the Generating Facilities, and as a condition of the approval of the Generating Facilities by the Energy Facilities Siting Board of the Commonwealth of Massachusetts, Grantor entered into a certain Agreement with the Town of Weymouth dated as of July 27, 1999 (the "Host Community Agreement").

Pursuant to Section 2.10 of such Host Community Agreement, Grantor agreed, as a portion of its mitigation obligations contained in its final environmental impact report under the Massachusetts Environmental Policy Act, to (a) build certain public amenities on the Lovell's Grove Parcel and the King's Cove Parcel and (b) to convey, pursuant to this Conservation Restriction, perpetual access to members of the public over the Premises, upon the terms and conditions hereinafter set forth.

Sherin and Lodgen LLP
101 Federal Street
Boston, MA 02110
Attn: Bethany Bartlett, Esq.

III. Additional Grant of Rights

Grantor also grants to Grantee and to members of the general public a perpetual easement to utilize, for motor vehicular access to the Premises, that portion of Fore River Station labeled as "Access Roadway" on the Plan attached hereto as Exhibit A. In addition, Grantor also grants to Grantee and to members of the general public the perpetual right and easement to utilize, for the parking of motor vehicles in connection with the access to the Premises, the parking areas (the "Parking Areas") labeled as Lovell's Grove Parking Area and King's Cove Parking Area on the Plan attached hereto as Exhibit A. Likewise, Grantor also grants to Grantee and to members of the general public the perpetual right and easement to utilize, for pedestrian access to the Premises, or between the two parcels composing the Premises, those certain pedestrian walkways located adjacent to the Access Roadway and connecting the Lovell's Grove Area to the King's Cove Area and labeled as the "Pedestrian Walkways" on the Plan attached hereto as Exhibit A. The foregoing additional grant of rights in the Access Roadway, Parking Areas and Pedestrian Walkways (are collectively, the "Access Rights") are conveyed subject to the right of Grantor to relocate, reconfigure, or alter any of the Access Rights as long as following such relocation, reconfiguration, or alteration, the Grantee and the general public still retain comparable vehicular, pedestrian, and parking rights for the utilization of the Premises.

IV. Purposes

This Conservation Restriction is defined in and authorized by Sections 31-33 of Chapter 184 of the General Laws and otherwise by law. The purpose of this Conversation Restriction is to assure that the Premises will be maintained in its current condition as set forth in baseline documentation in perpetuity and for conservation and passive recreational purposes, and to prevent any use or change that would materially impair or interfere with its conservation, recreation, and preservation values. The Premises, comprised of approximately 2.9 acres of land, contains unusual, unique and outstanding scenic and environmental qualities, including scenic views of the Fore River and opportunities for passive, recreation, including fishing, hiking, walking, jogging, picnicking, and bicycling the protection of which and the access thereto granted hereunder will benefit the public.

V. Prohibited Acts and Uses, Exceptions Thereto, and Permitted Uses

A. Prohibited Acts and Uses. Subject to the exceptions set forth herein, below, the Grantor will neither perform nor allow others to perform the following acts and uses which are prohibited on above, or below the Premises:

1. Constructing, placing or allowing to remain any temporary or permanent of any building, tennis court, landing strip, mobile home, swimming pool, fences, asphalt or concrete pavement, sign, fence, billboard or other

advertising display, antenna, utility pole, tower, conduit, line or other temporary or permanent structure or facility on, below, or above the Premises;

2. Mining, excavating, dredging, or removing from the Premises of soil, loam, peat, gravel, sand, rock or other material resource or natural deposit or otherwise make topographical changes to the area;

3. Placing, filling, storing or dumping on the Premises of soil, refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste or other substance or material whatsoever or the installation of underground storage tanks;

4. Cutting, removing or otherwise destroying trees, grasses or other vegetation except as provided in Paragraph B (4) and (6) below.

5. Activities detrimental to drainage, flood control, water conservation, water quality, erosion control, soil conservation, or archeological conservation.

6. The use, parking or storage of vehicles, including, without limitation, cars, trucks, snowmobiles, motorcycles, mopeds, trail bikes, all terrain vehicles, or any other motorized vehicle of any kind except vehicles necessary to public safety (i.e., fire police, ambulance or other government officials) on carrying out their lawful duties.

7. Use of the Premises, or any of the Access Rights, after sunset and before sunrise except as provided in Paragraph (B)(5) below.

8. Conveyance of a part or a portion of the Premises alone, or division or subdivision of the Premises (as compared to conveyance of either the Lovell's Grove Parcel or the King's Cove Parcel in their entirety which shall be permitted) and no portion of the Premises may be used towards building or development requirements at Fore River Station other than those that are the subject of the permits referred in Section II above.

9. The use of the Premises for more than a deminimus commercial recreation, business or industrial use.

10. Any other use of the Premises or activity, thereon which is inconsistent with the purposes of this Conservation Restriction or which would materially impair significant conservation interests unless necessary for the protection of the conservation interests that are the subject of this Conservation Restriction.

B. Exceptions to Otherwise Prohibited Acts and Uses. The following acts and uses otherwise prohibited in Section V (A) above are permitted

on the Premises but only if such acts or uses do not materially impair the purpose of this Conservation Restriction or other significant conservation interests.

1. Use of vehicles, as may be required for (a) the maintenance of the pedestrian walkways constructed on the Premises, (b) the maintenance, cutting, trimming, fertilizing, planting, or replacement of any shrubs, trees, or other vegetation on the Premises, or (c) the removal of any trash or other debris deposited in the trash cans or other receptacles located on the Premises.

2. Excavation and removal from the Premises of soil, gravel or other mineral resources or natural deposit as may be incidental to the installation or maintenance or removal of underground tanks, septic systems, utilities, and other underground structures, subject to Section VII below, or to the maintenance of good drainage, soil conservation practices or to other permissible use of the Premises;

3. The placing of fences that do not interfere with the recreational purposes of this restriction and which are necessary to separate the Premises from the Generating Facilities or any gas, water, oil, electrical, sewer, or other lines, pipes, conduits, or utilities, appurtenant to or now or hereafter serving the Generating Facilities or other portions of Fore River Station;

4. The cutting of grass and selective cutting of trees for fire protection, trail and pathway maintenance, or otherwise to preserve the present condition of the Premises, including vistas;

5. Erection of signs by the Grantor or Grantee identifying the Grantee as holder of the restriction and to educate the public about the public access rights enumerated herein and the right to impose reasonable rules and regulations as Grantee shall deem necessary or desirable in its reasonable judgment including the right to permit use of the Premises after sunset and before sunrise; and

6. the right of Grantee to perform any of its required maintenance obligations as more particularly described in Section VI hereof.

C. **Permitted Acts and Uses.** All acts and uses not prohibited by subparagraphs A and B are permissible, but only if such uses and activities do not materially impair the purpose of this Conservation Restriction or other significant conservation interests.

VI. Maintenance and Security Obligations

A. Maintenance Obligations of Grantee. Effective upon the execution of this Conservation Restriction by Grantee, Grantee shall thereafter shall be responsible for all maintenance, repair, and replacement obligations at the Premises including, without limitation, the following:

1. The maintenance, repair, and replacement, including the repaving, if necessary, of all of the pedestrian walkways located within the Premises;

2. The maintenance, cutting, trimming, fertilizing, planting, replanting, or replacement of any grass, flowers, shrubs, trees, bushes or other vegetation now located within the Premises;

3. The repair, maintenance, and replacement, if necessary, of any and all benches, picnic tables, and trash receptacles located within the Premises;

4. The removal of any trash or other debris deposited in the trash cans or the receptacles or otherwise deposited on any portion of the Premises;

5. The maintenance and repair (but not the replacement of or other action of a capital nature) of any bulkheads, seawalls, rip-rap, fences, or other physical features on the border of any portion of the Premises including, without limitation, the granite seating wall and the concrete ramp for emergency water access located at the Lovell's Grove Parcel; and

6. The maintenance of any signs, trail markers, or other visual markers located within the Premises.

B. Maintenance Obligations of Grantor. Grantor shall continue to be responsible for the maintenance, repair, and replacement, if necessary, of the Access Roadway, the Parking Areas, and the Pedestrian Walkways and the stormwater management system (the "Stormwater Management System"), whether such Stormwater Management System is located within Fore River Station or the Premises; however, Grantor shall have no responsibility for any pedestrian walkways located within the Premises.

C. Security. Grantee shall be responsible for the policing of and otherwise providing security to the Premises and Grantor shall have no liability for the policing, security, or any other activities occurring on such Premises.

VII. Reservations by Grantor

The grant of the Conservation Restriction and the Access Rights over the Access Roadway, Parking Areas, And Pedestrian Walkway is made subject to all existing matters of record enumerated on Certificate of Title No. 159129 and filed with the Norfolk Registry District of the Land Court including without limitation, those matters specifically delineated on Exhibit B attached hereto. Furthermore, Grantor hereby reserves the right to repair, maintain, restore, replace or upgrade any existing underground pipes, lines, conduits, or utilities serving the Generating Facilities or other portions of Fore River Station including without limitation, those items specified on Exhibit C attached hereto. Grantor also reserves the right to install additional underground utilities, conduits, pipes, or other appurtenances beneath the Lovell's Grove Area portion of the Premises subject, however, to the limitations and restoration obligations set forth on Exhibit D attached hereto.

VIII. Massachusetts Highway Department Matters

A portion of the Lovell's Grove Area of the Premises is subject to a taking by the Massachusetts Highway Department for the maintenance of a temporary bridge over the Weymouth Fore River, which taking is more particularly referenced as Document No. 1002678 filed with the Norfolk Registry District of the Land Court. It is anticipated that the temporary bridge referenced in such taking will be in place for a period of up to ten to fifteen years. Following such time, it is anticipated that the Massachusetts Highway Department will construct a new bridge over the Weymouth Fore River and demolish the current temporary bridge structure. Following such demolition of the temporary bridge, portions of the Lovell's Grove area of the Premises will need to be restored to their current condition. Grantor has obtained the agreement of the Massachusetts Highway Department to perform such restoration at the time such temporary bridge structure is demolished (the "Restoration Obligation"). Grantor has provided Grantee with a copy of the written undertaking of Massachusetts Highway Department to perform such Restoration Obligation and Grantor hereby assigns to Grantee all Grantor's right, title, and interest in and the right to enforce such Restoration Obligation.

IX. Legal Remedies of the Grantee

A. Legal and Injunctive Relief

The rights hereby granted shall include the right to enforce this Conservation Restriction by appropriate legal proceedings and to obtain injunctive and other equitable relief against any violations, including without limitation, relief requiring restoration of the Premises to its condition prior to the time of the injury complained of (it being agreed that the Grantee may have no adequate remedy at law) and shall be in addition to and not in limitation of any other rights and remedies available to the Grantee, for the enforcement of this Conservation Restriction. Grantee shall attempt to resolve issues

concerning violations through negotiations with Grantor prior to resorting to legal means. In the event of a dispute over the boundaries of the Conservation Restriction, Grantor shall pay for a survey and permanent monumentation of the boundaries.

B. Grantee's Disclaimer of Liability

By its acceptance of this Conservation Restriction, the Grantee does not undertake any liability or obligation, except as expressly set forth herein, relating to the condition of the Premises not caused by Grantee or its agents or pertaining to compliance with and including but not limited to, hazardous materials, zoning, environmental laws and regulations, or acts which are not caused by the Grantee or anyone acting under the direction of the Grantee. (The limited liability provisions of M.G.L. Ch. 21, Section 17C shall apply to the easements and rights granted hereunder.) Likewise, the Grantor, by the grant of this Conservation Restriction and the related Access Rights hereinabove described has made such grants and has allowed the general public access without fee or other charge; consequently, the Grantor shall also receive the benefit of the limited liability provisions of M.G.L. Ch. 21, Section 17C.

C. Severability Clause

If any provision of this Conservation Restriction shall to any extent be held invalid, the remainder shall not be affected.

D. Non-Waiver

Enforcement of the terms of this Conservation Restriction shall be at the discretion of Grantee. Any election by the Grantee as to the manner and timing of its right to enforce this Conservation Restriction or otherwise exercise its rights hereunder shall not be deemed or construed to be a waiver of such rights.

E. Acts Beyond the Grantor's Control

Nothing contained in this Conservation Restriction shall be construed to entitle the Grantee to bring any actions against the Grantor for any injury to or change in the Premises resulting from causes beyond the Grantor's control, including but not limited to fire, flood, storm and earth movement, or from any prudent action taken by the Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Premises resulting from such causes. The parties to this Conservation Restriction agree that in the event of damage to the Premises from acts beyond the Grantor's control, that if it is desirable that the Premises be restored, the parties will cooperate in attempting to restore the Premises if feasible.

X. Access

A. Public Access. The Grantor grants to the Grantee and the general public an easement to pass and repass upon the Premises for all passive recreational purposes including, without limitation, bicycling, running, walking, and fishing.

B. Access for Compliance Monitoring. Grantor grants to Grantee access pursuant to Section 32 of Chapter 184 of the General Law which provides that "such a Conservation Restriction...shall entitle representations of the holder to enter the land in a reasonable manner and at reasonable times to assure compliance."

XI. Assignability

A. Running of the Burden

The burdens of this Conservation Restriction shall run with Grantor in perpetuity, and shall be enforceable against the Grantor and the successors and assigns of the Grantor holding any interest in the Premises.

B. Execution of Instruments

The Grantee is authorized to record or file any notices or instruments appropriate to assuring the perpetual enforceability of the Conservation Restriction; the Grantor on behalf of themselves and their successors and assigns appoint the Grantee their attorney-in-fact to execute, acknowledge and deliver any such instruments on their behalf. Without limiting the foregoing, the Grantor and their successors and assigns agree themselves to execute any such any such instruments upon request.

C. Running of the Benefit

The benefits of this Conservation Restriction shall be in gross and shall not be assignable by the Grantee, except in the following instances and from time to time:

(i) as a condition of any assignment, the Grantee requires that the purpose of this Conservation Restriction continue to be carried out and

(ii) the assignee, at the time of assignment, qualifies under Section 170(h) of the Internal Revenue Code of 1986, as amended, and applicable regulations thereunder, and under Section 32 of Chapter 184 of the General Laws as an eligible donee to receive this Conservation Restriction directly.

(iii) The grantee complies with the provisions required by Article 97 of the Amendments of the State Constitution.

XII. Subsequent Transfers:

The Grantor agrees to incorporate by reference the terms of this Conservation Restriction in any deed or other legal instrument by which they divest themselves of any interest in all or a portion of the Premises including a leasehold interest and to notify the Grantee within 20 days of such transfer. Failure to do so shall not impair the validity or enforceability of this Conservation Restriction.

The Grantor shall be liable to only for violations occurring during or his or her ownership, or for any transfer, if in violation. Liability for any acts or omissions occurring prior to any transfer and liability for any transfer if in violation of this Conservation Restriction shall survive the transfer. Any new owner shall cooperate in the restoration of the Premises or removal of violations caused by prior owner(s) and may be held responsible for any continuing violations.

XIII. Estoppel Certificates:

Upon request by the Grantor, the Grantee shall within twenty (20) days execute and deliver to the Grantor any document, including an estoppel certificate, which certifies the Grantor's compliance with any obligation of the Grantor's contained in this Conservation Restriction.

XIV. Effective Dates:

This Conservation Restriction shall be effective when the Grantor and the Grantee have executed it, the administrative approvals required by Section 32 of Chapter 184 of the General Laws have been obtained, and it has been recorded, or if registered land, it has been registered.

XV. Recordation:

The Grantor shall file this instrument in timely fashion in the Norfolk Registry District of the Land Court.

XVI. General Provisions:

A. Controlling Law

The interpretation and performance of this Conservation Restriction shall be governed by the laws of the Commonwealth of Massachusetts.

B. Liberal Construction

Any general rule of construction to the contrary notwithstanding, this Conservation Restriction shall be liberally construed in favor of the grant to effect the purpose of this Conservation Restriction and the policy and purposes of Massachusetts General Laws Chapter 184, Sections 31-33. If any provision in this instrument is found to be ambiguous, any interpretation consistent with the purpose of this Conservation Restriction that would render the provision valid shall be favored over any interpretation that would render it invalid.

C. Entire Agreement

This instrument sets forth the entire agreement of the parties with respect to this Conservation Restriction and supersedes all prior discussions, negotiations, understandings or agreements relating to the Conservation Restriction, all of which are merged herein.

XVII. Miscellaneous:

A. Pre-existing Public Rights

Approval of this Conservation Restriction pursuant to M.G.L. Ch. 184, Section 32 by any municipal officials and by the Secretary of Energy and Environmental Affairs is not to be construed as representing the existence of non-existence of any pre-existing rights of the public, if any, in and to the Premises, and any such pre-existing rights of the public, if any, are not affected by the granting of this Conservation Restriction.

B. Subordination of Mortgage

The Grantor shall record at the Norfolk Registry District of the Land Court simultaneously with this Conservation Restriction all documents necessary to subordinate any mortgage, promissory note, loan, equity credit line, refinance assignment of mortgage, lease, financing statement or any other agreement which gives rise to a surety interest affecting the Premises.

Executed under seal this 13th day of August, 2007.

GRANTOR:

FORE RIVER DEVELOPMENT, LLC

Name: Paul Hamilton
Title: EVP FORE RIVER DEVELOPMENT, LLC AND AUTHORIZED SIGNATORY

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss

On this 13th day of August, 2007, before me, the undersigned notary, personally appeared the above-named Paul Hamilton (Grantor) of Fore River Development, LLC proved to me through satisfactory evidence of identification which was Personal Knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily.

Notary Public:
My commission expires:

DOUGLAS M. HENRY
Notary Public
Commonwealth of Massachusetts
My Commission Expires
September 6, 2013

ACCEPTANCE OF GRANT

The above Conservation Restriction was accepted by the Weymouth Conservation Commission this 15th day of August 2007.

John Thompson, Chairperson

COMMONWEALTH OF MASSACHUSETTS

Norfolk, ss.

On this 15th day of August, 2007, before me, the undersigned notary, personally appeared the above-named John Thompson of Weymouth proved to me through satisfactory evidence of identification which was Drivers License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily.

Notary Public
My commission expires:

DOUGLAS M. HENRY
Notary Public
Commonwealth of Massachusetts
My Commission Expires
September 6, 2013

Approval by Secretary of Energy and Environmental Affairs
Commonwealth of Massachusetts

The undersigned, Secretary of the Executive office of Energy and Environmental Affairs of the Commonwealth of Massachusetts, hereby certifies that the foregoing Conservation Restriction to the Town of Weymouth, has been approved in the public interest pursuant to G.L. Ch. 184 sec. 32.

Secretary of Energy and Environmental Affairs — Date: 2/12/09

COMMONWEALTH OF MASSACHUSETTS

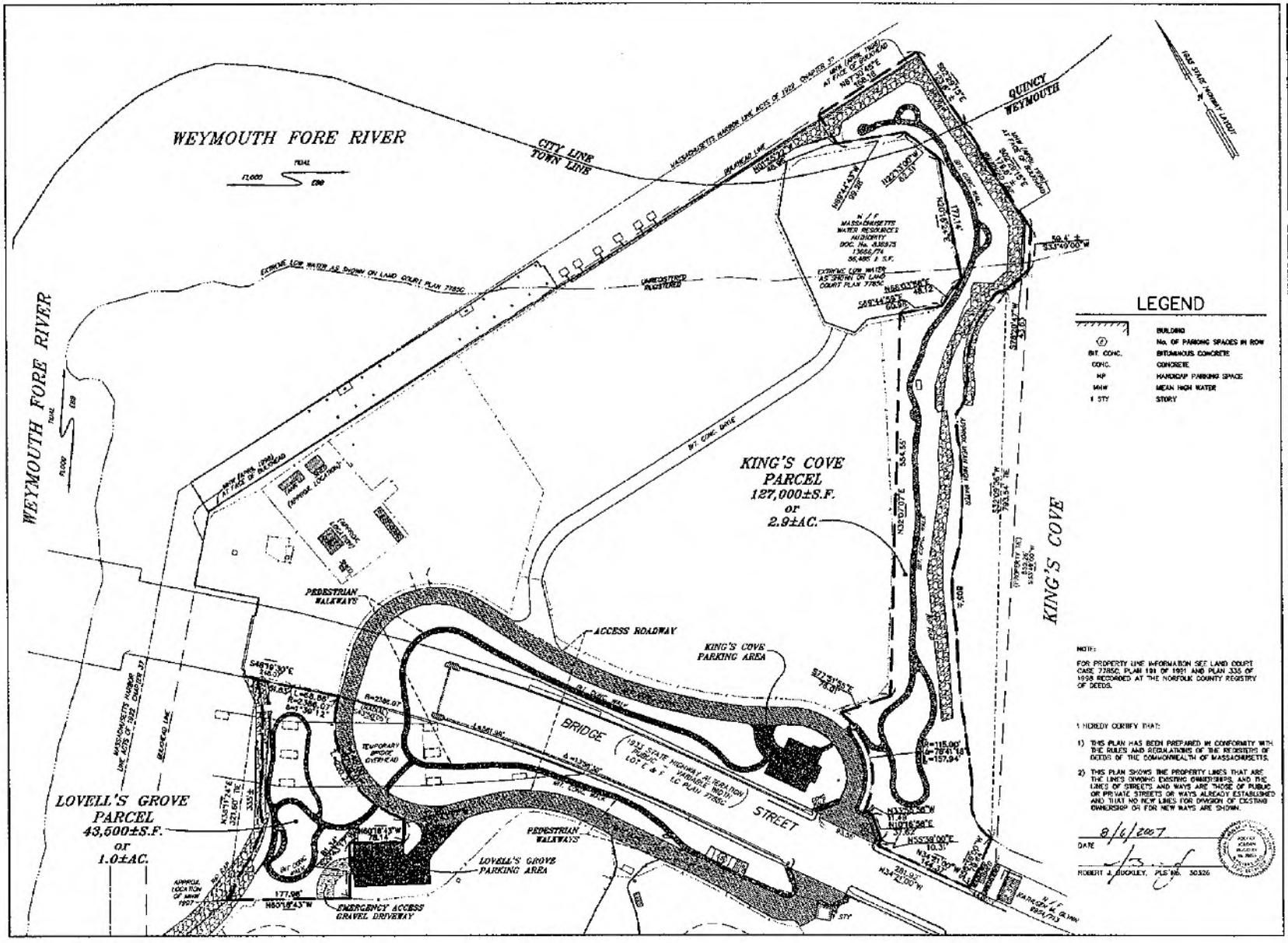
Suffolk, ss.

On this 12th day of Feb, 2009, before me, the undersigned notary, personally appeared the above-named Jack A. Bowles of Energy & Environmental Affairs proved to me through satisfactory evidence of identification which was personal knowledge of identity, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily.

Notary Public:
My commission expires: 12/15/2011

Exhibit A

PLAN OF PREMISES
AND
ACCESS RIGHTS



PREPARED FOR:
FORE RIVER DEVELOPMENT
9 BRIDGE STREET
NORTH WEYMOUTH, MA
02191

RECORD OWNER:
FORE RIVER DEVELOPMENT, LLC
LC Doc. No. 877121
LC Cert. No. 150129
Deed Book 14744 Page 439

See Certificate of Name Changes
LC Doc. No. 958304
LC Doc. No. 1015653

5			
4			
3			
2			
1			
0	8/6/2007	INITIAL ISSUE	
ISSUE	DATE	DESCRIPTION	
N/A	KEA	KEA	
FLD	CALC	DWN	CHKD

LOVELL'S COVE
KING'S COVE
CONSERVATION RESTRICTION AND EASEMENT PLAN

BRIDGE STREET
IN
WEYMOUTH, MA
(NORFOLK COUNTY)
AND
QUINCY, MA
(NORFOLK COUNTY)

PREPARED BY:
BEALS AND THOMAS, INC.
Civil Engineers • Landscape Architects
Land Surveyors • Planners • Wetland Scientists
Reservoir Corporate Center
144 Turnpike Road (Route 9)
Southborough, Massachusetts 01772
Tel.: 508-366-0560
Fax: 508-366-4391
(email) mail@btlweb.com
(website) http://www.btlweb.com

DATE: AUGUST 6, 2007
SCALE: 1"=50'

BT JOB NO. 1368.20
BT PLAN NO. 1368P001A-009
SHEET No. 1 OF 1

E-5

Exhibit A-1

LEGAL DESCRIPTION OF PREMISES

The following two parcels of land that comprise the Premises are shown on the plan entitled "Lovell's Cove King's Cove Conservation Restriction and Easement Plan" dated August 6, 2007, by Beals and Thomas, Inc., a copy of which is attached to this Conservation Restriction as Exhibit A.

LOVELL'S GROVE PARCEL

Beginning at a point at the northeast corner of the Lovell's Grove Parking Area as shown on said plan and thence running

NORTH 60° 16' 43" WEST by the Lovell's Grove Parking Area, 78.14 feet; thence turning and running

SOUTH 29° 43' 17" WEST by the same, 81.34 feet; thence turning and running

NORTH 60° 16' 43" WEST, 177.96 feet, to a point labeled "Approx. Location of MHW 1997"; thence turning and running

NORTHEASTERLY by Weymouth Fore River, 335 feet, more or less; thence turning and running

SOUTH 48° 19' 30" EAST by Bridge Street, 51.83 feet; thence continuing

SOUTHEASTERLY by the same, by a line having a radius of 2,386.07 feet, a distance of 68.86 feet; thence turning and running

SOUTHEASTERLY by the Access Roadway, by a line curving to the right having a radius of 145 feet, a distance of 220.26 feet; thence turning and running

SOUTH 29° 43' 17" WEST, 32.90 feet to the point of beginning

KING'S COVE PARCEL

Beginning at a point on the easterly side of Bridge Street and thence running

NORTH 34° 21' 00" WEST by Bridge Street, 144.37 feet; thence turning and running

NORTH 55° 39' 00" EAST by the Access Roadway, 10.31 feet; thence turning and running

NORTH 10° 16' 58" EAST by the same 37.62 feet; thence turning and running

NORTH 33° 55' 58" WEST by the same, 11.49 feet, thence turning and running

NORTHERLY by the same, by a line curving to the left having a radius of 115 feet, a distance of 157.94 feet; thence turning and running

SOUTH 77° 51' 55" EAST, 76.01 feet; thence turning and running

NORTH 32° 07' 07" EAST, 554.55 feet, to land now or formerly of Massachusetts Water Resources Authority; thence turning and running

SOUTH 69° 44' 59" EAST by the same, 60.98 feet; thence turning and running

NORTH 66° 03' 58" EAST by the same, 48.12 feet; thence turning and running

NORTH 20° 15' 24" EAST by the same, 177.14 feet; thence turning and running

NORTH 22° 13' 00" WEST by the same, 62.31 feet; thence turning and running

NORTH 69° 44' 43" WEST by the same, 99.28 feet; thence turning and running

NORTH 01° 55' 22" WEST to the Bulkhead Line, 48.96 feet; thence turning and running

NORTH 87° 30' 45" EAST, by the Bulkhead Line, 168.18 feet; thence turning and running

SOUTH 02° 29' 15" EAST by the same, 123.6 feet, more or less, thence continuing

SOUTH 02° 29' 15" EAST by the same, 179.6 feet, more or less, thence turning and running

SOUTH 33° 49' 00" WEST along King's Cove, 59.4 feet, more or less, thence turning and running

SOUTH 78° 20' 47" WEST by the same, 43.63 feet, thence continuing

SOUTHWESTERLY by the same, 805 feet, more or less; thence turning and running

SOUTH 55° 39' 00" WEST, 79.64 feet to the point of beginning.

Exhibit B

EXISTING TITLE MATTERS

1. Grant of Easement by Commonwealth of Massachusetts Department of Public Works to Boston Edison Company dated February 21, 1939 and filed with the Norfolk Registry District of the Land Court as Document No. 73615

2. Terms and provisions of License Agreement between Boston Edison Company and New England Power Company dated February 4, 1974 and filed with said Registry District as Document NO. 340847.

3. Terms and provisions of Cross Easement Agreement dated May 14, 1998 and filed with said Registry District as Document No. 793427, as amended.

4. Grant of easement to Algonquin Gas Transmission Company December 26, 2003 and filed with said Registry District as Document No. 958305.

5. Taking by the Massachusetts Water Resources Authority of Rights and Easements for Sewer purposed dated August 11, 1999 and filed with said Registry District as Document No. 836975.

6. Taking by the by the Massachusetts Water Resources Authority of Rights and Easements dated February 14, 2001 and filed with said Registry District as Document No. 876804.

7. Easements set forth in Grant to Massachusetts Electric Company and New England Telephone dated January 31, 2000 and recorded in Book 1414, Page 380 of the Norfolk County Registry of Deeds.

8. Notice of Irrevocable License by and between Boston Edison Company and Sithe Edgar LLC dated May 11, 200 and filed with said Registry District as Document No. 877119.

9. Taking for Highway Purposes by the Commonwealth of Massachusetts Department of Highways dated October 9, 2003 and filed with said Registry District as Document No. 1002678.

10. Grant of Easement to Boston Gas Company d/b/a Keyspan Energy Delivery New England dated August 16, 2005 and filed with said Registry District as Document No. 1082690.

Exhibit C

EXISTING UTILITIES, PIPES, ETC.,

1. 8" water line running from Quincy, through existing Boston Edison tunnel beneath Weymouth Fore River, through head house of tunnel on North side of Fore River Station, then running underground through the North side of Fore River Station, beneath the Massachusetts Highway Department Right of Way (Bridge Street) and then running to the Generating Facilities.

2. Fuel Oil Line running from Quincy, through existing Boston Edison tunnel beneath Weymouth Fore River, through head house of tunnel on North side of Fore River Station, then running underground through the North side of Fore River Station, beneath the Massachusetts Highway Department Right of Way (Bridge Street) and then running to the Generating Facilities.

3. Drainage System serving Lovell's Grove Area, Access Roadway and Parking Areas.

4. Emergency Access Gravel Driveway (as labeled on Exhibit A) to permit access, on an emergency basis, to and from the Generating Facilities over such driveway, which is located within the Lovell's Grove Parcel. As used herein, "an emergency basis" means (a) any access necessary for public safety by fire, police, ambulance or other government officials or (b) any access necessary to preserve labor relations at the Generating Facilities consistent with requirements of the National Labor Relations Board.

Exhibit D

RIGHT TO INITIAL ADDITIONAL UNDERGROUND UTILITIES, PIPES, ETC.

Grantor may install additional underground utilities, conduits, pipes or other appurtenances (collectively, the "New Utilities") beneath the Lovell's Grove Area portion of the Premises subject to the following conditions:

A. Grantor shall install any New Utilities beneath the surface, and at such depth and in such locations as to comply with all federal, state and local laws and regulations.

B. To the extent that it is necessary to disturb any of the surface of the Lovell's Grove Area in order to install the New Utilities, Grantor shall only use such portions of the Lovell's Grove Area as are necessary in order to effect such installation and shall thereafter promptly restore such surface area to the condition it was in prior to such installation.

C. Grantor shall notify Grantee at least fourteen (14) days prior to any installation of New Utilities and shall endeavor to schedule any such installation in a manner that minimizes, to the greatest extent practicable, any interference with the use of such Premises by the general public.

Norfolk County
Registry of Deeds

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Appendix C: Previous Investigation Data

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		B-601				B-603			B-603 E-5	B-603 N-5	B-603 S-5	B-603 W-5	B-606				B-607			
		Sample Name:		B-601 (0-1)	B-601 (1-3)	B-601 (3-5)	B-601(10-12)	B-603 (0-1)	B-603 (1-3)	B-603 (5-6)	SS-130 (0-1)	SS-128 (0-1)	SS-129 (0-1)	SS-131 (0-1)	B-606 (0-1)	B-606 (1-3)	B-606(6-8)	B-606(8-10)	B-607 (0-1)	B-607 (1-3)	B-607 (5-6)	B-607 (9-10)
		Current Sample Depth (ft.)		0-1 ft	1-3 ft	3-5 ft	10-12 ft	0-1 ft	1-3 ft	5-6 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	1-3 ft	6-8 ft	8-10 ft	0-1 ft	1-3 ft	5-6 ft	9-10 ft
		Sample Date:		01/12/2021	01/12/2021	01/12/2021	1/29/2021	01/12/2021	01/12/2021	02/01/2021	02/01/2021	02/01/2021	02/01/2021	02/01/2021	01/13/2021	01/13/2021	01/26/2021	01/26/2021	11/19/2020	11/19/2020	11/19/2020	11/19/2020
		S-1/GW-2	S-1/GW-3																			
VPH																						
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																						
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	7.20 U	**14.1**	8.25 U	7.91 U	7.58 U	**8.66**	7.90 U	NA	NA	NA	NA	7.33 U	**9.24**	**9.88**	7.93 U	7.47 U	7.56 U	**8.54**	7.45 U
	C19-C36 Aliphatics	3,000	3,000	7.20 U	**15.5**	**13.5**	7.91 U	7.58 U	7.90 U	7.90 U	NA	NA	NA	NA	7.33 U	**22.5**	**15.0**	7.93 U	**13.0**	**13.5**	**18.9**	7.45 U
	C11-C22 Aromatics	1,000	1,000	7.20 U	**58.4**	**44.1**	7.91 U	**11.5**	**31.5**	**20.2**	NA	NA	NA	NA	7.33 U	**31.9**	**30.2**	7.93 U	**24.2**	**20.1**	**25.7**	7.45 U
	Naphthalene	20	500	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	**0.424**	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	2-Methylnaphthalene	80	300	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Acenaphthylene	600	10	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Acenaphthene	1,000	1,000	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Fluorene	1,000	1,000	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Phenanthrene	500	500	0.360 U	**1.13**	**0.771**	0.396 U	0.379 U	**0.775**	0.395 U	NA	NA	NA	NA	0.366 U	**0.798**	**0.958**	0.397 U	0.373 U	**0.404**	0.379 U	0.372 U
	Anthracene	1,000	1,000	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Fluoranthene	1,000	1,000	0.360 U	**1.26**	**0.972**	0.396 U	0.379 U	**1.06**	0.395 U	NA	NA	NA	NA	0.366 U	**0.714**	**0.758**	0.397 U	**0.569**	**0.974**	**0.398**	0.372 U
	Pyrene	1,000	1,000	0.360 U	**1.38**	**1.03**	0.396 U	0.379 U	**1.28**	0.395 U	NA	NA	NA	NA	0.366 U	**0.736**	**0.953**	0.397 U	**0.409**	**0.774**	0.379 U	0.372 U
	Benzo(a)anthracene	7	7	0.360 U	**0.635**	**0.552**	0.396 U	0.379 U	**0.581**	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	**0.412**	0.397 U	0.373 U	**0.426**	0.379 U	0.372 U
	Chrysene	70	70	0.360 U	**1.08**	**0.830**	0.396 U	0.379 U	**0.813**	0.395 U	NA	NA	NA	NA	0.366 U	**0.516**	**0.546**	0.397 U	0.373 U	**0.479**	0.379 U	0.372 U
	Benzo(b)fluoranthene	7	7	0.360 U	**0.946**	**0.796**	0.396 U	0.379 U	**0.739**	0.395 U	NA	NA	NA	NA	0.366 U	**0.450**	**0.385**	0.397 U	0.373 U	**0.453**	0.379 U	0.372 U
	Benzo(k)fluoranthene	70	70	0.360 U	**0.424**	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Benzo(a)pyrene	2	2	0.360 U	**0.838**	**0.871**	0.396 U	0.379 U	**0.653**	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Indeno(1,2,3-cd)pyrene	7	7	0.360 U	**0.424**	0.412 U	0.396 U	0.379 U	**0.428**	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Dibenz(a,h)anthracene	0.7	0.7	0.360 U	0.389 U	0.412 U	0.396 U	0.379 U	0.395 U	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
	Benzo(g,h,i)perylene	1,000	1,000	0.360 U	**0.521**	**0.438**	0.396 U	0.379 U	**0.430**	0.395 U	NA	NA	NA	NA	0.366 U	0.407 U	0.373 U	0.397 U	0.373 U	0.378 U	0.379 U	0.372 U
Metals, total																						
(mg/kg)	Antimony	20	20	2.11 U	2.43 U	2.46 U	2.37 U	2.30 U	2.40 U	2.34 U	NA	NA	NA	NA	2.16 U	2.47 U	2.17 U	11.8 U	2.16 U	2.31 U	2.23 U	2.20 U
	Arsenic	20	20	**1.97**	**10.6**	**11.6**	**3.41**	**61.4**	**64.7**	**55.4**	**5.83**	**14.8**	**21.5**	**6.87**	**1.89**	**63.1**	**34.5**	**110**	**12.8**	**17.0**	**8.95**	**2.61**
	Barium	1,000	1,000	**7.77**	**41.2**	**52.4**	**6.38**	**73.0**	**96.2**	**83.6**	NA	NA	NA	NA	**7.92**	**116**	**73.2**	**255**	**10.2**	**13.4**	**12.1**	**4.91**
	Beryllium	90	90	0.211 U	0.243 U	0.246 U	0.237 U	**1.50**	**1.61**	**1.53**	NA	NA	NA	NA	0.216 U	**1.51**	**0.695**	**3.16**	0.216 U	**0.304**	**0.392**	0.220 U
	Cadmium	70	70	0.422 U	**0.781**	**0.877**	0.474 U	0.459 U	**0.512**	0.469 U	NA	NA	NA	NA	0.432 U	**0.711**	0.434 U	2.36 U	0.433 U	0.461 U	0.446 U	0.440 U
	Chromium	100	100	**5.18**	**9.22**	**18.9**	**6.59**	**11.4**	**14.5**	**12.6**	NA	NA	NA	NA	**6.13**	**15.1**	**13.1**	**26.2**	**9.50**	**9.66**	**5.53**	**8.88**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**7.82**	**246**	**218**	**7.91**	**22.5**	**62.0**	**24.8**	NA	NA	NA	NA	**7.92**	**31.3**	**15.7**	**20.8**	**161**	**56.8**	**30.3**	**4.12**
	Mercury	20	20	0.077 U	**0.125**	**0.138**	0.088 U	**0.091**	**0.142**	**0.153**	NA	NA	NA	NA	0.078 U	**0.063**	0.083 U	**0.142**	0.082 U	0.090 U	0.092 U	0.079 U
	Nickel	600	600	**3.70**	**29.2**	**27.2**	**6.44**	**13.7**	**18.9**	**15.5**	NA	NA	NA	NA	**4.08**	**20.1**	**14.7**	**29.1**	**15.2**	**23.8**	**10.0**	**7.68**
	Selenium	400	400	2.11 U	2.43 U	2.46 U	2.37 U	2.30 U	2.40 U	2.34 U	NA	NA	NA	NA	2.16 U	2.47 U	2.17 U	11.8 U	2.16 U	2.31 U	2.23 U	2.20 U
	Silver	100	100	0.422 U	0.485 U	0.493 U	0.474 U	0.459 U	0.479 U	0.469 U	NA	NA	NA	NA	0.432 U	0.494 U	0.434 U	2.36 U	0.433 U	0.461 U	0.446 U	0.440 U
	Thallium	8	8	2.11 U	2.43 U	2.46 U	2.37 U	2.30 U	2.40 U	2.34 U	NA	NA	NA	NA	2.16 U	2.47 U	2.17 U	11.8 U	2.16 U	2.31 U	2.23 U	2.20 U
	Vanadium	400	400	**11.7**	**122**	**138**	**12.7**	**48.0**	**91.4**	**55.1**	NA	NA	NA	NA	**13.2**	**128**	**50.8**	**111**	**51.8**	**54.4**	**16.4**	**14.8**
	Zinc	1,000	1,000	**10.0**	**111**	**109**	**33.2**	**22.4**	**37.0**	**29.4**	NA	NA	NA	NA	**11.0**	**49.7**	**31.3**	**45.3**	**55.1**	**42.2**	**20.3**	**29.4**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		B-608				B-609			B-610			B-611			B-612		
		Sample Name:		B-608 (0-1)	B-608 (1-3)	B-608 (6-7)	B-608 (7-8)	B-609 (0-1)	B-609 (1-3)	B-609 (8-10)	B-610 (0-1)	B-610 (1-3)	B-610 (4-6)	B-611 (0-1)	B-611 (1-3)	B-611 (4-6)	B-612 (0-1)	B-612 (1-3)	B-612 (4-6)
		Current Sample Depth (ft.)		0-1 ft	1-3 ft	6-7 ft	7-8 ft	0-1 ft	1-3 ft	8-10 ft	0-1 ft	1-3 ft	4-6 ft	0-1 ft	1-3 ft	4-6 ft	0-1 ft	1-3 ft	4-6 ft
		Sample Date:		11/23/2020	11/23/2020	11/23/2020	11/23/2020	11/23/2020	11/23/2020	11/23/2020	12/08/2020	12/08/2020	12/08/2020	12/07/2020	12/07/2020	12/07/2020	11/20/2020	11/20/2020	11/20/2020
		S-1/GW-2	S-1/GW-3																
VPH																			
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																			
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	7.22 U	9.04 U	8.47 U	8.46 U	7.72 U	7.43 U	8.31 U	21.6 U	27.3 U	8.19 U	23.8 U	21.2 U	7.91 U	7.61 U	8.14 U	8.44 U
	C19-C36 Aliphatics	3,000	3,000	7.22 U	9.04 U	8.47 U	8.46 U	7.72 U	7.43 U	8.31 U	21.6 U	27.3 U	8.19 U	23.8 U	21.2 U	7.91 U	7.61 U	8.14 U	8.44 U
	C11-C22 Aromatics	1,000	1,000	**14.1**	**13.0**	8.47 U	8.46 U	**18.2**	**28.4**	8.31 U	21.6 U	27.3 U	8.19 U	23.8 U	21.2 U	7.91 U	7.61 U	8.14 U	8.44 U
	Naphthalene	20	500	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	2-Methylnaphthalene	80	300	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Acenaphthylene	600	10	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Acenaphthene	1,000	1,000	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Fluorene	1,000	1,000	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Phenanthrene	500	500	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Anthracene	1,000	1,000	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Fluoranthene	1,000	1,000	**0.376**	0.452 U	0.423 U	0.423 U	**0.484**	**0.565**	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Pyrene	1,000	1,000	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	**0.805**	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Benzo(a)anthracene	7	7	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	**0.485**	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Chrysene	70	70	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	**0.612**	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Benzo(b)fluoranthene	7	7	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	**0.451**	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Benzo(k)fluoranthene	70	70	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Benzo(a)pyrene	2	2	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	**0.431**	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Indeno(1,2,3-cd)pyrene	7	7	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Dibenz(a,h)anthracene	0.7	0.7	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
	Benzo(g,h,i)perylene	1,000	1,000	0.361 U	0.452 U	0.423 U	0.423 U	0.386 U	0.371 U	0.415 U	1.08 U	1.36 U	0.410 U	1.19 U	1.06 U	0.395 U	0.381 U	0.407 U	0.422 U
Metals, total																			
(mg/kg)	Antimony	20	20	2.17 U	2.67 U	2.47 U	2.45 U	2.24 U	2.26 U	2.40 U	2.28 U	2.74 U	2.35 U	2.42 U	2.15 U	2.35 U	2.29 U	2.41 U	2.65 U
	Arsenic	20	20	**14.1**	**16.2**	**5.32**	**2.79**	**12.9**	**6.70**	**7.14**	**13.0**	**7.68**	**5.84**	**15.0**	**9.76**	**3.58**	**6.00**	**8.67**	**3.46**
	Barium	1,000	1,000	**17.0**	**9.81**	**9.69**	**5.00**	**12.4**	**10.6**	**16.3**	**11.0**	**32.9**	**18.8**	**10.9**	**8.65**	**4.56**	**6.76**	**9.36**	**9.18**
	Beryllium	90	90	**0.417**	**0.598**	0.247 U	0.245 U	**0.470**	**0.394**	**0.264**	**0.519**	**0.950**	**0.319**	**0.397**	**0.335**	0.235 U	0.229 U	0.241 U	0.265 U
	Cadmium	70	70	0.434 U	0.534 U	0.495 U	0.490 U	0.447 U	0.453 U	**0.504**	**0.606**	0.549 U	**0.488**	0.484 U	0.429 U	0.470 U	0.459 U	0.481 U	0.530 U
	Chromium	100	100	**11.0**	**6.88**	**6.78**	**8.14**	**16.9**	**7.98**	**17.8**	**12.6**	**8.09**	**17.5**	**15.6**	**14.2**	**8.06**	**6.18**	**13.2**	**9.93**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**30.0**	**20.4**	**15.7**	**10.2**	**26.9**	**15.2**	**33.5**	**36.1**	**20.6**	**7.60**	**42.0**	**13.6**	**3.58**	**35.0**	**38.9**	**6.74**
	Mercury	20	20	0.084 U	0.096 U	0.097 U	0.096 U	0.087 U	0.081 U	**0.276**	0.086 U	0.105 U	0.090 U	0.090 U	0.082 U	0.091 U	0.088 U	**0.095**	0.101 U
	Nickel	600	600	**26.0**	**16.0**	**9.96**	**6.18**	**14.6**	**18.9**	**10.5**	**24.7**	**14.1**	**14.4**	**33.1**	**17.2**	**6.50**	**11.2**	**16.5**	**9.95**
	Selenium	400	400	2.17 U	2.67 U	2.47 U	2.45 U	2.24 U	2.26 U	2.40 U	2.28 U	2.74 U	2.35 U	2.42 U	2.15 U	2.35 U	2.29 U	2.41 U	2.65 U
	Silver	100	100	0.434 U	0.534 U	0.495 U	0.490 U	0.447 U	0.453 U	0.480 U	0.456 U	0.549 U	0.470 U	0.484 U	0.429 U	0.470 U	0.459 U	0.481 U	0.530 U
	Thallium	8	8	2.17 U	2.67 U	2.47 U	2.45 U	2.24 U	2.26 U	2.40 U	2.28 U	2.74 U	2.35 U	2.42 U	2.15 U	2.35 U	2.29 U	2.41 U	2.65 U
	Vanadium	400	400	**149**	**30.3**	**25.8**	**15.0**	**24.3**	**22.1**	**22.7**	**59.0**	**46.3**	**28.9**	**134**	**41.3**	**19.9**	**29.4**	**35.4**	**32.0**
	Zinc	1,000	1,000	**48.0**	**27.0**	**25.2**	**24.8**	**33.6**	**18.0**	**87.6**	**56.0**	**30.5**	**43.5**	**56.4**	**31.0**	**26.1**	**27.5**	**46.1**	**30.2**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		MW-602 (B-602)			MW-603R (B-603-R)					MW-604 (B-604)			MW-605 (B-605)		
		Sample Name:		B-602 (0-1)	B-602 (1-3)	B-602(8-10)	B-603-R-(0-1)	B-603-R-(1-3)	DUP 13	B-603-R-(3-5)	B-603-R(24-26)	B-604 (0-1)	B-604 (1-3)	B-604(16-18)	B-605 (0-1)	B-605 (1-3)	B-605(20-22)
		Current Sample Depth (ft.)		0-1 ft	1-3 ft	8-10 ft	0-1 ft	1-3 ft	1-3 ft	3-5 ft	24-26 ft	0-1 ft	1-3 ft	16-18 ft	0-1 ft	1-3 ft	20-22 ft
		Sample Date:		01/12/2021	01/12/2021	1/28/2021	02/03/2021	02/03/2021	02/03/2021	02/03/2021	02/05/2021	01/12/2021	01/12/2021	1/28/2021	01/12/2021	01/12/2021	1/27/2021
		S-1/GW-2	S-1/GW-3						Field Dup								
VPH																	
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																	
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	7.25 U	8.36 U	7.34 U	7.83 U	7.59 U	7.77 U	8.01 U	8.86 U	7.53 U	7.08 U	**17.4**	7.57 U	**7.80**	8.15 U
	C19-C36 Aliphatics	3,000	3,000	7.25 U	8.36 U	7.34 U	7.83 U	7.59 U	7.77 U	8.01 U	8.86 U	7.53 U	7.08 U	**19.7**	7.57 U	**20.4**	8.15 U
	C11-C22 Aromatics	1,000	1,000	**9.40**	**8.79**	7.34 U	**18.0**	**17.8**	**16.0**	**23.7**	8.86 U	**10.4**	**8.46**	**35.5**	**8.92**	**29.1**	8.15 U
	Naphthalene	20	500	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	2-Methylnaphthalene	80	300	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Acenaphthylene	600	10	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Acenaphthene	1,000	1,000	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Fluorene	1,000	1,000	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Phenanthrene	500	500	0.362 U	0.418 U	0.367 U	**0.395**	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	**0.392**	0.408 U
	Anthracene	1,000	1,000	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Fluoranthene	1,000	1,000	0.362 U	0.418 U	0.367 U	**0.619**	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Pyrene	1,000	1,000	0.362 U	0.418 U	0.367 U	**0.647**	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	**0.400**	0.408 U
	Benzo(a)anthracene	7	7	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Chrysene	70	70	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Benzo(b)fluoranthene	7	7	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Benzo(k)fluoranthene	70	70	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Benzo(a)pyrene	2	2	0.362 U	0.418 U	0.367 U	**0.604**	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Indeno(1,2,3-cd)pyrene	7	7	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Dibenz(a,h)anthracene	0.7	0.7	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
	Benzo(g,h,i)perylene	1,000	1,000	0.362 U	0.418 U	0.367 U	0.391 U	0.379 U	0.389 U	0.400 U	0.443 U	0.376 U	0.354 U	0.531 U	0.378 U	0.369 U	0.408 U
Metals, total																	
(mg/kg)	Antimony	20	20	2.13 U	**3.07**	2.08 U	2.23 U	2.31 U	2.34 U	2.43 U	2.65 U	2.19 U	2.06 U	3.27 U	2.18 U	2.17 U	2.35 U
	Arsenic	20	20	**11.8**	**100**	**74.5**	**17.4**	**56.0**	**57.1**	**75.3**	**15.9**	**3.55**	**13.5**	**88.3**	**13.3**	**43.2**	**8.31**
	Barium	1,000	1,000	**25.4**	**122**	**82.6**	**59.4**	**72.9**	**74.1**	**92.0**	**9.84**	**13.2**	**37.8**	**74.8**	**24.9**	**83.0**	**8.65**
	Beryllium	90	90	0.213 U	**2.56**	**1.05**	**0.563**	**1.52**	**1.46**	**1.82**	**0.376**	0.219 U	**0.284**	**3.02**	**0.244**	**1.07**	0.235 U
	Cadmium	70	70	0.426 U	0.506 U	0.416 U	0.447 U	0.461 U	0.467 U	0.487 U	0.530 U	0.438 U	0.412 U	0.653 U	0.437 U	**0.504**	0.469 U
	Chromium	100	100	**8.16**	**16.3**	**10.2**	**8.09**	**11.8**	**11.4**	**13.6**	**8.43**	**5.82**	**7.03**	**18.9**	**7.49**	**12.8**	**5.23**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**17.2**	**14.9**	**18.1**	**26.2**	**17.4**	**16.9**	**15.3**	**21.0**	**9.48**	**8.60**	**49.0**	**15.4**	**19.8**	**8.54**
	Mercury	20	20	0.078 U	**0.165**	0.080 U	0.081 U	**0.083**	0.082 U	**0.104**	0.100 U	0.074 U	0.073 U	**0.175**	0.081 U	0.084 U	0.080 U
	Nickel	600	600	**7.16**	**20.8**	**17.6**	**7.79**	**14.6**	**13.9**	**16.4**	**9.11**	**5.10**	**8.08**	**35.2**	**8.10**	**19.7**	**6.40**
	Selenium	400	400	2.13 U	2.53 U	2.08 U	2.23 U	2.31 U	2.34 U	2.43 U	2.65 U	2.19 U	2.06 U	3.27 U	2.18 U	2.17 U	2.35 U
	Silver	100	100	0.426 U	0.506 U	0.416 U	0.447 U	0.461 U	0.467 U	0.487 U	0.530 U	0.438 U	0.412 U	0.653 U	0.437 U	0.434 U	0.469 U
	Thallium	8	8	2.13 U	2.53 U	2.08 U	2.23 U	2.31 U	2.34 U	2.43 U	2.65 U	2.19 U	2.06 U	3.27 U	2.18 U	2.17 U	2.35 U
	Vanadium	400	400	**19.7**	**74.4**	**24.0**	**20.3**	**55.3**	**56.3**	**67.2**	**33.1**	**14.7**	**24.4**	**58.8**	**36.6**	**59.6**	**14.7**
	Zinc	1,000	1,000	**26.6**	**25.3**	**23.5**	**31.6**	**25.2**	**24.2**	**23.2**	**25.1**	**15.3**	**28.0**	**41.8**	**25.1**	**37.2**	**12.3**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

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Table 1
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Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		SS-101		SS-102		SS-103		SS-104		SS-105		SS-106		SS-107		SS-108	SS-108R		SS-109	SS-110	
		Sample Name:		SS-101 (0-1)	SS-101 (1-3)	SS-102 (0-1)	SS-102 (1-3)	SS-103 (0-1)	SS-103 (1-3)	SS-104 (0-1)	SS-104(1-3)	SS-105 (0-1)	SS-105 (1-3)	SS-106 (0-1)	SS-106(1-2.9)	SS-107 (0-1)	SS-107 (1-2.5)	SS-108 (0-1)	SS-108(0-1)	SS-108(1-3)	SS-109 (0-1)	SS-110 (0-1)	SS-110 (1-3)
		Current Sample Depth (ft.)		0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-2.9 ft	0-1 ft	1-2.5 ft	0-1 ft	0-1 ft	1-3 ft	0-1 ft	0-1 ft	1-3 ft
		Sample Date:		01/15/2021	01/15/2021	01/15/2021	01/15/2021	01/15/2021	01/15/2021	01/18/2021	01/25/2021	01/18/2021	01/18/2021	01/18/2021	01/25/2021	01/18/2021	01/18/2021	01/15/2021	01/25/2021	01/25/2021	01/15/2021	01/18/2021	01/18/2021
		S-1/GW-2	S-1/GW-3																				
VPH																							
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																							
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	7.63 U	7.25 U	7.44 U	7.40 U	**7.69**	7.42 U	7.64 U	7.42 U	7.56 U	7.89 U	7.45 U	7.48 U	7.20 U	7.34 U	8.31 U	7.03 U	7.02 U	7.38 U	7.34 U	7.89 U
	C19-C36 Aliphatics	3,000	3,000	**9.86**	**8.78**	**11.1**	**35.5**	**13.7**	**22.8**	7.64 U	7.42 U	7.56 U	7.89 U	7.45 U	7.48 U	7.20 U	**21.5**	**10.4**	7.03 U	7.02 U	7.38 U	7.34 U	7.89 U
	C11-C22 Aromatics	1,000	1,000	**23.7**	**28.5**	**21.0**	**47.9**	**32.9**	**35.3**	**41.1**	**25.1**	**8.44**	7.89 U	**9.38**	**21.0**	**21.2**	**30.8**	**21.2**	7.03 U	7.02 U	**11.2**	**8.68**	**16.5**
	Naphthalene	20	500	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	0.382 U	0.371 U	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	2-Methylnaphthalene	80	300	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	0.382 U	0.371 U	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Acenaphthylene	600	10	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	0.382 U	0.371 U	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Acenaphthene	1,000	1,000	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	0.382 U	0.371 U	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Fluorene	1,000	1,000	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	**0.467**	0.371 U	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Phenanthrene	500	500	**0.534**	**0.506**	0.372 U	**0.614**	**0.440**	0.371 U	**4.61**	**2.96**	0.378 U	0.394 U	0.372 U	**0.553**	**0.395**	**0.791**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Anthracene	1,000	1,000	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	**1.00**	**0.653**	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Fluoranthene	1,000	1,000	**1.03**	**1.18**	**0.584**	**1.13**	**0.463**	0.371 U	**6.78**	**4.07**	0.378 U	0.394 U	0.372 U	**0.717**	**1.07**	**1.62**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Pyrene	1,000	1,000	**1.07**	**1.29**	**0.588**	**1.11**	**0.493**	0.371 U	**6.10**	**3.69**	0.378 U	0.394 U	0.372 U	**0.775**	**1.05**	**1.64**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Benzo(a)anthracene	7	7	**0.604**	**0.776**	0.372 U	**0.720**	0.379 U	0.371 U	**2.62**	**1.61**	0.378 U	0.394 U	0.372 U	**0.442**	**0.592**	**0.898**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Chrysene	70	70	**0.703**	**0.870**	0.372 U	**0.712**	**0.393**	0.371 U	**2.46**	**1.59**	0.378 U	0.394 U	0.372 U	**0.592**	**0.591**	**0.928**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Benzo(b)fluoranthene	7	7	**0.822**	**1.08**	**0.404**	**0.788**	0.379 U	0.371 U	**2.85**	**1.85**	0.378 U	0.394 U	0.372 U	**0.573**	**0.577**	**1.04**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Benzo(k)fluoranthene	70	70	0.382 U	**0.424**	0.372 U	0.370 U	0.379 U	0.371 U	**1.15**	**0.643**	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	**0.412**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Benzo(a)pyrene	2	2	**0.864**	**0.924**	**0.537**	**2.12**	**0.521**	0.371 U	**2.46**	**1.42**	0.378 U	0.394 U	0.372 U	**0.406**	**0.588**	**0.894**	**0.888**	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Indeno(1,2,3-cd)pyrene	7	7	**0.414**	**0.588**	0.372 U	**0.431**	0.379 U	0.371 U	**1.55**	**0.992**	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	**0.554**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Dibenz(a,h)anthracene	0.7	0.7	0.382 U	0.363 U	0.372 U	0.370 U	0.379 U	0.371 U	**0.411**	**0.672**	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	0.367 U	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
	Benzo(g,h,i)perylene	1,000	1,000	**0.449**	**0.555**	0.372 U	**0.455**	0.379 U	0.371 U	**1.57**	**0.993**	0.378 U	0.394 U	0.372 U	0.374 U	0.360 U	**0.579**	0.416 U	0.352 U	0.351 U	0.369 U	0.367 U	0.394 U
Metals, total																							
(mg/kg)	Antimony	20	20	2.26 U	2.16 U	2.25 U	2.26 U	2.36 U	2.27 U	2.32 U	2.20 U	2.28 U	2.36 U	2.24 U	2.24 U	2.14 U	2.22 U	2.50 U	2.08 U	2.16 U	2.27 U	2.17 U	11.8 U
	Arsenic	20	20	**7.61**	**5.40**	**6.12**	**4.69**	**9.06**	**10.5**	**3.37**	**5.65**	**3.19**	**13.5**	**5.05**	**15.6**	**5.90**	**7.78**	**15.8**	**1.71**	**23.1**	**7.31**	**8.55**	**94.2**
	Barium	1,000	1,000	**33.1**	**38.4**	**36.9**	**41.2**	**33.5**	**28.3**	**15.5**	**23.1**	**14.6**	**95.6**	**23.0**	**36.5**	**37.6**	**31.2**	**38.5**	**19.3**	**59.1**	**19.9**	**55.5**	**130**
	Beryllium	90	90	0.226 U	0.216 U	0.225 U	0.226 U	0.236 U	**0.231**	0.232 U	0.220 U	0.228 U	**0.869**	0.224 U	**0.502**	0.214 U	0.222 U	**0.446**	0.208 U	**0.709**	0.227 U	**0.235**	**3.06**
	Cadmium	70	70	**0.657**	**0.481**	**0.549**	**1.46**	**0.472**	**0.476**	0.463 U	0.440 U	0.456 U	0.472 U	0.448 U	0.448 U	0.428 U	**0.448**	0.501 U	0.417 U	0.432 U	0.455 U	0.435 U	2.37 U
	Chromium	100	100	**9.14**	**48.6**	**51.3**	**15.4**	**11.8**	**37.4**	**12.0**	**11.0**	**5.65**	**17.4**	**10.8**	**11.8**	**14.9**	**40.1**	**10.3**	**9.01**	**8.80**	**8.67**	**7.04**	**22.2**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**191**	**138**	**66.9**	**287**	**134**	**35.8**	**21.5**	**20.4**	**8.32**	**4.90**	**12.2**	**26.9**	**412**	**46.6**	**25.1**	**21.1**	**20.0**	**13.3**	**8.00**	**35.7**
	Mercury	20	20	**0.082**	**0.102**	**0.109**	0.083 U	0.083 U	0.084 U	0.081 U	0.084 U	0.084 U	0.092 U	0.085 U	0.085 U	0.072 U	**0.083**	0.097 U	0.077 U	0.080 U	0.081 U	0.084 U	**0.266**
	Nickel	600	600	**10.6**	**27.0**	**26.1**	**17.9**	**26.3**	**25.9**	**8.06**	**9.09**	**4.20**	**21.3**	**9.51**	**20.3**	**7.28**	**24.3**	**59.1**	**6.61**	**28.3**	**7.77**	**5.27**	**29.8**
	Selenium	400	400	2.26 U	2.16 U	2.25 U	2.26 U	2.36 U	2.27 U	2.32 U	2.20 U	2.28 U	2.36 U	2.24 U	2.24 U	2.14 U	2.22 U	2.50 U	2.08 U	2.16 U	2.27 U	2.17 U	11.8 U
	Silver	100	100	0.453 U	0.433 U	0.450 U	0.452 U	0.472 U	0.454 U	0.463 U	0.440 U	0.456 U	0.472 U	0.448 U	0.448 U	0.428 U	0.443 U	0.501 U	0.417 U	0.432 U	0.455 U	0.435 U	2.37 U
	Thallium	8	8	2.26 U	2.16 U	2.25 U	2.26 U	2.36 U	2.27 U	2.32 U	2.20 U	2.28 U	2.36 U	2.24 U	2.24 U	2.14 U	2.22 U	2.50 U	2.08 U	2.16 U	2.27 U	2.17 U	11.8 U
	Vanadium	400	400	**53.3**	**34.3**	**23.2**	**43.9**	**72.4**	**53.7**	**17.9**	**26.3**	**13.2**	**16.8**	**23.4**	**36.9**	**23.4**	**37.9**	**303**	**15.1**	**93.4**	**24.3**	**24.4**	**87.6**
	Zinc	1,000	1,000	**93.3**	**87.0**	**89.9**	**304**	**64.2**	**38.6**	**26.7**	**44.5**	**12.3**	**11.3**	**27.0**	**43.8**	**39.3**	**42.8**	**48.9**	**18.1**	**25.9**	**22.6**	**16.1**	**46.4**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		SS-111		SS-112		SS-113			SS-114		SS-115		SS-116		SS-117		SS-118	
		Sample Name:		SS-111 (0-1)	SS-111 (1-3)	SS-112 (0-1)	SS-112 (1-3)	SS-113 (0-1)	SS-113 (1-3)	DUP-11	SS-114 (0-1)	SS-114(1-3)	SS-115 (0-1)	SS-115 (1-3)	SS-116 (0-1)	SS-116(1-3)	SS-117 (0-1)	SS-117 (1-3)	SS-118 (0-1)	SS-118 (1-3)
		Current Sample Depth (ft.)		0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft
		Sample Date:		01/18/2021	01/18/2021	01/14/2021	01/14/2021	01/18/2021	01/18/2021	01/18/2021	01/18/2021	01/19/2021	01/14/2021	01/14/2021	01/18/2021	01/25/2021	01/19/2021	01/19/2021	01/13/2021	01/14/2021
		S-1/GW-2	S-1/GW-3							Field Dup										
VPH																				
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																				
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	7.79 U	8.10 U	7.26 U	7.26 U	7.60 U	8.38 U	7.69 U	7.81 U	8.03 U	8.04 U	6.96 U	7.50 U	7.96 U	**18.6**	**59.6**	7.35 U	7.22 U
	C19-C36 Aliphatics	3,000	3,000	**7.90**	8.10 U	7.26 U	7.26 U	**8.52**	8.38 U	7.69 U	7.81 U	8.03 U	**11.3**	6.96 U	7.50 U	7.96 U	**20.4**	**24.1**	7.35 U	**7.55**
	C11-C22 Aromatics	1,000	1,000	**11.6**	**23.3**	**10.3**	7.26 U	**12.4**	**21.3**	**24.7**	**8.48**	**17.4**	**25.5**	6.96 U	7.50 U	**12.0**	**46.7**	**137**	7.35 U	**10.8**
	Naphthalene	20	500	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	2-Methylnaphthalene	80	300	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	**0.486**	0.367 U	0.361 U
	Acenaphthylene	600	10	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Acenaphthene	1,000	1,000	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Fluorene	1,000	1,000	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	**0.471**	0.367 U	0.361 U
	Phenanthrene	500	500	0.389 U	**1.35**	0.363 U	0.363 U	0.380 U	**0.497**	**0.987**	0.390 U	**0.461**	**0.421**	0.348 U	0.375 U	0.398 U	0.415 U	**1.50**	0.367 U	0.361 U
	Anthracene	1,000	1,000	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Fluoranthene	1,000	1,000	0.389 U	**2.19**	0.363 U	0.363 U	0.380 U	**0.436**	**1.63**	0.390 U	0.401 U	**0.716**	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Pyrene	1,000	1,000	0.389 U	**2.04**	0.363 U	0.363 U	0.380 U	**0.524**	**1.63**	0.390 U	0.401 U	**0.753**	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Benzo(a)anthracene	7	7	0.389 U	**1.15**	0.363 U	0.363 U	0.380 U	0.419 U	**0.812**	0.390 U	0.401 U	**0.427**	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Chrysene	70	70	0.389 U	**1.02**	0.363 U	0.363 U	0.380 U	0.419 U	**0.884**	0.390 U	0.401 U	**0.512**	0.348 U	0.375 U	0.398 U	0.415 U	**0.789**	0.367 U	0.361 U
	Benzo(b)fluoranthene	7	7	0.389 U	**0.984**	0.363 U	0.363 U	0.380 U	0.419 U	**0.925**	0.390 U	0.401 U	**0.493**	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Benzo(k)fluoranthene	70	70	0.389 U	**0.431**	0.363 U	0.363 U	0.380 U	0.419 U	**0.388**	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Benzo(a)pyrene	2	2	0.389 U	**0.863**	0.363 U	0.363 U	**0.383**	0.419 U	**0.939**	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Indeno(1,2,3-cd)pyrene	7	7	0.389 U	**0.413**	0.363 U	0.363 U	0.380 U	0.419 U	**0.501**	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Dibenz(a,h)anthracene	0.7	0.7	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	0.384 U	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
	Benzo(g,h,i)perylene	1,000	1,000	0.389 U	0.405 U	0.363 U	0.363 U	0.380 U	0.419 U	**0.510**	0.390 U	0.401 U	0.402 U	0.348 U	0.375 U	0.398 U	0.415 U	0.408 U	0.367 U	0.361 U
Metals, total																				
(mg/kg)	Antimony	20	20	2.30 U	2.39 U	2.29 U	2.19 U	2.29 U	25.8 U	**2.31**	2.30 U	2.33 U	2.37 U	2.04 U	2.16 U	12.0 U	2.50 U	2.49 U	2.15 U	2.14 U
	Arsenic	20	20	**18.2**	**55.4**	**25.8**	**9.87**	**15.6**	**151**	**53.8**	**20.8**	**17.3**	**11.7**	**9.01**	**11.3**	**107**	**27.0**	**35.4**	**4.79**	**13.4**
	Barium	1,000	1,000	**41.5**	**118**	**41.3**	**17.2**	**30.1**	**206**	**75.3**	**24.3**	**17.6**	**37.2**	**13.9**	**27.2**	**163**	**14.7**	**11.7**	**13.6**	**21.9**
	Beryllium	90	90	**0.479**	**1.63**	**0.702**	**0.355**	**0.421**	**4.50**	**1.65**	**0.728**	**0.517**	**0.440**	**0.368**	**0.466**	**3.08**	**0.626**	**0.826**	0.215 U	**0.479**
	Cadmium	70	70	0.460 U	0.478 U	0.459 U	0.438 U	0.457 U	5.17 U	0.463 U	0.461 U	**0.494**	0.473 U	0.409 U	0.431 U	2.39 U	**0.981**	0.497 U	0.431 U	0.428 U
	Chromium	100	100	**7.44**	**20.7**	**12.0**	**8.46**	**8.15**	**45.8**	**13.9**	**23.5**	**40.7**	**10.5**	**6.24**	**7.98**	**23.0**	**11.0**	**74.6**	**6.46**	**11.5**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**10.4**	**15.6**	**10.9**	**9.77**	**15.5**	**60.4**	**34.6**	**48.8**	**40.3**	**58.0**	**9.24**	**13.1**	**27.8**	**27.8**	**24.6**	**11.4**	**10.3**
	Mercury	20	20	0.083 U	**0.115**	0.082 U	0.080 U	0.088 U	**0.823**	**0.248**	0.091 U	**0.093**	**0.089**	0.078 U	0.085 U	**0.124**	0.093 U	0.095 U	0.076 U	0.077 U
	Nickel	600	600	**7.25**	**21.9**	**9.42**	**8.61**	**7.24**	**50.8**	**18.1**	**372**	**107**	**9.93**	**8.35**	**8.38**	**48.6**	**24.6**	**45.4**	**4.73**	**11.1**
	Selenium	400	400	2.30 U	2.39 U	2.29 U	2.19 U	2.29 U	25.8 U	2.31 U	2.30 U	2.33 U	2.37 U	2.04 U	2.16 U	12.0 U	2.50 U	2.49 U	2.15 U	2.14 U
	Silver	100	100	0.460 U	0.478 U	0.459 U	0.438 U	0.457 U	5.17 U	0.463 U	0.461 U	0.466 U	0.473 U	0.409 U	0.431 U	2.39 U	0.501 U	0.497 U	0.431 U	0.428 U
	Thallium	8	8	2.30 U	2.39 U	2.29 U	2.19 U	2.29 U	25.8 U	2.31 U	2.30 U	2.33 U	2.37 U	2.04 U	2.16 U	12.0 U	2.50 U	2.49 U	2.15 U	2.14 U
	Vanadium	400	400	**23.2**	**61.6**	**31.6**	**36.9**	**23.1**	**139**	**67.5**	**1,450**	**317**	**25.1**	**49.9**	**23.9**	**116**	**45.6**	**38.9**	**17.6**	**67.6**
	Zinc	1,000	1,000	**16.0**	**37.3**	**20.1**	**16.6**	**23.7**	**61.5**	**41.2**	**77.9**	**60.3**	**55.4**	**15.2**	**21.7**	**44.2**	**204**	**44.6**	**18.5**	**36.1**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		SS-119		SS-120			SS-121		SS-122			SS-123		SS-124	SS-125	SS-126	TP-01		TP-02	
		Sample Name:		SS-119 (0-1)	SS-119(1-2)	SS-120 (0-1)	SS-120 (1-2)	SS-120(1-3)	SS-121 (0-1)	SS-121 (1-2)	SS-122 (0-1)	DUP-10	SS-122 (1-3)	SS-123 (0-1)	SS-123(1-3)	SS-124(0-0.5)	SS-125(0-0.5)	SS-126(0-0.5)	TP-1 (0-3)	TP-1 (3-5.8)	TP-2 (0-3)	TP-2 (3-5)
		Current Sample Depth (ft.)		0-1 ft	1-2 ft	0-1 ft	1-2 ft	1-3 ft	0-1 ft	1-2 ft	0-1 ft	0-1 ft	1-3 ft	0-1 ft	1-3 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-3 ft	3-5.8 ft	0-3 ft	3-5 ft
		Sample Date:		01/13/2021	01/25/2021	01/14/2021	01/14/2021	01/25/2021	01/14/2021	01/14/2021	01/14/2021	01/14/2021	01/14/2021	01/18/2021	01/25/2021	01/25/2021	01/25/2021	01/25/2021	12/07/2020	12/07/2020	12/07/2020	12/07/2020
		S-1/GW-2	S-1/GW-3									Field Dup										
VPH																						
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																						
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	6.82 U	6.74 U	7.77 U	7.05 U	7.12 U	8.18 U	7.65 U	7.55 U	7.61 U	7.78 U	7.69 U	7.11 U	**13.2**	10.2 U	7.91 U	7.76 U	22.6 U	7.34 U	7.64 U
	C19-C36 Aliphatics	3,000	3,000	6.82 U	6.74 U	**8.22**	7.05 U	7.12 U	**12.4**	**8.75**	7.55 U	7.61 U	7.78 U	7.69 U	7.11 U	7.97 U	**18.2**	7.91 U	7.76 U	22.6 U	7.34 U	7.64 U
	C11-C22 Aromatics	1,000	1,000	6.82 U	6.74 U	**14.8**	7.05 U	7.12 U	**17.7**	**17.6**	**13.8**	**12.4**	**18.3**	**16.2**	**11.6**	**39.2**	**91.7**	**25.1**	**18.3**	**30.7**	**14.9**	**13.1**
	Naphthalene	20	500	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	2-Methylnaphthalene	80	300	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Acenaphthylene	600	10	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	**0.598**	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Acenaphthene	1,000	1,000	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Fluorene	1,000	1,000	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Phenanthrene	500	500	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	**0.411**	**0.414**	**3.49**	**0.413**	**0.405**	1.13 U	**0.396**	0.382 U
	Anthracene	1,000	1,000	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Fluoranthene	1,000	1,000	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	**0.422**	0.381 U	0.389 U	0.384 U	**0.700**	0.399 U	**6.14**	**0.596**	**0.809**	1.13 U	**0.456**	0.382 U
	Pyrene	1,000	1,000	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	**0.411**	0.381 U	0.389 U	0.384 U	**0.796**	0.399 U	**6.20**	**0.688**	**0.857**	**1.22**	**0.503**	**0.410**
	Benzo(a)anthracene	7	7	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	**0.399**	0.399 U	**2.57**	0.395 U	**0.569**	1.13 U	0.367 U	0.382 U
	Chrysene	70	70	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	**0.466**	0.399 U	**2.91**	**0.547**	**0.617**	1.13 U	**0.377**	0.382 U
	Benzo(b)fluoranthene	7	7	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	**0.471**	0.355 U	0.399 U	0.509 U	0.395 U	**0.579**	1.13 U	0.367 U	0.382 U
	Benzo(k)fluoranthene	70	70	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Benzo(a)pyrene	2	2	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	**0.429**	0.355 U	0.399 U	**2.82**	**0.451**	**0.492**	1.13 U	0.367 U	0.382 U
	Indeno(1,2,3-cd)pyrene	7	7	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	**2.11**	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Dibenz(a,h)anthracene	0.7	0.7	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	0.509 U	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
	Benzo(g,h,i)perylene	1,000	1,000	0.341 U	0.337 U	0.388 U	0.352 U	0.356 U	0.409 U	0.383 U	0.377 U	0.381 U	0.389 U	0.384 U	0.355 U	0.399 U	**2.18**	0.395 U	0.388 U	1.13 U	0.367 U	0.382 U
Metals, total																						
(mg/kg)	Antimony	20	20	2.06 U	2.06 U	2.34 U	2.14 U	2.14 U	2.38 U	2.30 U	2.25 U	2.26 U	2.33 U	2.30 U	2.18 U	2.37 U	3.03 U	2.31 U	2.33 U	2.34 U	2.22 U	2.28 U
	Arsenic	20	20	**3.01**	**2.81**	**4.46**	**4.57**	**9.88**	**25.0**	**34.9**	**15.4**	**19.7**	**60.5**	**20.6**	**14.8**	**31.6**	**14.4**	**9.88**	**18.4**	**17.2**	**14.2**	**11.6**
	Barium	1,000	1,000	**15.3**	**16.0**	**20.9**	**17.8**	**18.3**	**52.8**	**62.7**	**32.5**	**36.5**	**102**	**42.5**	**27.9**	**24.6**	**64.5**	**31.5**	**16.0**	**16.7**	**13.2**	**11.8**
	Beryllium	90	90	0.206 U	0.206 U	0.234 U	**0.235**	0.214 U	**0.832**	**0.995**	**0.508**	**0.673**	**1.64**	**0.661**	**0.701**	**0.735**	**0.945**	**0.398**	**0.349**	**0.628**	**0.462**	**0.355**
	Cadmium	70	70	**0.452**	**0.470**	0.468 U	0.427 U	**0.544**	0.475 U	0.460 U	0.449 U	0.451 U	0.466 U	0.459 U	0.435 U	0.474 U	**0.612**	**0.536**	0.465 U	0.468 U	**0.444**	0.455 U
	Chromium	100	100	**27.0**	**11.8**	**10.1**	**23.1**	**12.3**	**14.4**	**13.4**	**8.18**	**10.5**	**20.5**	**10.5**	**8.58**	**10.1**	**9.43**	**9.50**	**7.53**	**10.1**	**10.1**	**9.76**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**11.0**	**10.1**	**19.6**	**13.1**	**26.9**	**21.3**	**25.4**	**16.6**	**17.8**	**23.3**	**15.1**	**23.4**	**26.3**	**130**	**58.4**	**34.2**	**47.7**	**57.1**	**33.0**
	Mercury	20	20	0.074 U	0.078 U	0.090 U	0.083 U	0.081 U	0.099 U	0.091 U	0.076 U	0.086 U	**0.135**	0.084 U	0.082 U	0.090 U	0.113 U	0.086 U	**0.104**	**0.141**	0.084 U	0.087 U
	Nickel	600	600	**16.2**	**10.4**	**7.62**	**15.2**	**16.2**	**17.3**	**16.5**	**7.02**	**9.83**	**20.0**	**15.0**	**12.1**	**21.6**	**41.3**	**22.9**	**16.3**	**14.6**	**32.6**	**14.4**
	Selenium	400	400	2.06 U	2.06 U	2.34 U	2.14 U	2.14 U	2.38 U	2.30 U	2.25 U	2.26 U	2.33 U	2.30 U	2.18 U	2.37 U	3.03 U	2.31 U	2.33 U	2.34 U	2.22 U	2.28 U
	Silver	100	100	0.411 U	0.412 U	0.468 U	0.427 U	0.428 U	0.475 U	0.460 U	0.449 U	0.451 U	0.466 U	0.459 U	0.435 U	0.474 U	0.606 U	0.462 U	0.465 U	0.468 U	0.444 U	0.455 U
	Thallium	8	8	2.06 U	2.06 U	2.34 U	2.14 U	2.14 U	2.38 U	2.30 U	2.25 U	2.26 U	2.33 U	2.30 U	2.18 U	2.37 U	3.03 U	2.31 U	2.33 U	2.34 U	2.22 U	2.28 U
	Vanadium	400	400	**15.2**	**15.0**	**17.9**	**21.3**	**22.1**	**74.0**	**63.8**	**33.0**	**39.6**	**86.0**	**67.3**	**54.5**	**16.7**	**81.2**	**99.1**	**74.0**	**34.9**	**117**	**37.0**
	Zinc	1,000	1,000	**30.3**	**35.6**	**32.8**	**41.2**	**39.2**	**47.3**	**39.4**	**21.2**	**25.9**	**42.3**	**32.9**	**39.7**	**32.2**	**89.9**	**52.1**	**47.4**	**57.4**	**64.5**	**75.8**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		TP-03			TP-04		TP-05		TRC-01		TRC-02		TRC-03		TRC-04		
		Sample Name:		TP-3 (0-3)	DUP-5	TP-3 (4-5.3)	TP-4 (0-2.5)	TP-4 (2.5-5)	TP-5 (0-3)	TP-5 (4.5-5)	TRC-1 0-1	TRC-1 1-3	TRC-2 0-1	TRC-2 1-3	TRC-3 0-1	TRC-3 1-3	TRC-4 0-1	TRC-4 1-3	DUP-2
		Current Sample Depth (ft.)		0-3 ft	0-3 ft	4-5.3 ft	0-2.5 ft	2.5-5 ft	0-3 ft	4.5-5 ft	0-1	1-3	0-1	1-3	0-1	1-3	0-1	1-3	1-3
		Sample Date:		12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	10/22/2019	10/28/2019	10/22/2019	10/28/2019	10/22/2019	10/28/2019	10/22/2019	10/28/2019	10/28/2019
		S-1/GW-2	S-1/GW-3		Field Dup														Field Dup
VPH																			
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																			
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	12.2 U	11.5 U	7.80 U	40.7 U	8.07 U	20.7 U	7.26 U	**12.2**	6.71 U	7.28 U	6.97 U	7.34 U	7.04 U	7.36 U	6.84 U	6.79 U
	C19-C36 Aliphatics	3,000	3,000	12.2 U	11.5 U	7.80 U	40.7 U	8.07 U	20.7 U	**15.2**	**7.68**	6.71 U	**10.1**	6.97 U	**9.15**	**8.29**	7.36 U	6.84 U	6.79 U
	C11-C22 Aromatics	1,000	1,000	12.2 U	**24.5**	7.80 U	40.7 U	8.07 U	20.7 U	**9.37**	**15.8**	6.71 U	**12.5**	6.97 U	**13.4**	**25.8**	**19.7**	**25.6**	**82.2**
	Naphthalene	20	500	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**0.536**	0.368 U	0.342 U	0.340 U
	2-Methylnaphthalene	80	300	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	0.352 U	0.368 U	0.342 U	0.340 U
	Acenaphthylene	600	10	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	0.352 U	0.368 U	0.342 U	0.340 U
	Acenaphthene	1,000	1,000	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	0.352 U	0.368 U	0.342 U	**0.630**
	Fluorene	1,000	1,000	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**0.644**	0.368 U	0.342 U	**1.53**
	Phenanthrene	500	500	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**4.24**	**1.04**	**1.79**	**12.0**
	Anthracene	1,000	1,000	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**1.27**	0.368 U	**0.410**	**3.73**
	Fluoranthene	1,000	1,000	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**3.49**	**2.11**	**1.88**	**12.6**
	Pyrene	1,000	1,000	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**2.52**	**1.62**	**1.42**	**9.00**
	Benzo(a)anthracene	7	7	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**1.37**	**0.935**	**0.844**	**4.95**
	Chrysene	70	70	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**1.40**	**0.903**	**0.800**	**4.64**
	Benzo(b)fluoranthene	7	7	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**0.978**	**0.689**	**0.626**	**3.12**
	Benzo(k)fluoranthene	70	70	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**0.950**	**0.714**	**0.706**	**3.33**
	Benzo(a)pyrene	2	2	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**1.09**	**0.786**	**0.697**	**3.68**
	Indeno(1,2,3-cd)pyrene	7	7	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**0.664**	**0.479**	**0.449**	**2.10**
	Dibenz(a,h)anthracene	0.7	0.7	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	0.352 U	0.368 U	0.342 U	**0.498**
	Benzo(g,h,i)perylene	1,000	1,000	0.609 U	0.573 U	0.390 U	2.04 U	0.403 U	1.03 U	0.363 U	0.352 U	0.336 U	0.364 U	0.348 U	0.367 U	**0.564**	**0.540**	**0.367**	**1.70**
Metals, total																			
(mg/kg)	Antimony	20	20	3.53 U	3.36 U	2.33 U	4.29 U	2.49 U	2.09 U	2.19 U	1.99 U	2.05 U	2.17 U	2.06 U	2.21 U	2.02 U	2.21 U	2.05 U	2.02 U
	Arsenic	20	20	**23.0**	**26.6**	**2.69**	**33.0**	**4.24**	**13.8**	**5.53**	**5.62**	**11.3**	**8.54**	**2.84**	**4.98**	**11.9**	**9.36**	**11.5**	**13.0**
	Barium	1,000	1,000	**13.3**	**18.0**	**4.54**	**24.6**	**6.66**	**15.3**	**8.76**	**13.8**	**26.4**	**23.1**	**16.4**	**18.0**	**34.0**	**23.4**	**32.0**	**32.7**
	Beryllium	90	90	**0.650**	**1.04**	0.233 U	**1.02**	0.249 U	0.209 U	0.219 U	0.199 U	**0.476**	**0.264**	**0.309**	0.221 U	**0.506**	**0.270**	**0.463**	**0.521**
	Cadmium	70	70	0.706 U	0.672 U	0.465 U	0.859 U	0.499 U	0.417 U	0.438 U	0.399 U	**0.431**	0.434 U	**0.520**	0.443 U	0.405 U	0.442 U	0.410 U	**0.440**
	Chromium	100	100	**9.10**	**11.6**	**7.11**	**22.7**	**9.95**	**12.3**	**11.8**	**7.56**	**10.9**	**7.97**	**10.1**	**6.96**	**8.70**	**8.04**	**8.81**	**12.9**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**29.2**	**41.6**	**9.64**	**81.0**	**4.92**	**31.6**	**16.4**	**15.1**	**12.0**	**11.0**	**29.5**	**9.54**	**10.5**	**13.7**	**10.4**	**11.2**
	Mercury	20	20	0.135 U	0.125 U	0.089 U	**0.164**	0.092 U	**0.079**	**0.099**	0.079 U	0.081 U	0.083 U	0.081 U	0.086 U	0.080 U	0.085 U	0.078 U	0.078 U
	Nickel	600	600	**9.19**	**18.2**	**5.68**	**42.9**	**7.96**	**529**	**8.22**	**4.37**	**9.42**	**7.07**	**8.88**	**6.12**	**8.53**	**7.31**	**7.94**	**9.76**
	Selenium	400	400	3.53 U	3.36 U	2.33 U	4.29 U	2.49 U	2.09 U	2.19 U	1.99 U	2.05 U	2.17 U	2.06 U	2.21 U	2.02 U	2.21 U	2.05 U	2.02 U
	Silver	100	100	0.706 U	0.672 U	0.465 U	0.859 U	0.499 U	0.417 U	0.438 U	0.399 U	0.410 U	0.434 U	0.412 U	0.443 U	0.405 U	0.442 U	0.410 U	0.404 U
	Thallium	8	8	3.53 U	3.36 U	2.33 U	4.29 U	2.49 U	2.09 U	2.19 U	1.99 U	2.05 U	2.17 U	2.06 U	2.21 U	2.02 U	2.21 U	2.05 U	2.02 U
	Vanadium	400	400	**23.0**	**43.8**	**13.1**	**147**	**19.9**	**2,020**	**61.2**	**17.5**	**28.8**	**23.9**	**17.1**	**15.9**	**22.1**	**25.5**	**21.7**	**23.8**
	Zinc	1,000	1,000	**32.1**	**46.4**	**21.2**	**102**	**31.4**	**48.8**	**37.9**	**17.7**	**31.6**	**24.0**	**34.7**	**23.8**	**29.9**	**22.8**	**29.2**	**31.5**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		TRC-05		TRC-06		TRC-07		TRC-08		TRC-09			TRC-10		TRC-11		TRC-12	TRC-13	TRC-14		TRC-15	TRC-16
		Sample Name:		TRC-5 0-1	TRC-5 1-3	TRC-6 0-1	TRC-6 1-3	TRC-7 0-1	TRC-7 1-2	TRC-8 0-1	TRC-8 1-3	TRC-9 0-1	DUP-1	TRC-9 1-3	TRC-10 0-1	TRC-10 1-3	TRC-11 0-1	TRC-11 1-3	TRC-12 0-1	TRC-13 0-1	TRC-14 0-1	DUP-3	TRC-15 0-1	TRC-16 0-1
		Current Sample Depth (ft.)		0-1	1-3	0-1	1-3	0-1	1-2	0-1	1-3	0-1	0-1	1-3	0-1	1-3	0-1	1-3	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft
		Sample Date:		10/22/2019	10/28/2019	10/22/2019	10/28/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/22/2019	10/28/2019	11/13/2019	11/13/2019	11/13/2019	11/13/2019	11/13/2019	11/13/2019
		S-1/GW-2	S-1/GW-3										Field Dup									Field Dup		
VPH																								
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																								
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	7.24 U	6.92 U	7.52 U	7.43 U	6.82 U	7.20 U	7.34 U	7.33 U	7.42 U	7.53 U	7.31 U	7.59 U	7.37 U	7.24 U	7.61 U	NA	NA	NA	NA	NA	NA
	C19-C36 Aliphatics	3,000	3,000	7.24 U	6.92 U	7.52 U	**33.3**	**9.24**	**28.6**	**19.3**	7.33 U	7.42 U	7.53 U	7.31 U	**9.53**	**10.9**	**10.5**	**10.2**	NA	NA	NA	NA	NA	NA
	C11-C22 Aromatics	1,000	1,000	**9.26**	6.92 U	**11.7**	**29.2**	**11.2**	**18.5**	**30.8**	**12.8**	**7.72**	**11.5**	7.31 U	**29.3**	**24.8**	**29.1**	**30.9**	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	80	300	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	Acenaphthylene	600	10	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	Acenaphthene	1,000	1,000	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	Fluorene	1,000	1,000	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	Phenanthrene	500	500	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	**0.617**	**1.07**	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.995**	**1.14**	**1.01**	NA	NA	NA	NA	NA	NA
	Anthracene	1,000	1,000	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	Fluoranthene	1,000	1,000	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	**0.626**	**0.570**	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**1.60**	**1.76**	**1.20**	NA	NA	NA	NA	NA	NA
	Pyrene	1,000	1,000	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	**0.507**	**0.898**	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**1.39**	**1.52**	**1.10**	NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7	7	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.839**	**0.786**	**0.547**	NA	NA	NA	NA	NA	NA
	Chrysene	70	70	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	**0.372**	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.984**	**0.895**	**0.612**	NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	7	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.756**	**0.696**	**0.504**	NA	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	70	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.712**	**0.619**	**0.517**	NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2	2	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.826**	**0.734**	**0.549**	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	7	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.610**	**0.523**	**0.408**	NA	NA	NA	NA	NA	NA
	Dibenz(a,h)anthracene	0.7	0.7	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	0.360 U	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	0.369 U	0.362 U	0.380 U	NA	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	1,000	0.362 U	0.346 U	0.376 U	0.372 U	0.341 U	**0.651**	0.367 U	0.366 U	0.371 U	0.377 U	0.366 U	0.380 U	**0.635**	**0.630**	**0.382**	NA	NA	NA	NA	NA	NA
Metals, total																								
(mg/kg)	Antimony	20	20	2.22 U	2.07 U	2.22 U	2.22 U	2.01 U	2.13 U	2.18 U	2.19 U	2.21 U	2.26 U	2.17 U	2.34 U	2.28 U	2.11 U	2.32 U	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	**6.62**	**14.4**	**18.3**	**25.0**	**4.49**	**20.5**	**25.7**	**41.3**	**5.56**	**4.24**	**5.60**	**49.4**	**67.0**	**5.65**	**12.4**	**36.7**	**16.4**	**25.0**	**34.7**	**71.6**	**81.6**
	Barium	1,000	1,000	**20.6**	**34.6**	**29.7**	**57.8**	**17.3**	**44.8**	**45.5**	**65.4**	**12.7**	**18.7**	**12.0**	**67.9**	**108**	**23.7**	**37.2**	NA	NA	NA	NA	NA	NA
	Beryllium	90	90	0.222 U	**0.593**	**0.492**	**0.890**	0.201 U	**0.576**	**0.663**	**1.09**	0.221 U	0.226 U	0.217 U	**1.27**	**1.92**	0.211 U	**0.493**	NA	NA	NA	NA	NA	NA
	Cadmium	70	70	0.444 U	**0.439**	0.444 U	0.443 U	0.401 U	0.426 U	0.436 U	0.438 U	0.443 U	0.451 U	0.434 U	0.468 U	0.456 U	0.422 U	**0.488**	NA	NA	NA	NA	NA	NA
	Chromium	100	100	**6.52**	**6.80**	**8.22**	**9.45**	**7.02**	**20.2**	**11.1**	**13.3**	**5.83**	**5.98**	**6.10**	**10.4**	**13.3**	**14.0**	**11.7**	NA	NA	NA	NA	NA	NA
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**11.8**	**10.1**	**14.7**	**14.9**	**10.5**	**12.5**	**16.1**	**13.6**	**24.1**	**17.6**	**11.0**	**27.7**	**33.4**	**75.3**	**105**	NA	NA	NA	NA	NA	NA
	Mercury	20	20	0.087 U	0.079 U	0.084 U	0.085 U	0.079 U	0.079 U	0.081 U	0.085 U	0.085 U	0.084 U	0.081 U	**0.578**	**0.764**	**0.095**	**0.161**	NA	NA	NA	NA	NA	NA
	Nickel	600	600	**5.08**	**5.90**	**9.75**	**11.6**	**5.49**	**13.6**	**12.2**	**15.4**	**4.20**	**4.42**	**3.82**	**13.0**	**19.2**	**16.1**	**17.9**	NA	NA	NA	NA	NA	NA
	Selenium	400	400	2.22 U	2.07 U	2.22 U	2.22 U	2.01 U	2.13 U	2.18 U	2.19 U	2.21 U	2.26 U	2.17 U	2.34 U	2.28 U	2.11 U	2.32 U	NA	NA	NA	NA	NA	NA
	Silver	100	100	0.444 U	0.414 U	0.444 U	0.443 U	0.401 U	0.426 U	0.436 U	0.438 U	0.443 U	0.451 U	0.434 U	0.468 U	0.456 U	0.422 U	0.465 U	NA	NA	NA	NA	NA	NA
	Thallium	8	8	2.22 U	2.07 U	2.22 U	2.22 U	2.01 U	2.13 U	2.18 U	2.19 U	2.21 U	2.26 U	2.17 U	2.34 U	2.28 U	2.11 U	2.32 U	NA	NA	NA	NA	NA	NA
	Vanadium	400	400	**19.7**	**20.1**	**38.7**	**42.4**	**15.0**	**27.3**	**89.9**	**60.8**	**17.0**	**15.3**	**14.5**	**59.6**	**77.7**	**23.2**	**94.9**	NA	NA	NA	NA	NA	NA
	Zinc	1,000	1,000	**17.6**	**36.8**	**25.9**	**28.6**	**18.5**	**30.4**	**38.6**	**36.8**	**17.0**	**18.6**	**11.4**	**22.9**	**44.2**	**87.6**	**83.0**	NA	NA	NA	NA	NA	NA

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		TRC-15E		TRC-16E	TRC-17	TRC-18	TRC-19	TRC-20	TRC-21	TRC-22		TRC-23	TRC-24	TRC-25	TRC-26	UU-1	UU-02		UU-3	
		Sample Name:		TRC-15E 0-1	DUP-4	TRC-16E 0-1	TRC-17 0-1	TRC-18 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	TRC-17 0-1	UU-1 (0-3)	UU-2 (0-3)	SS-145 (0-1)	UU-3 (0-3)	UU-3 (3-7)
		Current Sample Depth (ft.)		0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-3 ft	0-3 ft	0-1 ft	0-3 ft	3-7 ft
		Sample Date:		11/15/2019	11/15/2019	11/15/2019	11/15/2019	11/15/2019	12/20/2019	12/20/2019	12/20/2019	12/20/2019	12/20/2019	12/20/2019	12/20/2019	12/20/2019	12/20/2019	01/15/2021	01/14/2021	02/03/2021	01/15/2021	01/15/2021
		S-1/GW-2	S-1/GW-3		Field Dup								Field Dup									
VPH																						
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																						
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	7.82 U	6.95 U	6.83 U	8.13 U	8.11 U	7.24 U	7.30 U	7.32 U	7.03 U	7.58 U	7.52 U	NA	7.42 U	7.58 U
	C19-C36 Aliphatics	3,000	3,000	NA	NA	NA	NA	NA	**44.2**	6.95 U	**116**	8.13 U	8.11 U	**99.7**	**7.30 U**	**93.5**	**138**	7.58 U	7.52 U	NA	7.42 U	7.58 U
	C11-C22 Aromatics	1,000	1,000	NA	NA	NA	NA	NA	**28.5**	**8.99**	**47.3**	**14.8**	**20.4**	**58.3**	**11.4**	**42.6**	**43.6**	**13.0**	**12.7**	NA	**22.1**	**21.7**
	Naphthalene	20	500	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	2-Methylnaphthalene	80	300	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Acenaphthylene	600	10	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Acenaphthene	1,000	1,000	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Fluorene	1,000	1,000	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Phenanthrene	500	500	NA	NA	NA	NA	NA	0.391 U	0.347 U	**0.394**	0.406 U	0.406 U	**0.815**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Anthracene	1,000	1,000	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Fluoranthene	1,000	1,000	NA	NA	NA	NA	NA	0.391 U	0.347 U	**0.680**	0.406 U	0.406 U	**1.08**	0.365 U	0.366 U	**0.457**	0.379 U	0.376 U	NA	**0.425**	0.379 U
	Pyrene	1,000	1,000	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.598	0.406 U	0.406 U	**0.915**	0.365 U	0.366 U	**0.410**	0.379 U	0.376 U	NA	**0.455**	0.379 U
	Benzo(a)anthracene	7	7	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	**0.512**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Chrysene	70	70	NA	NA	NA	NA	NA	0.391 U	0.347 U	**0.344**	0.406 U	0.406 U	**0.566**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Benzo(b)fluoranthene	7	7	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	**0.399**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Benzo(k)fluoranthene	70	70	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	**0.393**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Benzo(a)pyrene	2	2	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	**0.459**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Indeno(1,2,3-cd)pyrene	7	7	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Dibenz(a,h)anthracene	0.7	0.7	NA	NA	NA	NA	NA	0.391 U	0.347 U	0.341 U	0.406 U	0.406 U	0.362 U	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
	Benzo(g,h,i)perylene	1,000	1,000	NA	NA	NA	NA	NA	0.391 U	0.347 U	**0.352**	0.406 U	0.406 U	**0.548**	0.365 U	0.366 U	0.351 U	0.379 U	0.376 U	NA	0.371 U	0.379 U
Metals, total																						
(mg/kg)	Antimony	20	20	NA	NA	NA	NA	NA	2.27 U	2.12 U	2.07 U	2.35 U	2.36 U	2.14 U	2.12 U	2.22 U	2.13 U	2.22 U	2.31 U	NA	2.14 U	2.31 U
	Arsenic	20	20	**44.0**	**47.3**	**36.1**	**78.5**	**68.0**	**2.96**	**7.94**	**3.24**	**46.8**	**56.0**	**2.58**	**5.24**	**2.85**	**2.44**	**7.86**	**47.8**	**19.3**	**24.4**	**36.0**
	Barium	1,000	1,000	NA	NA	NA	NA	NA	**15.2**	**15.4**	**22.6**	**56.9**	**57.4**	**16.7**	**12.5**	**16.5**	**16.0**	**20.3**	**56.7**	NA	**39.0**	**54.3**
	Beryllium	90	90	NA	NA	NA	NA	NA	0.227 U	**0.263**	0.207 U	**1.54**	**1.89**	0.214 U	0.212 U	0.222 U	0.213 U	**0.289**	**1.27**	NA	**0.802**	**1.12**
	Cadmium	70	70	NA	NA	NA	NA	NA	0.454 U	**0.446**	**0.431**	0.470 U	**0.472**	0.428 U	0.423 U	0.444 U	0.425 U	0.444 U	0.462 U	NA	0.429 U	0.461 U
	Chromium	100	100	NA	NA	NA	NA	NA	**6.23**	**7.91**	**8.24**	**10.5**	**12.2**	**5.68**	**6.05**	**6.06**	**6.17**	**7.62**	**11.1**	NA	**7.82**	**9.18**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	NA	NA	NA	NA	NA	**25.4**	**11.2**	**25.9**	**14.6**	**15.8**	**15.9**	**14.7**	**21.2**	**18.6**	**26.4**	**14.8**	NA	**22.3**	**28.1**
	Mercury	20	20	NA	NA	NA	NA	NA	0.088 U	0.080 U	0.079 U	**0.095**	**0.101**	0.083 U	0.082 U	0.083 U	0.081 U	0.077 U	0.092 U	NA	0.082 U	0.082 U
	Nickel	600	600	NA	NA	NA	NA	NA	**4.45**	**8.31**	**6.46**	**11.5**	**12.6**	**5.01**	**5.19**	**4.36**	**4.66**	**9.94**	**11.1**	NA	**11.2**	**15.7**
	Selenium	400	400	NA	NA	NA	NA	NA	2.27 U	2.12 U	2.07 U	2.35 U	2.36 U	2.14 U	2.12 U	2.22 U	2.13 U	2.22 U	2.31 U	NA	2.14 U	2.31 U
	Silver	100	100	NA	NA	NA	NA	NA	0.454 U	0.425 U	0.414 U	0.470 U	0.472 U	0.428 U	0.423 U	0.444 U	0.425 U	0.444 U	0.462 U	NA	0.429 U	0.461 U
	Thallium	8	8	NA	NA	NA	NA	NA	2.27 U	2.12 U	2.07 U	2.35 U	2.36 U	2.14 U	2.12 U	2.22 U	2.13 U	2.22 U	2.31 U	NA	2.14 U	2.31 U
	Vanadium	400	400	NA	NA	NA	NA	NA	**12.2**	**28.8**	**13.2**	**39.4**	**42.6**	**12.0**	**23.2**	**12.7**	**12.6**	**21.2**	**43.4**	NA	**34.5**	**42.4**
	Zinc	1,000	1,000	NA	NA	NA	NA	NA	**31.6**	**16.4**	**32.0**	**22.8**	**22.3**	**22.2**	**16.8**	**25.9**	**26.2**	**43.0**	**22.7**	NA	**34.0**	**36.7**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 1
Summary of Fill and Soil Sampling Results
Kings Cove Conservation Restriction Area - Upland Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample ID:		UU-04			UU-05				UU-6	UU-07	UU-08		UU-09A	UU-09B	
		Sample Name:		UU-4 (0-3)	UU-4 (3-7)	SS-154 (0-1)	UU-5 (0-3)	UU-5 (3-6.5)	SS-136 (0-1)	DUP 12	UU-6 (0-3)	UU-7 (0-3)	UU-8 (0-3)	UU-8 (3-4)	UU-9A (0-3)	UU-9B (0-3)	UU-9B (3-6)
		Current Sample Depth (ft.)		0-3 ft	3-7 ft	0-1 ft	0-3 ft	3-6.5 ft	0-1 ft	0-1 ft	0-3 ft	0-3 ft	0-3 ft	3-4 ft	0-3 ft	0-3 ft	3-6 ft
		Sample Date:		01/14/2021	01/14/2021	02/03/2021	01/14/2021	01/14/2021	02/03/2021	02/03/2021	01/15/2021	01/14/2021	01/13/2021	01/13/2021	01/13/2021	01/13/2021	01/13/2021
		S-1/GW-2	S-1/GW-3							Field Dup							
VPH																	
(mg/kg)	C9-C10 Aromatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C5-C8 Aliphatics	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	C9-C12 Aliphatics	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzene	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Toluene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Ethylbenzene	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	p/m-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	o-xylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Xylenes (total)	100	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methyl tert butyl ether (MTBE)	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	20	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH																	
(mg/kg)	C9-C18 Aliphatics	1,000	1,000	8.12 U	7.87 U	NA	8.86 U	**10.6**	NA	NA	7.07 U	7.35 U	7.31 U	6.75 U	7.16 U	7.45 U	7.33 U
	C19-C36 Aliphatics	3,000	3,000	**13.7**	**11.5**	NA	8.86 U	**14.4**	NA	NA	7.07 U	7.35 U	7.31 U	6.75 U	7.16 U	**8.06**	**13.5**
	C11-C22 Aromatics	1,000	1,000	**11.0**	**18.0**	NA	**14.7**	**31.4**	NA	NA	**9.32**	**9.35**	**11.0**	6.75 U	7.16 U	**12.3**	**9.53**
	Naphthalene	20	500	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	2-Methylnaphthalene	80	300	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Acenaphthylene	600	10	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Acenaphthene	1,000	1,000	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Fluorene	1,000	1,000	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Phenanthrene	500	500	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	**0.662**	0.337 U	0.358 U	**0.615**	0.367 U
	Anthracene	1,000	1,000	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Fluoranthene	1,000	1,000	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	**0.684**	0.337 U	0.358 U	**0.565**	0.367 U
	Pyrene	1,000	1,000	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	**0.599**	0.337 U	0.358 U	**0.501**	0.367 U
	Benzo(a)anthracene	7	7	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Chrysene	70	70	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Benzo(b)fluoranthene	7	7	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Benzo(k)fluoranthene	70	70	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Benzo(a)pyrene	2	2	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Indeno(1,2,3-cd)pyrene	7	7	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Dibenz(a,h)anthracene	0.7	0.7	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
	Benzo(g,h,i)perylene	1,000	1,000	0.406 U	0.394 U	NA	0.443 U	0.418 U	NA	NA	0.353 U	0.368 U	0.365 U	0.337 U	0.358 U	0.372 U	0.367 U
Metals, total																	
(mg/kg)	Antimony	20	20	**2.78**	**2.68**	NA	2.70 U	**3.46**	NA	NA	2.16 U	2.18 U	2.17 U	2.02 U	2.22 U	2.15 U	2.14 U
	Arsenic	20	20	**91.0**	**79.1**	**9.45**	**40.0**	**86.3**	**2.56**	**3.04**	**2.95**	**25.9**	**12.7**	**4.11**	**16.8**	**19.0**	**27.8**
	Barium	1,000	1,000	**104**	**93.3**	NA	**65.6**	**122**	NA	NA	**13.3**	**33.9**	**27.6**	**8.01**	**29.5**	**41.5**	**47.6**
	Beryllium	90	90	**2.28**	**2.09**	NA	**1.32**	**2.21**	NA	NA	0.216 U	**0.743**	**0.274**	0.202 U	**0.294**	**0.439**	**0.651**
	Cadmium	70	70	0.474 U	0.483 U	NA	0.540 U	0.500 U	NA	NA	0.432 U	0.437 U	0.435 U	0.404 U	0.445 U	0.430 U	**0.463**
	Chromium	100	100	**15.5**	**14.0**	NA	**10.8**	**16.1**	NA	NA	**4.95**	**7.56**	**7.74**	**2.81**	**8.57**	**9.69**	**11.5**
	Copper	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	200	200	**17.6**	**16.7**	NA	**24.6**	**26.1**	NA	NA	**9.57**	**9.78**	**10.9**	**4.40**	**10.8**	**13.0**	**11.3**
	Mercury	20	20	**0.120**	**0.115**	NA	0.099 U	**0.147**	NA	NA	0.071 U	0.089 U	0.071 U	0.072 U	0.074 U	0.074 U	0.079 U
	Nickel	600	600	**24.4**	**19.3**	NA	**13.8**	**21.8**	NA	NA	**4.52**	**7.96**	**7.48**	**2.53**	**8.18**	**9.21**	**12.1**
	Selenium	400	400	2.37 U	2.41 U	NA	2.70 U	2.50 U	NA	NA	2.16 U	2.18 U	2.17 U	2.02 U	2.22 U	2.15 U	2.14 U
	Silver	100	100	0.474 U	0.483 U	NA	0.540 U	0.500 U	NA	NA	0.432 U	0.437 U	0.435 U	0.404 U	0.445 U	0.430 U	0.428 U
	Thallium	8	8	2.37 U	2.41 U	NA	2.70 U	2.50 U	NA	NA	2.16 U	2.18 U	2.17 U	2.02 U	2.22 U	2.15 U	2.14 U
	Vanadium	400	400	**96.2**	**74.9**	NA	**44.0**	**88.6**	NA	NA	**12.6**	**29.9**	**24.6**	**9.40**	**27.9**	**29.8**	**36.8**
	Zinc	1,000	1,000	**28.8**	**26.6**	NA	**26.3**	**25.5**	NA	NA	**18.6**	**15.4**	**23.8**	**9.24**	**22.7**	**25.4**	**31.3**

Notes:

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

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

Values shown in bold and shaded type exceed one or more of the listed standards.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

Table 2
Summary of Groundwater Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

Analysis	Analyte	Sample Location:		MW-602		MW-603R		MW-604		MW-605	
		Sample ID:		MW-602		MW-603		MW-604		MW-605	
		Sample Date:		4/8/2021		4/8/2021		4/7/2021		4/7/2021	
		GW-2	GW-3								
VPH											
(ug/L)	C9-C10 Aromatics	4,000	50,000	100	U	100	U	100	U	100	U
	C5-C8 Aliphatics	3,000	50,000	100	U	100	U	100	U	100	U
	C9-C12 Aliphatics	5,000	50,000	100	U	100	U	100	U	100	U
	Benzene	1,000	10,000	2.00	U	2.00	U	2.00	U	2.00	U
	Toluene	50,000	40,000	2.00	U	2.00	U	2.00	U	2.00	U
	Ethylbenzene	20,000	5,000	2.00	U	2.00	U	2.00	U	2.00	U
	p/m-Xylene	NS	NS	2.00	U	2.00	U	2.00	U	2.00	U
	o-Xylene	NS	NS	2.00	U	2.00	U	2.00	U	2.00	U
	Xylenes (total)	3,000	5,000	2.00	U	2.00	U	2.00	U	2.00	U
	Methyl tert butyl ether	50,000	50,000	3.00	U	3.00	U	3.00	U	3.00	U
	Naphthalene	700	20,000	4.00	U	4.00	U	4.00	U	4.00	U
EPH											
(ug/L)	C9-C18 Aliphatics	5,000	50,000	100	U	100	U	100	U	100	U
	C19-C36 Aliphatics	NS	50,000	100	U	100	U	100	U	100	U
	C11-C22 Aromatics	50,000	5,000	100	U	100	U	100	U	100	U
	Naphthalene	700	20,000	10.0	U	10.0	U	10.0	U	10.0	U
	2-Methylnaphthalene	2,000	20,000	10.0	U	10.0	U	10.0	U	10.0	U
	Acenaphthylene	10,000	40	10.0	U	10.0	U	10.0	U	10.0	U
	Acenaphthene	NS	10,000	10.0	U	10.0	U	10.0	U	10.0	U
	Fluorene	NS	40	10.0	U	10.0	U	10.0	U	10.0	U
	Phenanthrene	NS	10,000	10.0	U	10.0	U	10.0	U	10.0	U
	Anthracene	NS	30	10.0	U	10.0	U	10.0	U	10.0	U
	Fluoranthene	NS	200	10.0	U	10.0	U	10.0	U	10.0	U
	Pyrene	NS	20	10.0	U	10.0	U	10.0	U	10.0	U
	Benzo(a)anthracene	NS	1,000	10.0	U	10.0	U	10.0	U	10.0	U
	Chrysene	NS	70	10.0	U	10.0	U	10.0	U	10.0	U
	Benzo(b)fluoranthene	NS	400	10.0	U	10.0	U	10.0	U	10.0	U
	Benzo(k)fluoranthene	NS	100	10.0	U	10.0	U	10.0	U	10.0	U
	Benzo(a)pyrene	NS	500	10.0	U	10.0	U	10.0	U	10.0	U
	Indeno(1,2,3-cd)Pyrene	NS	100	10.0	U	10.0	U	10.0	U	10.0	U
	Dibenzo(a,h)anthracene	NS	40	10.0	U	10.0	U	10.0	U	10.0	U
	Benzo(ghi)perylene	NS	20	10.0	U	10.0	U	10.0	U	10.0	U
Metals, total											
(ug/L)	Antimony	NS	8,000	50	U	50	U	50	U	50	U
	Arsenic	NS	900	5.0	U	**28.6**		**7.0**		**7.9**	
	Barium	NS	50,000	**32**		**40**		**23**		**24**	
	Beryllium	NS	200	5	U	5	U	5	U	5	U
	Cadmium	NS	4	4	U	4	U	4	U	4	U
	Chromium	NS	300	10	U	10	U	10	U	10	U
	Lead	NS	10	10	U	10	U	10	U	10	U
	Mercury	NS	20	0.2	U	0.2	U	0.2	U	0.2	U
	Nickel	NS	200	25	U	25	U	25	U	25	U
	Selenium	NS	100	10	U	10	U	10	U	10	U
	Silver	NS	7	7	U	7	U	7	U	7	U
	Thallium	NS	3,000	20	U	20	U	20	U	20	U
	Vanadium	NS	4,000	10	U	**73**		10	U	**14**	
	Zinc	NS	900	50	U	50	U	50	U	50	U

Notes:

ug/L - micrograms per liter.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

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

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

RC - Reportable concentration.

*- Sample was also analyzed for SW8270D SIM;

No anlaytes were detected with the detection limit at 0.10 ug/L.

Table 3
Summary of Fill Below Mean High Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	LC-A-01		LC-A-02		LC-B-01		LC-B-02		SL1-01		SL1-01A		SL1-02		SL1-03		SL1-04		SL1-04A		SL1-05		SL1-06		SL1-07	
			Sample Depth:	0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft	
			Sample Date:	6/1/2022		6/1/2022		6/1/2022		6/1/2022		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020	
	Analyte	Unit	Site-Specific AET																									combo	
PAHs																													
	Naphthalene	mg/kg	N/A	0.00465	U	**0.00679**		**0.00973**		0.00497	U	**0.0418**		**0.0237**		**0.00525**		**0.0102**		**0.0147**		**0.0171**		**0.0229**		**0.0320**		**0.02275**	
	2-Methylnaphthalene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	0.00497	U	**0.0295**		**0.0235**		**0.00686**		**0.0198**		**0.0349**		**0.0205**		**0.0286**		**0.0205**		**0.04575**	
	2-Chloronaphthalene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	0.00497	U	0.00541	U	0.00417	U	0.00525	U	0.00548	U	0.00502	U	0.00454	U	**0.00630**		0.00462	U	0.00442	U
	Acenaphthylene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	0.00497	U	**0.0516**		**0.118**		**0.0497**		**0.0654**		**0.0156**		**0.00829**		**0.0233**		**0.00922**		**0.008585**	
	Acenaphthene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	0.00497	U	**0.0716**		0.00417	U	0.00525	U	0.00548	U	0.00502	U	**0.0280**		**0.0235**		**0.00742**		**0.00757**	
	Fluorene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	0.00497	U	**0.0545**		**0.0108**		0.00525	U	**0.00966**		0.00502	U	**0.0218**		**0.0197**		**0.00552**		**0.00622**	
	Phenanthrene	mg/kg	N/A	**0.00758**		**0.00987**		**0.00995**		**0.0241**		**0.466**		**0.297**		**0.0826**		**0.153**		**0.106**		**0.183**		**0.142**		**0.0869**		**0.1745**	
	Anthracene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	**0.00564**		**0.134**		**0.101**		**0.0387**		**0.0594**		**0.0183**		**0.0456**		**0.0479**		**0.0259**		**0.0206**	
	Fluoranthene	mg/kg	N/A	**0.0154**		**0.0188**		**0.0356**		**0.0760**		**0.829**		**0.685**		**0.305**		**0.386**		**0.103**		**0.249**		**0.238**		**0.122**		**0.191**	
	Pyrene	mg/kg	N/A	**0.0149**		**0.0190**		**0.0314**		**0.0639**		**0.62**		**0.663**		**0.241**		**0.317**		**0.108**		**0.21**		**0.193**		**0.0968**		**0.176**	
	Benzo(a)anthracene	mg/kg	N/A	**0.00800**		**0.00936**		**0.0173**		**0.0298**		**0.422**		**0.46**		**0.186**		**0.235**		**0.0626**		**0.125**		**0.128**		**0.0757**		**0.1061**	
	Chrysene	mg/kg	N/A	**0.00998**		**0.0128**		**0.0189**		**0.0445**		**0.43**		**0.431**		**0.182**		**0.256**		**0.0983**		**0.149**		**0.16**		**0.103**		**0.1365**	
	Benzo(b)fluoranthene	mg/kg	N/A	**0.0100**		**0.0134**		**0.0140**		**0.0499**		**0.404**		**0.358**		**0.166**		**0.213**		**0.0726**		**0.136**		**0.167**		**0.0974**		**0.12375**	
	Benzo(k)fluoranthene	mg/kg	N/A	**0.00847**		**0.0115**		**0.0174**		**0.0392**		**0.32**		**0.331**		**0.149**		**0.192**		**0.0475**		**0.105**		**0.132**		**0.0566**		**0.075**	
	Benzo(a)pyrene	mg/kg	N/A	**0.00874**		**0.0118**		**0.0185**		**0.0432**		**0.403**		**0.424**		**0.18**		**0.23**		**0.0672**		**0.135**		**0.152**		**0.0617**		**0.0959**	
	Indeno(1,2,3-cd)Pyrene	mg/kg	N/A	**0.00629**		**0.00881**		**0.0117**		**0.0350**		**0.298**		**0.24**		**0.123**		**0.145**		**0.0501**		**0.0920**		**0.133**		**0.0491**		**0.0811**	
	Dibenzo(a,h)anthracene	mg/kg	N/A	0.00465	U	0.00497	U	0.00412	U	**0.00705**		**0.0860**		**0.0591**		**0.0280**		**0.0376**		**0.0170**		**0.0220**		**0.0394**		**0.0136**		**0.02155**	
	Benzo(ghi)perylene	mg/kg	N/A	0.00690	U	0.00917	U	0.0108	U	**0.0353**		**0.256**		**0.221**		**0.114**		**0.141**		**0.0596**		**0.0866**		**0.127**		**0.0477**		**0.0842**	
	Total PAHs	mg/kg	N/A	**0.089**		**0.122**		**0.184**		**0.454**		**4.92**		**4.35**		**1.87**		**2.48**		**0.890**		**1.63**		**1.78**		**0.916**		**1.38**	
Metals, total																													
	Antimony	mg/kg	N/A	1.9	U	2.0	U	1.7	U	2.0	U	2.1	U	1.8	U	2.1	U	2.3	U	**2.4**		1.7	U	**2.2**		1.9	U	**2.05**	**J**
	Arsenic	mg/kg	N/A	**3.1**		**2.9**		**4.4**		**6.1**		**11**		**12**		**14**		**22**		**30**		**10**		**13**		**11**		**14**	
	Barium	mg/kg	N/A	**13**		**6.7**		**10**		**20**		**14**		**19**		**14**		**12**		**9.8**		**11**		**17**		**17**		**18**	
	Beryllium	mg/kg	N/A	0.36	U	0.38	U	**0.34**		**0.64**		0.39	U	**0.88**		**0.76**		**0.60**		**0.59**		**0.34**		**0.62**		**0.58**		**0.43**	
	Cadmium	mg/kg	N/A	0.24	U	0.25	U	0.21	U	0.25	U	0.26	U	0.22	U	0.26	U	0.28	U	0.25	U	0.21	U	0.25	U	0.23	U	0.23	U
	Chromium	mg/kg	N/A	**12**		**14**		**8.0**		**24**		**13**		**9.8**		**20**		**11**		**11**		**19**		**16**		**18**		**23.5**	
	Lead	mg/kg	N/A	**26**		**18**		**47**		**58**		**51**		**31**		**48**		**33**		**50**		**26**		**47**		**58**		**27.5**	
	Mercury	mg/kg	N/A	0.080	U	0.081	U	**0.084**		**0.194**		0.107	U	0.071	U	0.096	U	0.102	U	0.098	U	0.082	U	0.103	U	0.081	U	0.083	U
	Nickel	mg/kg	100	**12**		**10**		**12**		**16**		**13**		**22**		**47**		**21**		**100**		**36**		**46**		**77**		**3,550**	
	Selenium	mg/kg	N/A	2.4	U	2.5	U	2.1	U	2.5	U	2.6	U	2.2	U	2.6	U	2.8	U	2.5	U	2.1	U	2.5	U	2.3	U	2.3	U
	Silver	mg/kg	N/A	0.60	U	0.63	U	0.52	U	0.62	U	0.65	U	0.55	U	0.65	U	0.71	U	0.63	U	0.54	U	0.63	U	0.58	U	0.57	U
	Thallium	mg/kg	N/A	0.48	U	0.50	U	0.42	U	0.50	U	0.52	U	0.44	U	0.52	U	0.57	U	0.50	U	0.43	U	0.50	U	0.47	U	0.45	U
	Vanadium	mg/kg	470	**20**		**23**		**23**		**30**		**37**		**53**		**300**		**230**		**630**		**320**		**160**		**1,100**		**9,500**	
	Zinc	mg/kg	N/A	**200**		**53**		**360**		**240**		**48**		**46**		**84**		**50**		**47**		**49**		**82**		**59**		**70.5**	
AVS/SEM Metals																													
	Sulfide, Acid Volatile	umoles/g	N/A	0.125	U	**0.428**	**B**	0.132	U	**0.136**	**B**	NA		**0.218**	**B**	NA		0.624	U	NA		0.158	U	NA		0.624	U	NA	
	Cadmium	umoles/g	N/A	0.001779	U	0.002042	U	0.001888	U	0.001713	U	NA		0.002111	U	NA		0.001876	U	NA		0.002251	U	NA		0.002071	U	NA	
	Copper	umoles/g	N/A	**0.048066**		**0.026408**		**0.061728**		**0.087184**		NA		**0.078267**		NA		**0.324969**		NA		**0.265776**		NA		**0.387891**		NA	
	Lead	umoles/g	N/A	**0.033881**		**0.027488**		**0.030912**		**0.058908**		NA		**0.067173**		NA		**0.19483**		NA		**0.481611**		NA		**0.22731**		NA	
	Nickel	umoles/g	N/A	0.034068	U	0.039106	U	0.036152	U	0.032793	U	NA		0.040419	U	NA		**0.092356**		NA		**0.079556**		NA		**0.34198**		NA	
	Zinc	umoles/g	N/A	**0.149376**		**0.141292**		**0.215821**		**0.193918**		NA		**0.164695**		NA		**0.567617**		NA		**0.469683**		NA		**0.691273**		NA	
	SEM/AVS Ratio	none	N/A	NA		**0.456044**		NA		**2.50007**		NA		**1.42264**		NA		NA		NA		NA		NA		NA		NA	

Table 3
Summary of Fill Below Mean High Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	LC-A-01	LC-A-02	LC-B-01	LC-B-02	SL1-01	SL1-01A	SL1-02	SL1-03	SL1-04	SL1-04A	SL1-05	SL1-06	SL1-07
			Sample Depth:	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date:	6/1/2022	6/1/2022	6/1/2022	6/1/2022	11/13/2020	6/1/2022	11/13/2020	11/13/2020	11/13/2020	6/1/2022	11/13/2020	11/13/2020	11/13/2020
	Analyte	Unit	Site-Specific AET													combo
Grain Size																
	Coarse Gravel	%	N/A	**4.60**	**2.70**	**4.90**	**1.40**	NA	**7.00**	NA	NA	NA	**16.2**	NA	NA	NA
	Fine Gravel	%	N/A	**13.9**	**6.80**	**4.90**	**1.50**	NA	**20.0**	NA	NA	NA	**16.3**	NA	NA	NA
	Total Gravel	%	N/A	**18.5**	**9.50**	**9.80**	**2.90**	NA	**27.0**	NA	NA	NA	**32.5**	NA	NA	NA
	Coarse Sand	%	N/A	**14.2**	**6.40**	**22.2**	**25.8**	NA	**21.9**	NA	NA	NA	**36.7**	NA	NA	NA
	Medium Sand	%	N/A	**42.2**	**41.6**	**34.3**	**36.4**	NA	**34.3**	NA	NA	NA	**24.1**	NA	NA	NA
	Fine Sand	%	N/A	**23.2**	**38.5**	**32.2**	**27.0**	NA	**14.5**	NA	NA	NA	**4.20**	NA	NA	NA
	Total Sand	%	N/A	**79.6**	**86.5**	**88.7**	**89.2**	NA	**70.7**	NA	NA	NA	**65.0**	NA	NA	NA
	Total Fines	%	N/A	**1.90**	**4.00**	**1.50**	**7.90**	NA	**2.30**	NA	NA	NA	**2.50**	NA	NA	NA
	Cobbles	%	N/A	0.100 U	0.100 U	0.100 U	0.100 U	NA	0.100 U	NA	NA	NA	0.100 U	NA	NA	NA
General Chemistry																
	Total Organic Carbon - 1	%	N/A	**0.147**	**0.318**	**0.164**	**0.897**	NA	**2.86**	NA	**8.52**	NA	**5.48**	NA	**10.7**	NA
	Total Organic Carbon - 2	%	N/A	**0.182**	**0.368**	**0.149**	**0.951**	NA	**2.34**	NA	**10.6**	NA	**5.42**	NA	**10.3**	NA
	Total Organic Carbon - Average	%	N/A	**0.165**	**0.343**	**0.157**	**0.924**	NA	**2.60**	NA	**9.58**	NA	**5.45**	NA	**10.5**	NA
	Salinity		N/A	**5.8**	**4.2**	**2.2**	2.0 U	NA	2.0 U	NA	NA	NA	**2.7**	NA	NA	NA
	pH	su	N/A	**6.8**	**7.8**	**7.7**	**7.5**	NA	**8.2**	NA	NA	NA	**8.2**	NA	NA	NA
	Chromium (VI)	mg/kg	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oxidation Reduction Potential	mV	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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

umoles/g - micromhos per gram.

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

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

PAHs - Polycyclic Aromatic Hydrocarbons.

AVS - Acid Volatile Sulfide.

SEM Metals - Simultaneously Extractable Metals.

N/A - No Site-Specific AET developed.

AET - Apparent Effects Threshold.

Bold and shaded results equal or exceed the Site-Specific AET.

Table 3
Summary of Fill Below Mean High Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	SL1-07A		SL1-08		SL1-09		SL1-10		SL2-01		SL2-02		SL2-02A		SL2-03		SL2-04		SL2-05		SL2-05A		SL2-06		SL2-07		SL2-08		SL2-09	
			Sample Depth:	0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft	
			Sample Date:	6/1/2022		11/13/2020		11/13/2020		11/13/2020		11/13/2020		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020		11/13/2020	
	Analyte	Unit	Site-Specific AET			combo														combo													
PAHs																																	
	Naphthalene	mg/kg	N/A	**0.0128**		**0.0154**		**0.0152**		**0.0156**		**0.0400**		**0.0383**		**0.107**		**0.0453**		**0.00616**	**J**	**0.0127**		**0.0138**		**0.0209**		**0.00900**		**0.0176**		**0.0104**	
	2-Methylnaphthalene	mg/kg	N/A	**0.0241**		**0.0279**		**0.0330**		**0.0236**		**0.1**		**0.0753**		**0.181**		**0.0684**		**0.00927**		**0.0162**		**0.00927**		**0.0297**		**0.0147**		**0.0326**		**0.0126**	
	2-Chloronaphthalene	mg/kg	N/A	0.00419	U	0.00443	U	0.00467	U	0.00593	U	0.00598	U	0.00662	U	0.00687	U	0.00679	U	0.00524	U	0.00531	U	0.00449	U	0.00573	U	0.00497	U	0.00461	U	0.00520	U
	Acenaphthylene	mg/kg	N/A	**0.00512**		**0.0060**		0.00467	U	**0.0128**		**0.14**		**0.0316**		**0.0367**		**0.0198**		**0.00688**	**J**	**0.0148**		**0.00558**		**0.0777**		**0.00514**		**0.0135**		0.00520	U
	Acenaphthene	mg/kg	N/A	0.00419	U	0.00443	U	0.00467	U	0.00593	U	**0.0166**		**0.0133**		**0.0330**		**0.0156**		0.00524	U	**0.00651**		0.00449	U	**0.0267**		0.00497	U	0.00461	U	0.00520	U
	Fluorene	mg/kg	N/A	0.00419	U	0.00443	U	0.00467	U	0.00593	U	**0.0193**		**0.0139**		**0.0375**		**0.0157**		0.00524	U	**0.00652**		0.00449	U	**0.0478**		0.00497	U	0.00461	U	0.00520	U
	Phenanthrene	mg/kg	N/A	**0.0777**		**0.0542**		**0.0822**		**0.0864**		**0.392**		**0.186**		**0.577**		**0.22**		**0.0254**		**0.0483**		**0.0293**		**0.611**		**0.0294**		**0.0510**		**0.0321**	
	Anthracene	mg/kg	N/A	**0.0102**		**0.0089**		**0.00796**		**0.0182**		**0.134**		**0.0628**		**0.0880**		**0.0540**		**0.00638**	**J**	**0.0144**		**0.00599**		**0.147**		**0.00697**		**0.0176**		**0.007**	
	Fluoranthene	mg/kg	N/A	**0.0846**		**0.0412**		**0.0495**		**0.128**		**1.21**		**0.418**		**0.944**		**0.241**		**0.04295**		**0.0904**		**0.0516**		**0.995**		**0.0541**		**0.0922**		**0.0616**	
	Pyrene	mg/kg	N/A	**0.0852**		**0.0372**		**0.0627**		**0.104**		**0.989**		**0.321**		**0.676**		**0.207**		**0.03655**		**0.0811**		**0.0480**		**0.812**		**0.0425**		**0.0828**		**0.0497**	
	Benzo(a)anthracene	mg/kg	N/A	**0.0448**		**0.0261**		**0.0369**		**0.0613**		**0.669**		**0.199**		**0.396**		**0.127**		**0.02425**		**0.0508**		**0.0242**		**0.457**		**0.0286**		**0.0550**		**0.0307**	
	Chrysene	mg/kg	N/A	**0.0699**		**0.0507**		**0.0661**		**0.103**		**0.84**		**0.293**		**0.524**		**0.179**		**0.03135**		**0.0647**		**0.0386**		**0.501**		**0.0403**		**0.0713**		**0.0393**	
	Benzo(b)fluoranthene	mg/kg	N/A	**0.0544**		**0.0391**		**0.0500**		**0.0967**		**0.846**		**0.321**		**0.499**		**0.139**		**0.03675**		**0.0851**		**0.0401**		**0.396**		**0.0443**		**0.0742**		**0.0436**	
	Benzo(k)fluoranthene	mg/kg	N/A	**0.0347**		**0.0205**		**0.0224**		**0.0685**		**0.633**		**0.185**		**0.361**		**0.107**		**0.02115**		**0.0472**		**0.0313**		**0.283**		**0.0249**		**0.0463**		**0.0302**	
	Benzo(a)pyrene	mg/kg	N/A	**0.0501**		**0.0265**		**0.0381**		**0.0777**		**0.789**		**0.249**		**0.388**		**0.13**		**0.0263**		**0.0643**		**0.0360**		**0.389**		**0.0340**		**0.0612**		**0.0357**	
	Indeno(1,2,3-cd)Pyrene	mg/kg	N/A	**0.0327**		**0.0208**		**0.0314**		**0.0736**		**0.658**		**0.215**		**0.3**		**0.104**		**0.02435**		**0.0622**		**0.0294**		**0.274**		**0.0301**		**0.0545**		**0.0328**	
	Dibenzo(a,h)anthracene	mg/kg	N/A	**0.00963**		**0.00783**		**0.0144**		**0.0179**		**0.147**		**0.0506**		**0.0778**		**0.0319**		**0.006745**	**J**	**0.0179**		**0.00634**		**0.0697**		**0.00736**		**0.0146**		**0.00721**	
	Benzo(ghi)perylene	mg/kg	N/A	**0.0354**		**0.0253**		**0.0360**		**0.0855**		**0.632**		**0.209**		**0.304**		**0.108**		**0.02515**		**0.0622**		**0.0295**		**0.263**		**0.0312**		**0.0570**		**0.0327**	
	Total PAHs	mg/kg	N/A	**0.621**		**0.421**		**0.565**		**0.991**		**8.26**		**2.89**		**5.53**		**1.82**		**0.345**		**0.751**		**0.393**		**5.41**		**0.417**		**0.755**		**0.446**	
Metals, total																																	
	Antimony	mg/kg	N/A	1.6	U	1.8	U	1.8	U	2.5	U	2.4	U	2.7	U	2.6	U	2.7	U	2.1	U	2.3	U	1.9	U	2.3	U	2.0	U	**2.1**		2.1	U
	Arsenic	mg/kg	N/A	**21**		**15**		**18**		**24**		**14**		**15**		**13**		**22**		**17**		**16**		**20**		**24**		**23**		**20**		**8.0**	
	Barium	mg/kg	N/A	**25**		**30**		**20**		**17**		**18**		**29**		**23**		**40**		**13.5**		**21**		**54**		**23**		**14**		**19**		**6.3**	
	Beryllium	mg/kg	N/A	**0.78**		**0.54**		**0.59**		**0.78**		**0.60**		**0.62**		**0.65**		**0.89**		**0.465**		**0.60**		**0.94**		**0.72**		**0.54**		**0.55**		0.39	U
	Cadmium	mg/kg	N/A	0.21	U	0.23	U	0.22	U	0.31	U	0.30	U	0.34	U	0.33	U	0.34	U	0.26	U	0.29	U	0.24	U	0.29	U	0.25	U	0.23	U	0.26	U
	Chromium	mg/kg	N/A	**22**		**65.34**		**13**		**21**		**18**		**32**		**21**		**43**		**13**		**24**		**18**		**24**		**14**		**28**		**10**	
	Lead	mg/kg	N/A	**49**		**53**		**54**		**67**		**47**		**78**		**50**		**100**		**48.5**		**580**		**65**		**100**		**31**		**40**		**22**	
	Mercury	mg/kg	N/A	0.077	U	0.088	U	0.084	U	0.100	U	0.126	U	**0.198**		**0.161**		**0.221**		0.100	U	0.098	U	**0.106**		**0.174**		0.095	U	0.076	U	0.110	U
	Nickel	mg/kg	100	**190**		**2,100**		**60**		**24**		**41**		**93**		**27**		**64**		**31**		**170**		**67**		**94**		**32**		**40**		**17**	
	Selenium	mg/kg	N/A	2.1	U	2.3	U	2.2	U	3.1	U	3.0	U	3.4	U	3.3	U	3.4	U	2.6	U	2.9	U	2.4	U	2.9	U	2.5	U	2.3	U	2.6	U
	Silver	mg/kg	N/A	0.52	U	0.58	U	0.56	U	0.77	U	0.75	U	0.84	U	0.82	U	0.85	U	0.65	U	0.72	U	0.60	U	0.72	U	0.62	U	0.58	U	0.65	U
	Thallium	mg/kg	N/A	0.41	U	0.46	U	0.45	U	0.62	U	0.60	U	0.67	U	0.66	U	0.68	U	0.52	U	0.29	U	0.48	U	0.58	U	0.50	U	0.46	U	0.52	U
	Vanadium	mg/kg	470	**890**		**7,200**		**450**		**120**		**150**		**1,400**		**100**		**220**		**80.5**		**480**		**330**		**410**		**200**		**110**		**49**	
	Zinc	mg/kg	N/A	**160**		**72**		**81**		**110**		**73**		**110**		**67**		**130**		**59.5**		**190**		**84**		**110**		**74**		**120**		**81**	
AVS/SEM Metals																																	
	Sulfide, Acid Volatile	umoles/g	N/A	0.141	U	NA		NA		NA		NA		NA		**0.291**	**B**	**6.01**		NA		NA		0.157	U	NA		NA		0.624	U	NA	
	Cadmium	umoles/g	N/A	0.002017	U	NA		NA		NA		NA		NA		0.003281	U	0.003395	U	NA		NA		0.002242	U	NA		NA		0.001357	U	NA	
	Copper	umoles/g	N/A	**0.427343**		NA		NA		NA		NA		NA		**0.142260**		**0.503314**		NA		NA		**0.340850**		NA		NA		**0.830**		NA	
	Lead	umoles/g	N/A	**0.089062**		NA		NA		NA		NA		NA		**0.103487**		**0.46464**		NA		NA		**0.247132**		NA		NA		**0.152185**		NA	
	Nickel	umoles/g	N/A	**0.379632**		NA		NA		NA		NA		NA		0.062820	U	**0.358799**		NA		NA		**0.202334**		NA		NA		**0.105079**		NA	
	Zinc	umoles/g	N/A	**0.444865**		NA		NA		NA		NA		NA		**0.274667**		**1.42365**		NA		NA		**0.688892**		NA		NA		**0.678504**		NA	
	SEM/AVS Ratio	none	N/A	NA		NA		NA		NA		NA		NA		**1.78837**		**0.457638**		NA		NA		NA		NA		NA		NA		NA	

Table 3
Summary of Fill Below Mean High Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	SL1-07A		SL1-08		SL1-09		SL1-10		SL2-01		SL2-02		SL2-02A		SL2-03		SL2-04		SL2-05		SL2-05A		SL2-06		SL2-07		SL2-08		SL2-09	
			Sample Depth:	0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft	
			Sample Date:	6/1/2022		11/13/2020		11/13/2020		11/13/2020		11/13/2020		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020		11/13/2020	
	Analyte	Unit	Site-Specific AET			combo														combo												
Grain Size																																
	Coarse Gravel	%	N/A	**16.2**		NA		NA		NA		NA		NA		**5.10**		NA		NA		NA		**3.90**		NA		NA		NA		NA	
	Fine Gravel	%	N/A	**16.2**		NA		NA		NA		NA		NA		**10.8**		NA		NA		NA		**15.0**		NA		NA		NA		NA	
	Total Gravel	%	N/A	**32.4**		NA		NA		NA		NA		NA		**15.9**		NA		NA		NA		**18.9**		NA		NA		NA		NA	
	Coarse Sand	%	N/A	**37.5**		NA		NA		NA		NA		NA		**14.7**		NA		NA		NA		**19.5**		NA		NA		NA		NA	
	Medium Sand	%	N/A	**20.1**		NA		NA		NA		NA		NA		**36.0**		NA		NA		NA		**46.8**		NA		NA		NA		NA	
	Fine Sand	%	N/A	**8.40**		NA		NA		NA		NA		NA		**20.1**		NA		NA		NA		**11.0**		NA		NA		NA		NA	
	Total Sand	%	N/A	**66.0**		NA		NA		NA		NA		NA		**70.8**		NA		NA		NA		**77.3**		NA		NA		NA		NA	
	Total Fines	%	N/A	**1.60**		NA		NA		NA		NA		NA		**13.3**		NA		NA		NA		**3.80**		NA		NA		NA		NA	
	Cobbles	%	N/A	0.100	U	NA		NA		NA		NA		NA		0.100	U	NA		NA		NA		0.100	U	NA		NA		NA		NA	
General Chemistry																																
	Total Organic Carbon - 1	%	N/A	**6.42**		NA		NA		NA		NA		NA		**20.9**		**8.21**		NA		NA		**2.76**		NA		NA		**2.94**		NA	
	Total Organic Carbon - 2	%	N/A	**4.76**		NA		NA		NA		NA		NA		**18.3**		**9.24**		NA		NA		**3.35**		NA		NA		**2.87**		NA	
	Total Organic Carbon - Average	%	N/A	**5.59**		NA		NA		NA		NA		NA		**19.6**		**8.72**		NA		NA		**3.05**		NA		NA		**2.90**		NA	
	Salinity		N/A	**2.0**		NA		NA		NA		NA		NA		**9.0**		NA		NA		NA		**3.9**		NA		NA		NA		NA	
	pH	su	N/A	**8.1**		**8.05**		NA		NA		NA		NA		**7.4**		NA		NA		NA		**8.0**		NA		NA		NA		NA	
	Chromium (VI)	mg/kg	N/A	NA		**1.54**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Oxidation Reduction Potential	mV	N/A	NA		**190**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

Notes:

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

umoles/g - micromhos per gram.

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

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

PAHs - Polycyclic Aromatic Hydrocarbons.

AVS - Acid Volatile Sulfide.

SEM Metals - Simultaneously Extractable Metals.

N/A - No Site-Specific AET developed.

AET - Apparent Effects Threshold.

Bold and shaded results equal or exceed the Site-Specific AET.

Table 3
Summary of Fill Below Mean High Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	SL2-09A		SL2-10		SL3-01		SL3-02		SL3-03		SL3-04		SL3-05		SL3-05A		SL3-06		SL3-06A		SL3-07		SL3-08		SL3-09		SL3-10		SL3-10A	
			Sample Depth:	0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft	
			Sample Date:	6/1/2022		11/13/2020		11/13/2020		11/13/2020		11/13/2020		11/13/2020		11/13/2020		6/1/2022		11/13/2020		6/1/2022		11/13/2020		11/13/2020		11/13/2020		11/13/2020		6/1/2022	
	Analyte	Unit	Site-Specific AET			combo																											
PAHs																																	
	Naphthalene	mg/kg	N/A	**0.0171**		**0.00745**		**0.0307**		**0.104**		**0.0297**		**0.0170**		**0.00662**		**0.0130**		**0.0292**		**0.0176**		**0.0156**		**0.0188**		**0.0454**		**0.0109**		**0.0198**	
	2-Methylnaphthalene	mg/kg	N/A	**0.0322**		**0.00708**		**0.0483**		**0.122**		**0.0607**		**0.0332**		**0.0110**		**0.0170**		**0.0506**		**0.0375**		**0.0233**		**0.0339**		**0.0604**		**0.0146**		**0.0210**	
	2-Chloronaphthalene	mg/kg	N/A	0.00510	U	0.00553	U	0.00565	U	0.00596	U	0.00629	U	0.00568	U	0.00551	U	0.00562	U	0.00683	U	0.00632	U	0.00633	U	0.00604	U	0.00561	U	0.00482	U	0.00532	U
	Acenaphthylene	mg/kg	N/A	**0.0132**		0.00553	U	**0.0687**		**0.0941**		**0.0310**		**0.0174**		0.00551	U	**0.00972**		**0.0343**		**0.0204**		**0.0154**		**0.0306**		**0.0142**		**0.00637**		0.00532	U
	Acenaphthene	mg/kg	N/A	**0.00759**		0.00553	U	**0.0262**		**0.17**		**0.0119**		**0.0105**		0.00551	U	0.00562	U	**0.0101**		**0.00661**		**0.00675**		**0.00931**		**0.0152**		0.00482	U	**0.0114**	
	Fluorene	mg/kg	N/A	**0.00926**		0.00553	U	**0.0294**		**0.13**		**0.0160**		**0.0186**		0.00551	U	0.00562	U	**0.0184**		**0.00978**		**0.00825**		**0.0107**		**0.0155**		0.00482	U	**0.0108**	
	Phenanthrene	mg/kg	N/A	**0.117**		**0.0206**		**0.616**		**1.2**		**0.271**		**0.182**		**0.0258**		**0.0603**		**0.244**		**0.139**		**0.107**		**0.183**		**0.226**		**0.0497**		**0.0857**	
	Anthracene	mg/kg	N/A	**0.0252**		0.00553	U	**0.148**		**0.336**		**0.0550**		**0.0464**		**0.00694**		**0.0108**		**0.0465**		**0.0351**		**0.0272**		**0.0515**		**0.0336**		**0.0136**		**0.0211**	
	Fluoranthene	mg/kg	N/A	**0.177**		**0.0372**		**1.5**		**2.46**		**0.597**		**0.372**		**0.0625**		**0.106**		**0.502**		**0.283**		**0.262**		**0.393**		**0.435**		**0.0833**		**0.105**	
	Pyrene	mg/kg	N/A	**0.174**		**0.0323**		**1.16**		**1.8**		**0.464**		**0.275**		**0.0489**		**0.0972**		**0.373**		**0.254**		**0.201**		**0.314**		**0.347**		**0.0686**		**0.0810**	
	Benzo(a)anthracene	mg/kg	N/A	**0.122**		**0.0214**		**0.842**		**1.05**		**0.318**		**0.183**		**0.0373**		**0.0517**		**0.251**		**0.147**		**0.133**		**0.228**		**0.178**		**0.0472**		**0.0522**	
	Chrysene	mg/kg	N/A	**0.185**		**0.0300**		**0.936**		**1.29**		**0.321**		**0.176**		**0.0428**		**0.0706**		**0.266**		**0.18**		**0.143**		**0.237**		**0.232**		**0.0554**		**0.0552**	
	Benzo(b)fluoranthene	mg/kg	N/A	**0.152**		**0.0308**		**1.13**		**1.27**		**0.392**		**0.193**		**0.0482**		**0.0688**		**0.327**		**0.173**		**0.189**		**0.338**		**0.198**		**0.0686**		**0.0492**	
	Benzo(k)fluoranthene	mg/kg	N/A	**0.11**		**0.0216**		**0.621**		**1.09**		**0.242**		**0.102**		**0.0328**		**0.0517**		**0.178**		**0.143**		**0.116**		**0.176**		**0.14**		**0.0404**		**0.0420**	
	Benzo(a)pyrene	mg/kg	N/A	**0.142**		**0.0248**		**0.898**		**1.09**		**0.28**		**0.132**		**0.0336**		**0.0636**		**0.22**		**0.173**		**0.131**		**0.229**		**0.139**		**0.0444**		**0.0449**	
	Indeno(1,2,3-cd)Pyrene	mg/kg	N/A	**0.0947**		**0.0228**		**0.762**		**1.01**		**0.231**		**0.0989**		**0.0292**		**0.0447**		**0.193**		**0.119**		**0.115**		**0.198**		**0.11**		**0.0408**		**0.0291**	
	Dibenzo(a,h)anthracene	mg/kg	N/A	**0.0286**		**0.00553**		**0.169**		**0.248**		**0.0587**		**0.0260**		**0.00690**		**0.0104**		**0.0497**		**0.0276**		**0.0255**		**0.0471**		**0.0303**		**0.0104**		**0.00714**	
	Benzo(ghi)perylene	mg/kg	N/A	**0.104**		**0.0237**		**0.726**		**0.969**		**0.245**		**0.101**		**0.0304**		**0.0449**		**0.197**		**0.118**		**0.119**		**0.194**		**0.109**		**0.0399**		**0.0277**	
	Total PAHs	mg/kg	N/A	**1.51**		**0.313**		**9.72**		**14.4**		**3.63**		**1.99**		**0.445**		**0.710**		**3.00**		**1.88**		**1.64**		**2.70**		**2.33**		**0.609**		**0.663**	
Metals, total																																	
	Antimony	mg/kg	N/A	2.0	U	2.1	U	2.3	U	2.4	U	2.7	U	2.3	U	2.2	U	2.3	U	2.8	U	2.6	U	2.6	U	2.5	U	2.2	U	2.0	U	2.1	U
	Arsenic	mg/kg	N/A	**23**		**32.33**		**10**		**9.0**		**10**		**10**		**9.9**		**16**		**15**		**24**		**21**		**12**		**12**		**5.1**		**31**	
	Barium	mg/kg	N/A	**24**		**13**		**21**		**28**		**16**		**17**		**11**		**22**		**31**		**30**		**30**		**32**		**18**		**6.7**		**30**	
	Beryllium	mg/kg	N/A	**0.90**		**0.59**		0.44	U	**0.56**		**0.51**		**0.52**		**0.48**		**0.90**		**0.77**		**1.0**		**0.77**		**0.58**		**0.45**		0.38	U	**0.98**	
	Cadmium	mg/kg	N/A	**0.59**		0.27	U	0.29	U	0.30	U	0.33	U	0.29	U	0.27	U	0.29	U	0.35	U	0.32	U	0.33	U	0.31	U	0.28	U	0.25	U	0.26	U
	Chromium	mg/kg	N/A	**27**		**13**		**38**		**23**		**22**		**20**		**13**		**20**		**40**		**33**		**37**		**37**		**18**		**8.0**		**21**	
	Lead	mg/kg	N/A	**93**		**42**		**50**		**47**		**30**		**29**		**29**		**38**		**74**		**74**		**55**		**52**		**37**		**13**		**40**	
	Mercury	mg/kg	N/A	**0.138**		0.100	U	0.106	U	**0.120**		**0.120**		0.107	U	0.092	U	0.096	U	**0.206**		**0.185**		**0.167**		**0.191**		0.101	U	0.086	U	0.093	U
	Nickel	mg/kg	100	**47**		**45**		**45**		**32**		**25**		**40**		**78**		**100**		**46**		**63**		**28**		**24**		**19**		**11**		**19**	
	Selenium	mg/kg	N/A	2.5	U	2.7	U	2.9	U	3.0	U	3.3	U	2.9	U	2.7	U	2.9	U	3.5	U	3.2	U	3.3	U	3.1	U	2.8	U	2.5	U	2.6	U
	Silver	mg/kg	N/A	0.62	U	0.67	U	0.73	U	0.76	U	0.83	U	0.72	U	0.68	U	0.72	U	0.88	U	0.81	U	0.82	U	0.78	U	0.70	U	0.63	U	0.64	U
	Thallium	mg/kg	N/A	0.49	U	0.54	U	0.58	U	0.61	U	0.67	U	0.57	U	0.54	U	**0.79**		0.70	U	0.65	U	0.65	U	0.63	U	0.56	U	0.50	U	0.52	U
	Vanadium	mg/kg	470	**120**		**97**		**110**		**100**		**130**		**140**		**310**		**470**		**180**		**230**		**100**		**120**		**80**		**23**		**62**	
	Zinc	mg/kg	N/A	**240**		**150**		**110**		**92**		**70**		**59**		**63**		**71**		**84**		**90**		**84**		**81**		**52**		**21**		**56**	
AVS/SEM Metals																																	
	Sulfide, Acid Volatile	umoles/g	N/A	0.186	U	NA		NA		NA		**7.21**		NA		NA		0.153	U	NA		0.217	U	**8.49**		NA		NA		NA		0.121	U
	Cadmium	umoles/g	N/A	0.002658	U	NA		NA		NA		0.002383	U	NA		NA		0.002193	U	NA		0.003106	U	0.003473	U	NA		NA		NA		0.001721	U
	Copper	umoles/g	N/A	**0.279067**		NA		NA		NA		**0.122005**		NA		NA		**0.132645**		NA		**0.148845**		**0.40**		NA		NA		NA		**0.056261**	
	Lead	umoles/g	N/A	**0.151565**		NA		NA		NA		**0.12635**		NA		NA		**0.081325**		NA		**0.146309**		**0.290325**		NA		NA		NA		**0.045339**	
	Nickel	umoles/g	N/A	**0.148107**		NA		NA		NA		**0.200**		NA		NA		**0.186601**		NA		**0.083189**		**0.21938**		NA		NA		NA		0.032958	U
	Zinc	umoles/g	N/A	**1.89354**		NA		NA		NA		**0.594173**		NA		NA		**0.319618**		NA		**0.356335**		**1.01609**		NA		NA		NA		**0.179587**	
	SEM/AVS Ratio	none	N/A	NA		NA		NA		NA		**0.144636**		NA		NA		NA		NA		NA		**0.226791**		NA		NA		NA		NA	

Table 3
Summary of Fill Below Mean High Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	SL2-09A	SL2-10	SL3-01	SL3-02	SL3-03	SL3-04	SL3-05	SL3-05A	SL3-06	SL3-06A	SL3-07	SL3-08	SL3-09	SL3-10	SL3-10A
			Sample Depth:	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
			Sample Date:	6/1/2022	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	11/13/2020	6/1/2022	11/13/2020	6/1/2022	11/13/2020	11/13/2020	11/13/2020	11/13/2020	6/1/2022
	Analyte	Unit	Site-Specific AET		combo													
Grain Size																		
	Coarse Gravel	%	N/A	**13.7**	NA	NA	NA	NA	NA	NA	**1.00**	NA	**2.30**	NA	NA	NA	NA	**9.40**
	Fine Gravel	%	N/A	**17.2**	NA	NA	NA	NA	NA	NA	**5.90**	NA	**9.50**	NA	NA	NA	NA	**38.8**
	Total Gravel	%	N/A	**30.9**	NA	NA	NA	NA	NA	NA	**6.90**	NA	**11.8**	NA	NA	NA	NA	**48.2**
	Coarse Sand	%	N/A	**14.1**	NA	NA	NA	NA	NA	NA	**9.30**	NA	**11.1**	NA	NA	NA	NA	**38.7**
	Medium Sand	%	N/A	**37.5**	NA	NA	NA	NA	NA	NA	**51.2**	NA	**37.5**	NA	NA	NA	NA	**10.2**
	Fine Sand	%	N/A	**10.8**	NA	NA	NA	NA	NA	NA	**28.6**	NA	**24.5**	NA	NA	NA	NA	**0.900**
	Total Sand	%	N/A	**62.4**	NA	NA	NA	NA	NA	NA	**89.1**	NA	**73.1**	NA	NA	NA	NA	**49.8**
	Total Fines	%	N/A	**6.70**	NA	NA	NA	NA	NA	NA	**4.00**	NA	**15.1**	NA	NA	NA	NA	**2.00**
	Cobbles	%	N/A	0.100 U	NA	NA	NA	NA	NA	NA	0.100 U	NA	0.100 U	NA	NA	NA	NA	0.100 U
General Chemistry																		
	Total Organic Carbon - 1	%	N/A	**2.93**	NA	NA	NA	**4.48**	NA	NA	**1.79**	NA	**2.83**	**4.63**	NA	NA	NA	NA
	Total Organic Carbon - 2	%	N/A	**2.85**	NA	NA	NA	**4.20**	NA	NA	**1.17**	NA	**2.51**	**4.14**	NA	NA	NA	NA
	Total Organic Carbon - Average	%	N/A	**2.89**	NA	NA	NA	**4.34**	NA	NA	**1.48**	NA	**2.67**	**4.38**	NA	NA	NA	NA
	Salinity		N/A	**2.6**	NA	NA	NA	NA	NA	NA	**7.4**	NA	**7.4**	NA	NA	NA	NA	**6.3**
	pH	su	N/A	**7.9**	NA	NA	NA	NA	NA	NA	**7.5**	NA	**7.5**	NA	NA	NA	NA	**7.6**
	Chromium (VI)	mg/kg	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oxidation Reduction Potential	mV	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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

umoles/g - micromhos per gram.

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

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

PAHs - Polycyclic Aromatic Hydrocarbons.

AVS - Acid Volatile Sulfide.

SEM Metals - Simultaneously Extractable Metals.

N/A - No Site-Specific AET developed.

AET - Apparent Effects Threshold.

Bold and shaded results equal or exceed the Site-Specific AET.

Table 4
Summary Surface Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	**LCSW-01**		**LCSW-02**		**LCSW-03**		**SL1-03**				**SL1-06**				**SL1-09**				**SL2-02**				**SL2-04**								**SL2-06**			
			Sample Name:	LCSW-1		LCSW-2		LCSW-3		SW-1		SW-1R		SW-2		SW-2R		SW-3		SW-3R		SW-4		SW-4R		SW-5		DUP-11		SW-5R		DUP-11R		SW-6		SW-6R	
			Sample Date:	11/12/2020		11/12/2020		11/12/2020		11/13/2020		02/09/2021		11/13/2020		02/09/2021		11/13/2020		02/09/2021		11/13/2020		02/09/2021		11/13/2020		11/13/2020 Field Dup		02/09/2021		02/09/2021 Field Dup		11/13/2020		02/09/2021	
Analysis	Analyte	Unit	Screening Value*																																		
PAHs																																					
	Naphthalene	ug/L	193	**0.0575**		0.0400	U	0.0400	U	**0.222**		NA		**0.43**		NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	2-Methylnaphthalene	ug/L	72	0.0385	U	0.0400	U	0.0400	U	**0.0439**		NA		**0.0679**		NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	2-Chloronaphthalene	ug/L	NS	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Acenaphthylene	ug/L	307	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Acenaphthene	ug/L	56	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Fluorene	ug/L	39	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Phenanthrene	ug/L	19	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Anthracene	ug/L	21	0.0385	U	**0.0472**		0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		**0.0698**		NA	
	Fluoranthene	ug/L	7.1	0.0385	U	0.0400	U	0.0400	U	**0.0538**		NA		0.0385	U	NA		0.0385	U	NA		**0.0937**		NA		**0.0481**		**0.0485**		NA		NA		0.0385	U	NA	
	Pyrene	ug/L	10	0.0385	U	0.0400	U	0.0400	U	**0.0398**		NA		0.0385	U	NA		0.0385	U	NA		**0.0737**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Benzo(a)anthracene	ug/L	2.2	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0409**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Chrysene	ug/L	2	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0573**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Benzo(b)fluoranthene	ug/L	0.68	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0654**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Benzo(k)fluoranthene	ug/L	0.64	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0414**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Benzo(a)pyrene	ug/L	0.96	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0496**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Indeno(1,2,3-cd)Pyrene	ug/L	0.28	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0438**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Dibenzo(a,h)anthracene	ug/L	0.28	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
	Benzo(ghi)perylene	ug/L	0.44	0.0385	U	0.0400	U	0.0400	U	0.0385	U	NA		0.0385	U	NA		0.0385	U	NA		**0.0463**		NA		0.0417	U	0.0435	U	NA		NA		0.0385	U	NA	
Metals, dissolved																																					
	Antimony	ug/L	500	200	U	200	U	200	U		R	**1.0**	**J**		R	2.0	U		R	2.0	U		R	2.0	U		R		R	2.0	U	2.0	U		R	2.0	U
	Arsenic	ug/L	36	25	U	25	U	25	U	**1.24**		**1.01**		**1.38**		**0.97**		**1.22**		**0.92**		**1.65**		**0.96**		**1.51**		**1.43**		**0.94**		**0.91**		**1.50**		**0.98**	
	Barium	ug/L	200	25	U	25	U	25	U	25	U	**10.6**		25	U	**10.5**		25	U	**10.7**		25	U	**8.8**		25	U	25	U	**10.0**		**9.1**		25	U	**9.6**	
	Beryllium	ug/L	100	25	U	25	U	25	U	0.1	U**	**0.012**	**J**	0.1	U**	**0.031**		0.1	U**	0.023	U	0.1	U**	**0.009**	**J**	0.1	U**	0.1	U**	0.10	U	0.12	U	0.1	U**	0.12	U
	Cadmium	ug/L	8.8	25	U	25	U	25	U	0.02	U**	**0.037**		0.02	U**	**0.040**		0.02	U**	**0.039**		0.02	U**	**0.034**		0.02	U**	0.02	U**	**0.031**		**0.028**		0.02	U**	**0.032**	
	Chromium	ug/L	50	50	U	50	U	50	U	50	U	**0.21**	**J**	50	U	**0.20**	**J**	50	U	**0.20**	**J**	50	U	**0.19**	**J**	50	U	50	U	**0.20**		**0.17**	**J**	50	U	**0.20**	**J**
	Lead	ug/L	8.1	50	U	50	U	50	U	0.1	U**	**1.13**		0.1	U**	**0.506**		0.1	U**	**0.298**		0.1	U**	**0.314**		0.1	U**	0.1	U**	**0.298**		**0.260**		0.1	U**	**0.169**	
	Mercury	ug/L	0.94	0.20	U	0.20	U	0.20	U	0.2	U	0.20	U	0.2	U	0.20	U	0.2	U	0.20	U	0.2	U	0.20	U	0.2	U	0.2	U	0.20	U	0.20	U	0.2	U	0.20	U
	Nickel	ug/L	8.2	100	U	100	U	100	U	**0.3**	**	**0.56**		**0.3**	**	**0.51**		0.2	U**	**0.49**		**0.3**	**	**0.42**		**0.3**	**	**0.4**	**	**0.47**		**0.48**		**0.3**	**	**0.53**	
	Selenium	ug/L	71	250	U	250	U	250	U	250	U	1.0	U	250	U	1.0	U	250	U	1.0	U	250	U	1.0	U	250	U	250	U	1.0	U	1.0	U	250	U	1.0	U
	Silver	ug/L	1.9	25	U	25	U	25	U	25	U	**0.021**	**J**	25	U	**0.014**	**J**	25	U	**0.010**	**J**	25	U	**0.013**	**J**	25	U	25	U	**0.010**	**J**	**0.011**	**J**	25	U	**0.011**	**J**
	Thallium	ug/L	17	50	U	50	U	50	U	25	U	**0.019**	**J**	25	U	**0.016**	**J**	25	U	**0.015**	**J**	25	U	**0.013**	**J**	25	U	25	U	**0.009**	**J**	0.023	U	25	U	**0.011**	**J**
	Vanadium	ug/L	50	250	U	250	U	250	U	1	U**	**2.9**	**J**	1	U**	**1.6**	**J**	1	U**	**1.8**	**J**	1	U**	**1.5**	**J**	1	U**	1	U**	**1.1**	**J**	**1.7**	**J**	**1**	**	**2.5**	**J**
	Zinc	ug/L	90	500	U	500	U	500	U	1	U**	**4.58**		1	U**	**5.93**		1	U**	**4.45**		1	U**	**2.61**		1	U**	**1**	**	**4.28**		**3.16**		1	U**	**3.61**	

Notes:

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP Screening value exists for this analyte.

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

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

PAHs - Polycyclic Aromatic Hydrocarbons.

* - SW Eco-Screening Benchmarks.

** - Result was analyzed by a "chelation prep" method.

Quantitation limit value exceeds the Screening value.

Table 4
Summary Surface Water Sampling Results
Kings Cove Conservation Restriction Area Portion of Site
Weymouth, Massachusetts

			Sample Location:	SL2-08				SL3-03				SL3-06				SL3-09			
			Sample Name:	SW-7		SW-7R		SW-8		SW-8R		SW-9		SW-9R		SW-10		SW-10R	
			Sample Date:	11/13/2020		02/09/2021		11/13/2020		02/09/2021		11/13/2020		02/09/2021		11/13/2020		02/09/2021	
Analysis	Analyte	Unit	Screening Value*																
PAHs																			
	Naphthalene	ug/L	193	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		**0.207**		NA	
	2-Methylnaphthalene	ug/L	72	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		**0.0418**		NA	
	2-Chloronaphthalene	ug/L	NS	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Acenaphthylene	ug/L	307	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Acenaphthene	ug/L	56	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Fluorene	ug/L	39	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Phenanthrene	ug/L	19	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Anthracene	ug/L	21	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Fluoranthene	ug/L	7.1	0.0400	U	NA		**0.0446**		NA		**0.102**		NA		0.0385	U	NA	
	Pyrene	ug/L	10	0.0400	U	NA		0.0417	U	NA		**0.0853**		NA		0.0385	U	NA	
	Benzo(a)anthracene	ug/L	2.2	0.0400	U	NA		0.0417	U	NA		**0.0574**		NA		0.0385	U	NA	
	Chrysene	ug/L	2	0.0400	U	NA		0.0417	U	NA		**0.0829**		NA		0.0385	U	NA	
	Benzo(b)fluoranthene	ug/L	0.68	0.0400	U	NA		0.0417	U	NA		**0.0805**		NA		0.0385	U	NA	
	Benzo(k)fluoranthene	ug/L	0.64	0.0400	U	NA		0.0417	U	NA		**0.0593**		NA		0.0385	U	NA	
	Benzo(a)pyrene	ug/L	0.96	0.0400	U	NA		0.0417	U	NA		**0.0673**		NA		0.0385	U	NA	
	Indeno(1,2,3-cd)Pyrene	ug/L	0.28	0.0400	U	NA		0.0417	U	NA		**0.0532**		NA		0.0385	U	NA	
	Dibenzo(a,h)anthracene	ug/L	0.28	0.0400	U	NA		0.0417	U	NA		0.0385	U	NA		0.0385	U	NA	
	Benzo(ghi)perylene	ug/L	0.44	0.0400	U	NA		0.0417	U	NA		**0.0556**		NA		0.0385	U	NA	
Metals, dissolved																			
	Antimony	ug/L	500		R	2.0	U		R	2.0	U		R	2.0	U		R	2.0	U
	Arsenic	ug/L	36	**1.33**		**0.97**		**1.61**		**0.86**		**1.59**		**1.00**		**1.53**		**0.99**	
	Barium	ug/L	200	25	U	**9.5**		25	U	**9.1**		25	U	**8.9**		25	U	**9.9**	
	Beryllium	ug/L	100	0.1	U**	0.12	U	0.1	U**	0.12	U	0.1	U**	0.024	U	0.1	U**	0.12	U
	Cadmium	ug/L	8.8	0.02	U**	**0.036**		0.02	U**	**0.032**		0.02	U**	**0.030**		0.02	U**	**0.029**	
	Chromium	ug/L	50	50	U	**0.22**	**J**	50	U	**0.19**	**J**	50	U	**0.22**	**J**	50	U	**0.23**	**J**
	Lead	ug/L	8.1	0.1	U**	**0.264**		0.1	U**	**0.258**		0.1	U**	**0.212**		0.1	U**	**0.257**	
	Mercury	ug/L	0.94	0.2	U	0.20	U	0.2	U	0.20	U	0.2	U	0.20	U	0.2	U	0.20	U
	Nickel	ug/L	8.2	**0.3**	**	**0.54**		0.2	U**	**0.42**		**0.3**	**	**0.64**		**0.3**	**	**0.64**	
	Selenium	ug/L	71	250	U	1.0	U	250	U	1.0	U	250	U	1.0	U	250	U	1.0	U
	Silver	ug/L	1.9	25	U	**0.010**	**J**	25	U	**0.008**	**J**	25	U	**0.016**	**J**	25	U	**0.015**	**J**
	Thallium	ug/L	17	25	U	**0.011**	**J**	25	U	**0.012**	**J**	25	U	**0.012**	**J**	25	U	**0.014**	**J**
	Vanadium	ug/L	50	1	U**	**3.3**	**J**	1	U**	**1.7**	**J**	1	U**	**6.3**		1	U**	**2.9**	**J**
	Zinc	ug/L	90	1	U**	**4.01**		1	U**	**2.62**		**1**	**	**3.37**		1	U**	**3.22**	

Notes:

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP Screening value exists for this analyte.

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

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

PAHs - Polycyclic Aromatic Hydrocarbons.

* - SW Eco-Screening Benchmarks.

** - Result was analyzed by a “chelation prep” method.

Quantitation limit value exceeds the Screening value.

Appendix D: Permitting Planset and Specifications

	DWG. TITLE
GENERAL	
WEYM-A-3001	LEGEND & GENERAL NOTES
WEYM-A-3002	OVERALL SITE PLAN
WEYM-A-3003	PROPOSED SITE PLAN
WEYM-A-3004	PROPOSED GRADING PLAN
WEYM-A-3005	TYPICAL SECTION DETAILS
WEYM-A-3006	TYPICAL DETAILS

KINGS COVE CONSERVATION RESTRICTION AREA
PHASE IV RIP
82-90 BRIDGE STREET, WEYMOUTH
NORFOLK COUNTY, MASSACHUSETTS

DATE	ISSUE	LEAD DFRS.	SECT. SUPV.	PROJ. ENG./ DESIGN ENG.	PROJ. MGR./ DESIGN MGR.	PROJECT DIRECTOR
		APPROVALS				
4-24-2024	☐ PERMITTING (P2)					
	☐ PRELIMINARY (P3)					
	☐ BID					
	☐ CONSTRUCTION					
	☐ AS-CONSTRUCTED					

ASSESSORS PLAT
MAP: 6
BLOCK: 63
LOT: 1

APPLICANT:
ALGONQUIN GAS TRANSMISSION, LLC
890 WINTER STREET #300
WALTHAM, MA 02451
(617) 254-4050

EXHIBIT A
CONTRACT NO. E-
PLANT W.B.S. NO.
PIPELINE W.O. NO. CE.000089.005.
YEAR 2024

DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

DRAWN BY:	MWM	4-24-2024	KINGS COVE CONSERVATION RESTRICTION AREA PHASE IV RIP
DESIGN CHECKER:			
DESIGN ENGINEER:			TITLE: COVER SHEET
PROJECT MANAGER:			LOC.: WEYMOUTH, MASS.
TITLE	INITIALS	DATE	YEAR: 2024 | W.O.: | SCALE: | DWG.: COV | REV.: A

ENBRIDGE
Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617) 254-4050

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Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF	BLSF	BORDERING LAND SUBJECT TO FLOODING
BZ	BZ	WETLAND BUFFER ZONE
NDZ	NDZ	NO DISTURB ZONE
200'RA	200'RA	200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
CG	CG	CURB AND GUTTER
ECC	ECC	EXTRUDED CONCRETE CURB
MCC	MCC	MONOLITHIC CONCRETE CURB
PCC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
	EN	BUILDING ENTRANCE
	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW× 38.5 BW	45.0 TW× 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN CONCENTRIC
		CATCH BASIN ECCENTRIC
		DOUBLE CATCH BASIN CONCENTRIC
		DOUBLE CATCH BASIN ECCENTRIC
		GUTTER INLET
		DRAIN MANHOLE CONCENTRIC
		DRAIN MANHOLE ECCENTRIC
TD		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
S		SEWER MANHOLE CONCENTRIC
S		SEWER MANHOLE ECCENTRIC
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		FIRE DEPARTMENT CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
E	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
T	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
		MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
B	BORING
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BZ	BUFFER ZONE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DIA.	DIAMETER
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EXIST	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
MW	MONITORING WELL
NDZ	NO DISCHARGE ZONE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
RFA	RIVER FRONT AREA
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SQFT	SQUARE FEET
SS	SUBSURFACE SOIL SAMPLE
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
T	TEST PIT
TS	TOP OF SLOPE
TYP	TYPICAL
UU	UNDERGROUND UTILITY
W	WATER

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

General

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
5. WITHIN THE LIMITS OF THE REVETMENT FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
10. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
11. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
12. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR ITS REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.

Layout and Materials

1. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
2. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY VHB, DURING AUGUST 2014 AND THEN UPDATED DECEMBER 2020.
   A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: VHB
   B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: VHB
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88.

Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

Control of Water

1. THE CONTRACTOR SHALL MONITOR WEATHER PATTERNS AND FORECASTED TIDE LEVELS, AND IMPLEMENT NECESSARY MEASURES TO PROTECT THE WORK IF A SEVERE STORM OR KING TIDE IS FORECASTED.
2. DREDGING SHALL BE COMPLETED DURING LOW TIDE CONDITIONS WHEN WATER LEVELS IN KINGS COVE ARE BELOW THE DREDGING LIMITS.
3. BACKFILLING OF DREDGING AREAS SHALL OCCUR WITHIN THE SAME TIDE CYCLE AS REMOVAL OF THE DREDGE MATERIAL DURING LOW TIDE.
4. IN THE EVENT OF FLOODING, NO WORK SHALL TAKE PLACE IN THE WORK AREA UNTIL FLOODWATERS HAVE RECEDED AND ANY NECESSARY REPAIRS HAVE BEEN MADE TO THE EROSION CONTROL MEASURES.

DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

DRAWN BY:	MWM	4-24-2024	
DESIGN CHECKER:			
DESIGN ENGINEER:			
PROJECT MANAGER:			
TITLE	INITIALS	DATE	

KINGS COVE CONSERVATION RESTRICTION AREA
PHASE IV RIP

TITLE: LEGEND & GENERAL NOTES

LOC.: WEYMOUTH, MASS.

YEAR: 2024 | W.O.: | SCALE: 1"=20'

ENBRIDGE
Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617) 254-4050

DWG.: WEYM-A-3001 | REV.: A

LEGEND

Exist.	Prop.	
		COASTAL BANK
		LAND SUBJECT TO COASTAL STORM FLOWAGE
		MEAN LOW WATER
		MEAN HIGH WATER
		PROPERTY LINE
		FEMA FLOOD ZONE DELINEATION
50'NDZ		50' NO DISTURB ZONE
100'BZ		100' WETLAND BUFFER ZONE
200' RFA		200' RIVERFRONT AREA
EOP		EDGE OF PAVEMENT
		BUILDING
		EROSION CONTROL
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
		CONCRETE
		RIPRAP
Matchline		MATCHLINE
		PATH
		TREE LINE
		CHAIN LINK FENCE
		EXISTING MATERIAL TO BE REMOVED AND BACKFILLED WITH COBBLES
		COBBLE BEACH

ISSUED FOR: PERMITTING
NOT FOR CONSTRUCTION

200' RIVER FRONT AREA

100' WETLAND BUFFER

EXISTING METERING STATION

PROPOSED CONTRACTOR STOCKPILE AREA

EXISTING COMPRESSOR STATION

STATE ROUTE 3A

BRIDGE STREET

MWRA PUMP STATION

ZONE AO

ZONE VE (EL 22)
ZONE VE (EL 17)

ZONE VE (EL 17)
ZONE VE (EL 15)

ZONE VE (EL 15)
ZONE AE (EL 10)

QUINCY
WEYMOUTH TOWN LINE

EXTREME LOW WATER AS SHOWN ON LAND COURT PLAN 7785C

APPROXIMATE HARBOR LINE

50'NDZ

100'BZ

200'RA

PLAN VIEW #1

PROPERTY LINE

100' WETLAND BUFFER

LAND SUBJECT TO COASTAL STORM FLOWAGE

MEAN LOW WATER = -5.3'

EXISTING RIP-RAP REVETMENT

TOP OF BANK COASTAL

TOE OF BANK COASTAL

12" DEPTH OF EXISTING FILL MATERIAL TO BE REMOVED AND BACKFILLED

PROPOSED COBBLES

MEAN HIGH WATER = 4.3'

KINGS COVE

PROPOSED REVETMENT

82-90 BRIDGE STREET CONSTRUCTION ACCESS

PLAN VIEW #2

0 30 60 120 Feet

DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

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Watertown, MA 02471
617.924.1770

DRAWN BY:	MWM	4-24-2024	KINGS COVE CONSERVATION RESTRICTION AREA PHASE IV RIP
DESIGN CHECKER:			
DESIGN ENGINEER:			TITLE: OVERALL SITE PLAN
PROJECT MANAGER:			LOC.: WEYMOUTH, MASS.
TITLE	INITIALS	DATE	YEAR: 2024 | W.O.: | SCALE: 1"=60' | DWG.: WEYM-A-3002 | REV.: A

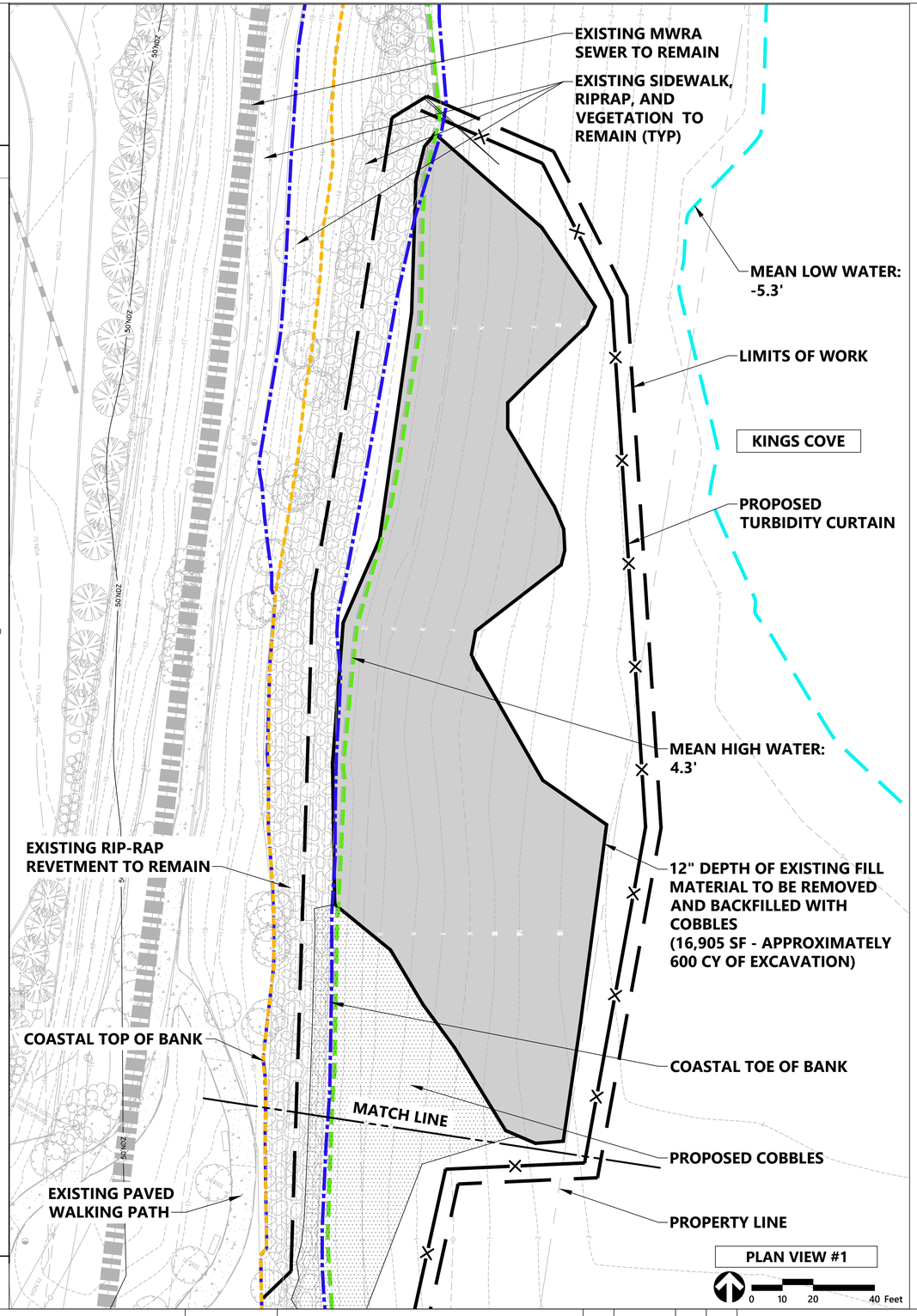
ENBRIDGE
Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617) 254-4050

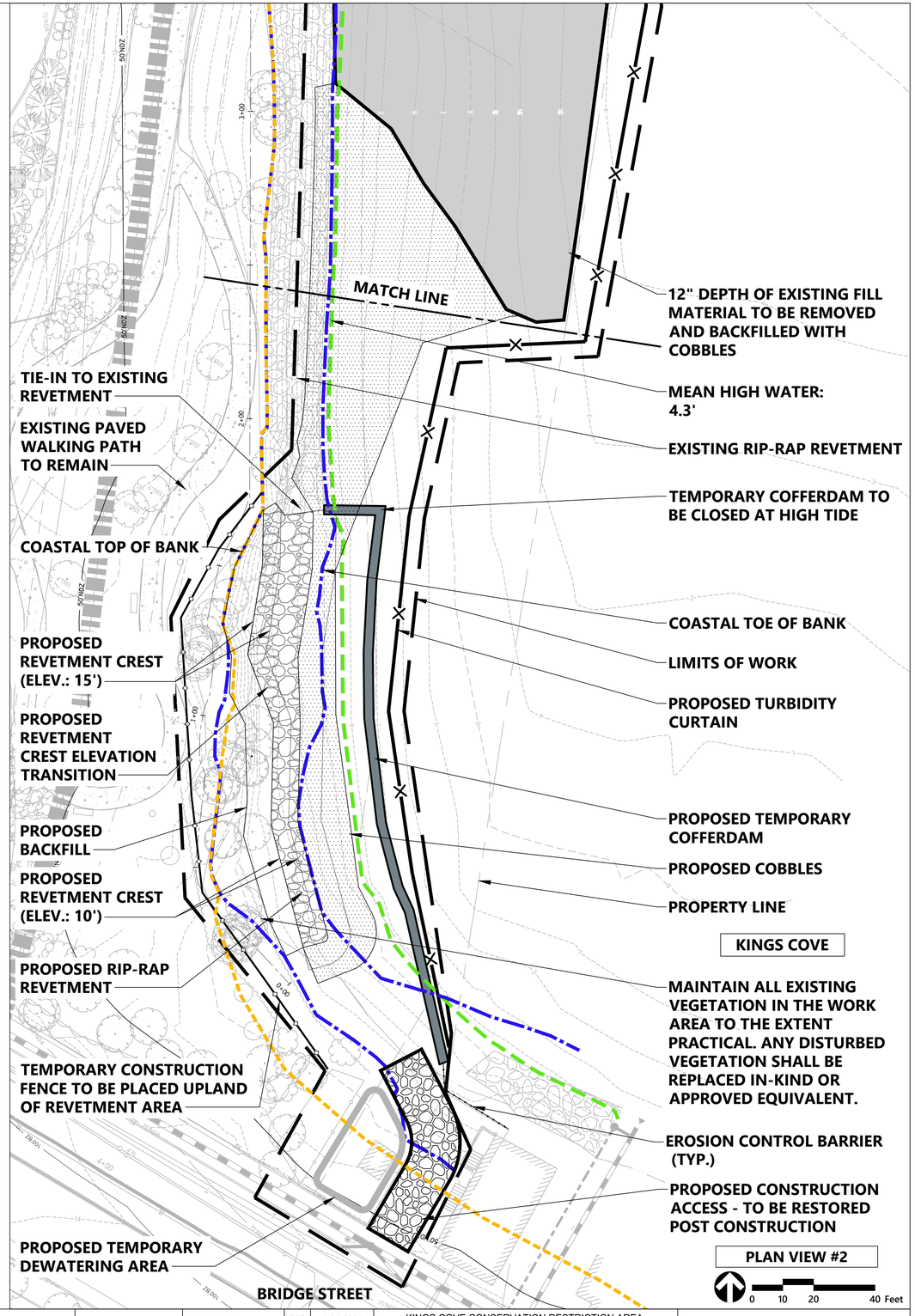
LEGEND

Exist. Prop.

- COASTAL BANK
- LAND SUBJECT TO COASTAL STORM FLOWAGE
- MEAN LOW WATER
- MEAN HIGH WATER
- PROPERTY LINE
- FEMA FLOOD ZONE DELINEATION
- 50'NDZ — 50' NO DISTURB ZONE
- 100'BZ — 100' WETLAND BUFFER ZONE
- 200' RFA — 200' RIVERFRONT AREA
- EOP — EDGE OF PAVEMENT
- BUILDING
- EROSION CONTROL
- 4 — MINOR CONTOUR
- 20 — MAJOR CONTOUR
- CONCRETE
- RIPRAP
- Matchline — MATCHLINE
- PATH
- TREE LINE
- CHAIN LINK FENCE
- EXISTING MATERIAL TO BE REMOVED AND BACKFILLED WITH COBBLES
- COBBLE BEACH

ISSUED FOR: PERMITTING
NOT FOR CONSTRUCTION





DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

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DRAWN BY:	MWM	4-24-2024	KINGS COVE CONSERVATION RESTRICTION AREA PHASE IV RIP
DESIGN CHECKER:			
DESIGN ENGINEER:			TITLE: PROPOSED SITE PLAN
PROJECT MANAGER:			LOC.: WEYMOUTH, MASS.
TITLE	INITIALS	DATE	YEAR: 2024 / W.O.: / SCALE: 1"=20' / DWG.: WEYM-A-3003 / REV.: A

ENBRIDGE

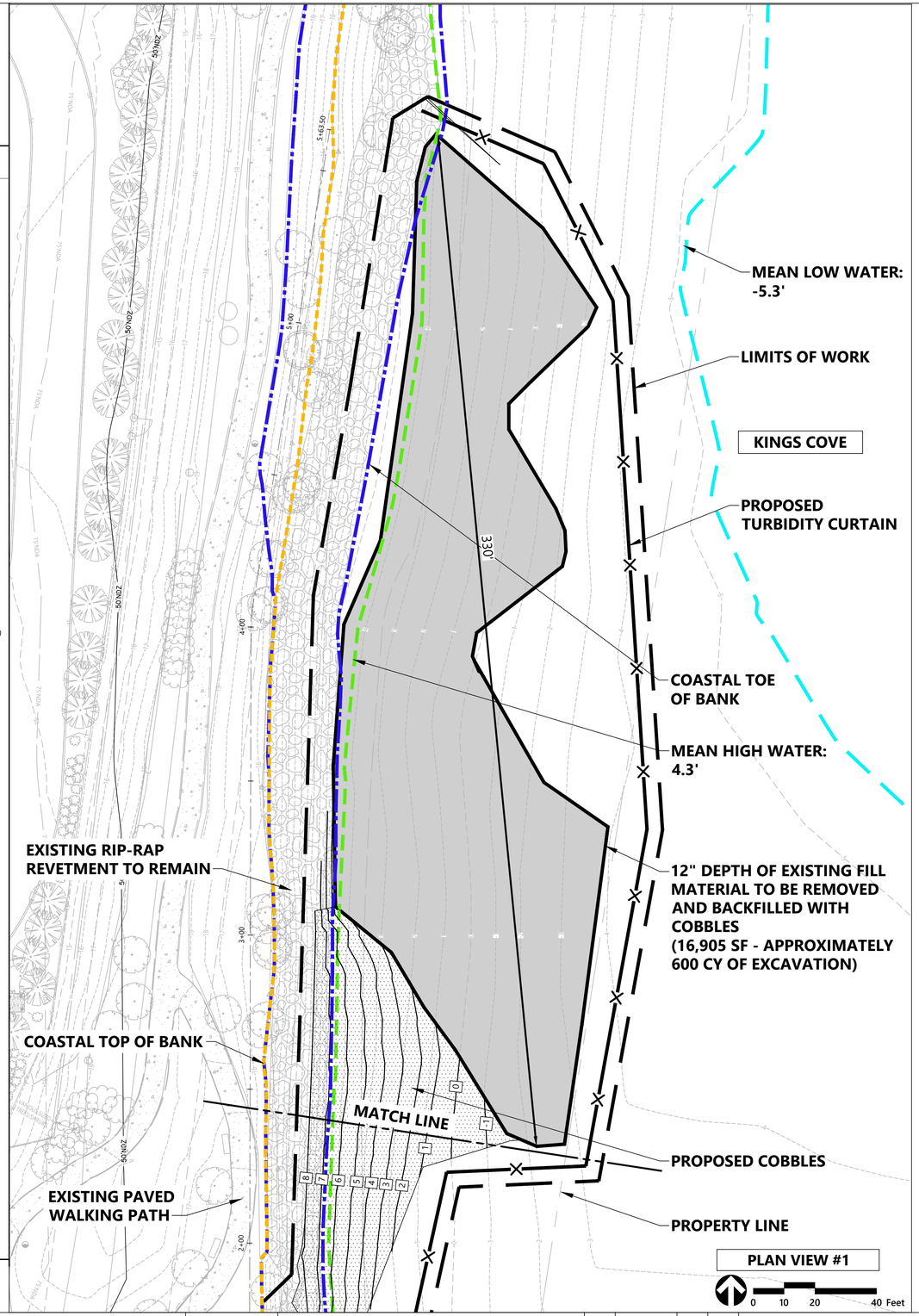
Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617) 254-4050

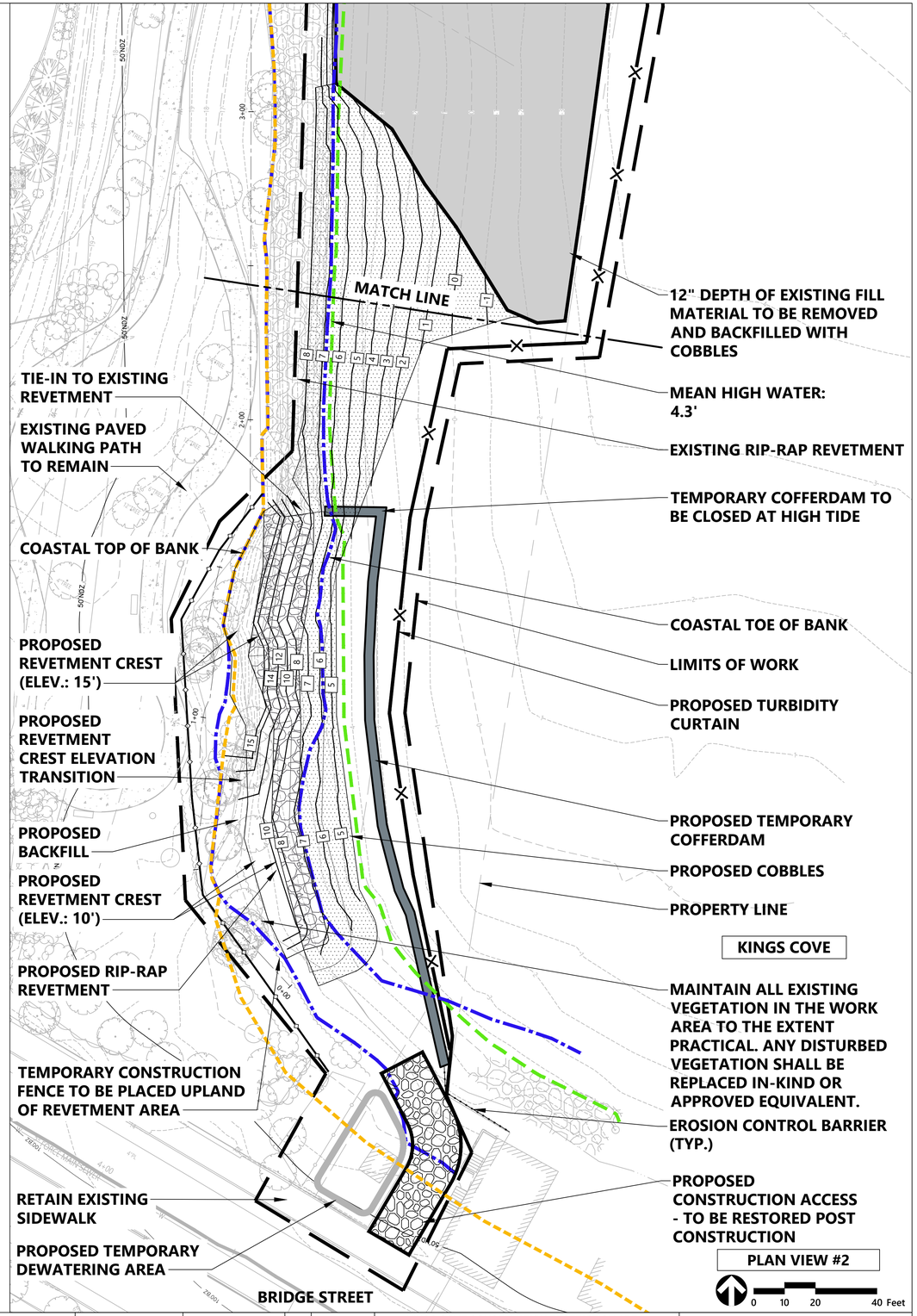
LEGEND

Exist. Prop.

- COASTAL BANK
- LAND SUBJECT TO COASTAL STORM FLOWAGE
- MEAN LOW WATER
- MEAN HIGH WATER
- PROPERTY LINE
- FEMA FLOOD ZONE DELINEATION
- 50' NDZ — 50' NO DISTURB ZONE
- 100' BZ — 100' WETLAND BUFFER ZONE
- 200' RFA — 200' RIVERFRONT AREA
- EOP — EDGE OF PAVEMENT
- BUILDING
- EROSION CONTROL
- 4 — MINOR CONTOUR
- 20 — MAJOR CONTOUR
- CONCRETE
- RIPRAP
- Matchline — MATCHLINE
- PATH
- TREE LINE
- CHAIN LINK FENCE
- EXISTING MATERIAL TO BE REMOVED AND BACKFILLED WITH COBBLES
- COBBLE BEACH

ISSUED FOR: PERMITTING
NOT FOR CONSTRUCTION



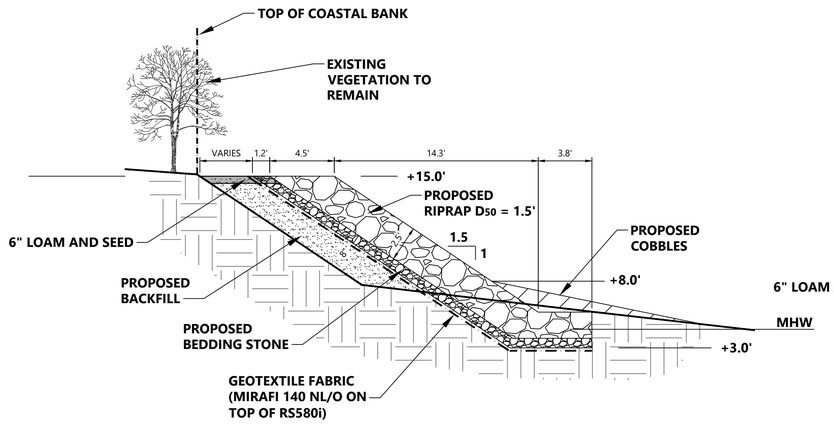


DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

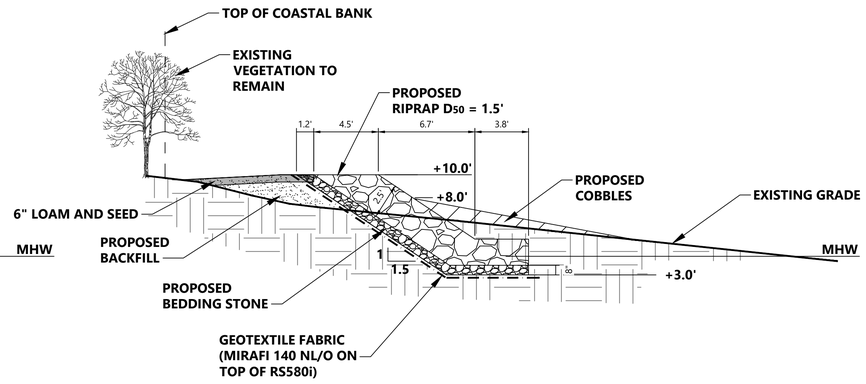
vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

DRAWN BY:	MWM	4-24-2024	KINGS COVE CONSERVATION RESTRICTION AREA PHASE IV RIP
DESIGN CHECKER:			
DESIGN ENGINEER:			TITLE: PROPOSED GRADING PLAN
PROJECT MANAGER:			LOC.: WEYMOUTH, MASS.
TITLE	INITIALS	DATE	YEAR: 2024 | W.O.: | SCALE: 1"=20' | DWG.: WEYM-A-3004 | REV.: A

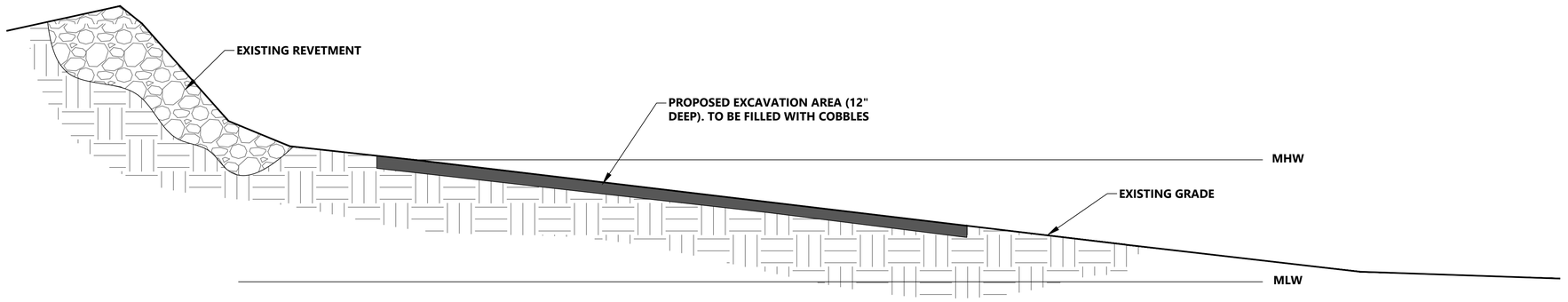
ENBRIDGE
Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617)-254-4050



TYPICAL REVETMENT SECTION :
CREST +15.0' NAVD88



TYPICAL REVETMENT SECTION :
CREST +10.0' NAVD88



TYPICAL EXCAVATION AND FILL SECTION

DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

DRAWN BY:	MWM	4-24-2024	
DESIGN CHECKER:			
DESIGN ENGINEER:			
PROJECT MANAGER:			
TITLE	INITIALS	DATE	

KINGS COVE CONSERVATION RESTRICTION AREA
PHASE IV RIP

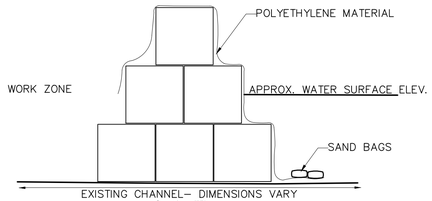
TITLE: TYPICAL SECTION DETAILS

LOC.: WEYMOUTH, MASS.

YEAR: 2024 | W.O.: | SCALE: 1"=5' | DWG.: WEYM-A-3005 | REV.: A

ENBRIDGE

Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617) 254-4050



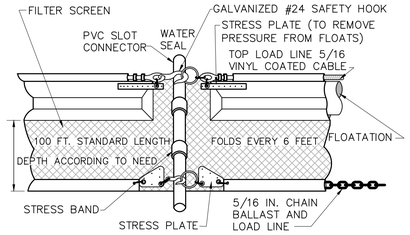
Section View

Notes:

1. CONTRACTOR TO DESIGN AND INSTALL COFFER DAM TO CONTROL OVERTOPPING FLOWS AND PREVENT EROSION OR DAMAGE TO SURROUNDING LAND

Coffer Dam (Sand Bags)

N.T.S.

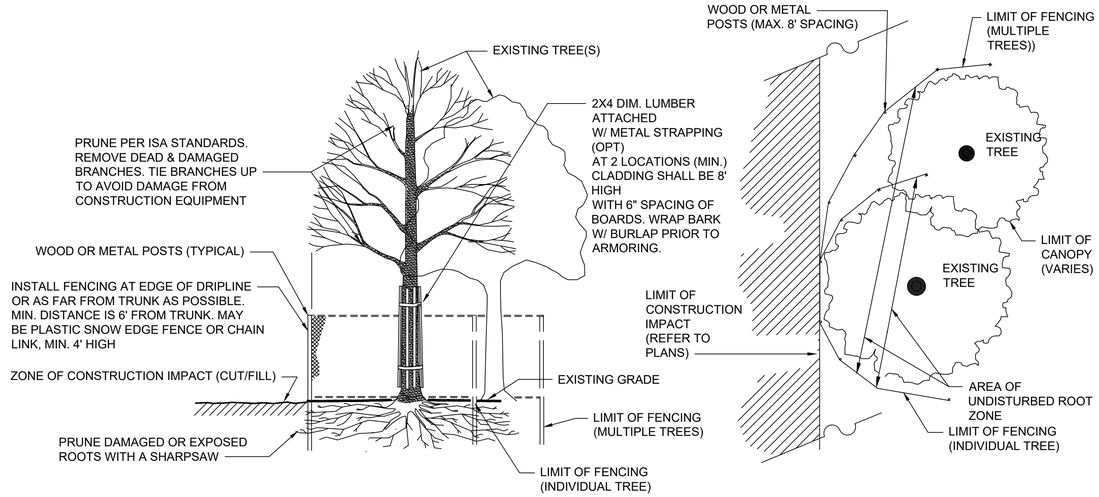


Notes:

1. TURBIDITY CURTAIN SHALL BE TYPE III AND SHALL ALLOW CONTINUOUS FLOW THROUGH OF WATER.
2. CONTRACTOR SHALL SUBMIT PRODUCT DATA SHEETS TO ENGINEER FOR APPROVAL.

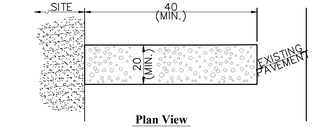
Turbidity Curtain

N.T.S.

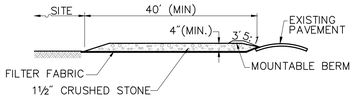


Tree Protection of Existing Tree(s)

N.T.S.



Plan View



Cross-section

Notes:

1. ENTRANCE WIDTH SHALL BE A TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.
4. FINAL LOCATIONS OF STABILIZED CONSTRUCTION EXIT TO BE CONFORMED WITH ENGINEER PRIOR TO CONSTRUCTION.

Stabilized Construction Exit

N.T.S.

DWG. NO.	REFERENCE DWG.	REV	DATE	DSN	CK	DESCRIPTION

vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

DRAWN BY:	MWM	4-24-2024
DESIGN CHECKER:		
DESIGN ENGINEER:		
PROJECT MANAGER:		
TITLE	INITIALS	DATE

KINGS COVE CONSERVATION RESTRICTION AREA
PHASE IV RIP

TITLE: TYPICAL DETAILS

LOC.: WEYMOUTH, MASS.

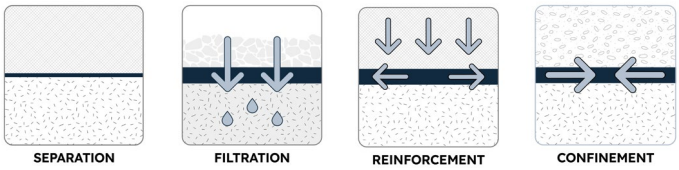
YEAR: 2024 | W.O.: | SCALE:

ENBRIDGE

Algonquin Gas Transmission, LLC
890 Winter Street #300, Waltham, MA 02451 (617) 254-4050

DWG.: WEYM-A-3006 | REV.: A

MIRAFI RS580*i*



MIRAFI® RS580*i* is a specially designed geosynthetic that integrates the key performance characteristics to maximize performance. Extensive performance testing has been performed per AASHTO and FHWA guidelines to validate performance for both paved and unpaved roads. The patented weave pattern and unique Orange identifier yarn make the MIRAFI RS580*i* a unique performance geotextile. TenCate Geosynthetics Americas (A Solmax Company) is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MIRAFI RS580i meets Build America, Buy America Act, Pub. L. No. 117-58, div. G §§ 70901-52.

ROADWAY DESIGN and PERFORMANCE PROPERTIES	GUIDANCE DOCUMENT / TEST METHOD	UNIT	DESIGN / CALIBRATION VALUE
Base Course M_R Improvement Factor[1]	AASHTO R50-09	--	1.40
Subgrade M_R Improvement / Increase[2]	AASHTO R50-09	lbs/in² (MPa)	9,000 (62)
Traffic Benefit Ratio: TBR [4,5,6]	AASHTO R50-09	--	9.0 / 13.1 / 39.0

			MD	CD
Cyclic Tensile Modulus @ 2% Permanent Strain: J_{cyclic} (MARV)	ASTM D7556	lbs/ft (kN/m)	54,434 (809)	120,940 (1765)
Resilient Interface Shear Stiffness: GI[3]	ASTM D7499	kip/in² (MPa)	329 (2,268)	
Interaction Coefficient: C_i[7]			0.90	
Pore Pressure Dissipation Ratio[4]			2.0	
Average Dynamic Filtration Pore Size	ASTM D6767	microns	O_{95} - 394 O_{85} -330 O_{60} - 248 O_{50} - 208	
Maximum Percent Open Area: MPOA[8]	ASTM D6767	%	7.3	

			MD	CD
Tensile Strength (at 2% strain)	ASTM D4595	lbs/ft (kN/m)	480 (7.0)	1,800 (26.3)
Tensile Strength (at 5% strain)	ASTM D4595	lbs/ft (kN/m)	1,440 (21.0)	4,380 (63.9)
Grab Tensile (MARV)	ASTM D4632	lb (N)	625 (2781)	525 (2336)
CBR (MARV)	ASTM D6241	lb (N)	1950 (8678)	

INDEX PROPERTIES	TEST METHOD	UNIT	MAXIMUM ROLL VALUE
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve (mm)	40 (0.425)

			MINIMUM AVERAGE ROLL VALUE
Hydraulic Flow Rate	ASTM D4491	gal/min/ft² (l/min/m²)	75 (3,056)
Permittivity	ASTM D4491	sec^{-1}	1.0

			MINIMUM TEST VALUE
UV Resistance (at 500 hours)	ASTM D4355	% strength retained	90

365 South Holland Drive Pendergrass, GA 30567
Tel +1 706 693 2226 www.tencategeo.us

PHYSICAL PROPERTIES	UNIT	Roll Size
Roll Dimensions (width x length)	ft (m)	15 x 300 (4.5 x 91) 17 x 300 (5.2 x91.4)
Roll Area	yd^2 (m^2)	500 (418) 567 (474)
Estimated Roll Weight	lbs (kgs)	404 (183) 458 (207)

Notes:

[1] Value Determined from Results of Independent Testing Performed at Kansas State University in accordance with NCHRP Report 512 "Accelerated Pavement Testing: Data Guidelines" and AASHTO R50-09 Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures." Multiplier for Unbound Granular Material; for SG MR between 4.5 and 6.9 ksi (30.9 and 47.4 MPa).

[2] Value Determined from Results of Independent Testing Performed at GeoTesting Express (GeoComp) "A Laboratory Evaluation of the Performance of TenCate Mirafi® Geosynthetics in Roadway Stabilization Applications – Georgia Silt Subgrade," September 1, 2011. 9-kip {40 kN} Wheel Load, SG CBR = 1%, 12-inch (300-mm) Crushed Aggregate BC (CBR > 25%), 3-inch (75-mm) Rut Depth.

[3] Value Determined from Results of Independent Testing Performed at LTRC "Performance of Reinforced–Stabilized Unpaved Test Sections Built Over Native Soft Soil Under Full-Scale Moving Wheel Loads," TRR Volume 2511, 2015. Measured at 0.34-inch (8.64 mm) Rut Depth; Peak Pore Pressure 6-inches (150 mm) Below Geosynthetic.

[4] Value Determined from Results of Independent Testing Performed at GeoTesting Express (GeoComp) "A Laboratory Evaluation of the Performance of TenCate Mirafi® Geosynthetics in Roadway Stabilization Applications – Montana Clay Subgrade," September 1, 2011. 9-kip (40 kN) Wheel Load, SG CBR = 1.8%, 8-inch (200-mm) Rounded Aggregate BC (CBR > 25%), 3-inch (75-mm) Rut Depth.

[5] Interaction Coefficient value is for sand (SP) or gravel (GW) based on testing conducted by SGI Testing Services.

U.S. Patent 8,333,220 and 8,598,054

For additional Patent Information, please visit our website or use the QR Code:
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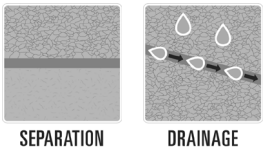
TENCATE Mirafi®



Mirafi® Orange Delineation Nonwoven Geotextile

for Visual Barrier, Soil Separation and Drainage

Mirafi® Orange Delineation Geotextiles

TenCate develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

The Difference Mirafi® Orange Nonwoven Geotextiles Make:

- Utility Alert. Mirafi® delineation geotextiles are a visual dig barrier designed to be placed above underground utilities.
- Contaminated Soils. Mirafi® delineation geotextiles separate contaminated soils from clean soils.
- Archeological Sites. Mirafi® delineation geotextiles assist in the long-term protection of historical sites.

APPLICATIONS

Mirafi® nonwoven geotextiles are used in a wide variety of applications in the environmental and general civil markets. These include separation, filtration and protection applications.

Mirafi® delineation geotextiles are used in many critical subsurface systems. The use of this orange delineation fabric allows for safe excavations where utilities or other sensitive structures may be buried. The highly visible orange nonwoven geotextile serves as a warning to construction workers when the excavation reaches a buried structure.

Excavation near all utilities (gas, electric, water, Cable TV and telephone) is always a sensitive operation. The use of Mirafi® delineation geotextile is a low cost-effective method of protection. In addition, lining trenches with a geotextile keeps the selected and costly backfill material separated from the native subgrade.

Construction in areas where contaminated soils exist poses risks when trenches or deep footings need to be excavated. These risks are minimized when the Mirafi® delineation geotextile is placed on the contaminated soils before capping of these areas occurs. The geotextile limits particle movement between the clean new soil and the contaminated substrate. The Mirafi® delineation geotextile offers a visual barrier to future excavations of the contaminated hazard below.

Federal and State laws require that archeological sites must be protected from adverse impacts caused by engineering projects. Many archeological sites throughout the world are left in place to protect them. In some cases, after discovery, they are buried. Sites can be protected through burial below an engineered cover, if the engineering project does not require excavation. The installation of Mirafi® delineation geotextile before the new soil is placed will aid in the long term protection of these archeological sites.

* These guidelines serve as a general basis for installation. Detailed instructions are available from your TenCate representative.

TENCATE GEOSYNTHETICS

TENCATE Mirafi®

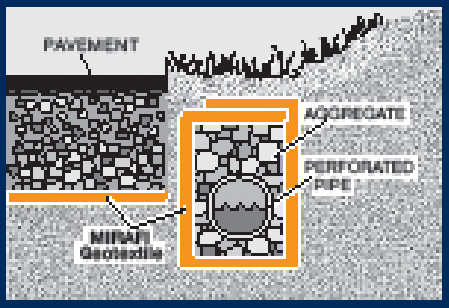
Mirafi® Orange Delineation Nonwoven Geotextile

for Visual Barrier, Soil Separation and Drainage

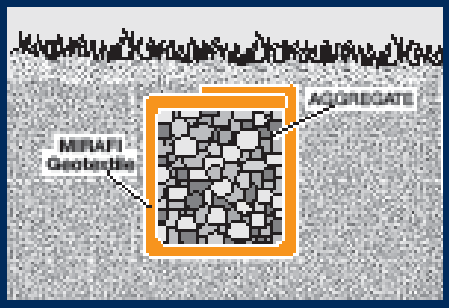
PROPERTY/TEST METHOD	UNITS	140NL/O	160N/O	180N/O
MECHANICAL PROPERTIES		**TYPICAL ROLL VALUE**		
Grab Tensile Strength ASTM D4632	lbs (N)	100 (445)	180 (801)	230 (1023)
Trapezoidal Tear Strength ASTM D4533	lbs (N)	45 (200)	70 (312)	95 (423)
CBR Puncture Strength ASTM D6241	lbs (N)	310 (1380)	480 (2136)	600 (2669)
UV Resistance (500 hrs.) ASTM D4355	% strength retained	70	80	80
HYDRAULIC PROPERTIES		**TYPICAL ROLL VALUE**		
Permittivity ASTM D4491	sec^{-1}	2.55	1.7	1.4
Flow Rate ASTM D4491	$gal/min/ft^2$ ($l/min/m^2$)	188 (7659)	125 (5093)	100 (4115)
PACKAGING				
Roll Width	ft (m)	15.0 (4.5)	15.0 (4.5)	15.0 (4.5)
Roll Length	ft (m)	360 (110)	300 (91)	300 (91)
Est. Gross Weight	lbs (kg)	157 (71)	220 (100)	271 (122)
Area	yd^2 (m^2)	600 (502)	500 (418)	500 (418)

(Values and methods could change without notice)

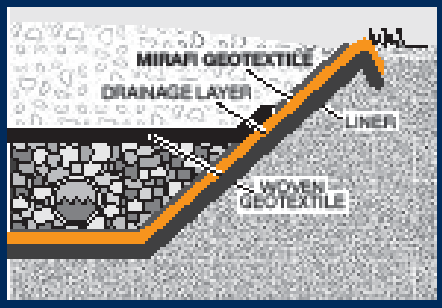
Mirafi® Orange Delineation Geotextiles



Cut-off/Inceptor Drain Along a Roadway Or Another Critical Structure



French Drain Without Pipe



Liner Protection Within a Landfill

PDS.NLO.0821

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Pendergrass, GA 30567

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ISO 9001 FM 61026

TENCATE GEOSYNTHETICS

Appendix E: Health and Safety Plan

Kings Cove Conservation Restriction Area

82-90 Bridge Street

Weymouth, Massachusetts

Release Tracking Number (RTN) 4-26230

PREPARED FOR

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

PREPARED BY

260 Arsenal Place #2
Watertown, MA 02472

April 23, 2024 (Rev0)

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Site-specific Health and Safety Plan

Introduction

Vanesse Hangen Brustlin (VHB) has prepared this Site-specific Health and Safety Plan (HASP) on behalf of Algonquin Gas Transmission, LLC (Algonquin). This Site-specific HASP establishes health and safety procedures for handling contaminated media at the Kings Cove Conservation Restriction Area of the Disposal Site associated with Release Tracking Number (RTN) 4-26230 (hereafter the KCCRA) located at 82-90 Bridge Street in Weymouth, Massachusetts. The location of the KCCRA is depicted on **Figure 1**.

The KCCRA comprises approximately 4 acres of the Disposal Site and is bounded to the north by a Massachusetts Water Resources Authority (MWRA) pumping station, to the east by Kings Cove, to the south by Bridge Street (Route 3A), and to the west by the remainder of the Disposal Site. The KCCRA is further divided into two areas for the purpose of this HASP:

- KCCRA - Upland which includes the area above Mean High Water (MHW) in the KCCRA; and
- KCCRA – Shore which is the portion of the KCCRA below MHW.

The KCCRA – Upland portion of the KCCRA is referred to herein as the Upland portion of the KCCRA, and the KCCRA – Shore portion of the KCCRA is referred to herein as the Shore portion of the KCCRA.

This HASP covers ground intrusive activities planned at the KCCRA to implement the preferred Remedial Action Alternative. As outlined in the August 2023 Phase III Remedial Action Plan (RAP), the preferred Remedial Action Alternative for the Upland portion of the KCCRA was to extend the existing stone revetment and record an Activity and Use Limitation (AUL). The preferred Remedial Action Alternative for the Shore portion of the KCCRA was to excavate an area of fill below MHW and establish a cobble beach to create a gradual surficial transition between the dredging area and the revetment. A Phase IV Remedy Implementation Plan (RIP) has been prepared for the KCCRA describing the engineering concepts and the design criteria to be used for the construction of the Remedial Action Alternative. The location of the KCCRA, the proposed revetment, area of proposed excavation below MHW, and proposed cobble placement associated with Remedial Action Alternative are depicted on **Figure 2**.

In preparing this HASP, VHB has obtained and relied upon information from multiple sources to form certain conclusions regarding potential environmental issues at and in the vicinity of

the KCCRA. Except as otherwise noted, no attempt has been made to verify the accuracy or completeness of such information.

Algonquin's Gas Transmission and Midstream (GTM) Business Unit developed the GTM Health and Safety Manual, SAF-58.101 dated March 8, 2024 Version 9.0 (HASM) to provide detailed guidance for "…the prevention of incidents leading to personal injury, property damage and non-compliances." This HASP is not intended to supersede the guidance provided in Algonquin's HASM but rather to augment it with state-specific health and safety requirements for oil and/or hazardous materials (OHM) release sites in Massachusetts.

The guidance presented in this HASP is based solely upon information gathered to date. Should further environmental or other relevant information be developed at a later date, VHB will evaluate and modify the HASP as appropriate.

General Site Information

Site Name: Kings Cove Conservation Restriction Area – Weymouth, Massachusetts

Table 1 Emergency Information and Local Resources – Weymouth, MA

Public and Private Resources	Telephone Numbers
Weymouth Police Department	911 or 781-335-1212
Weymouth Fire Department	911 or 781-337-5151
MassDEP 24-hour spill response hotline	888-304-1133
National Poison Control Center	800-222-1222
Dig Safe	811 or 800-344-7233

Nearest Hospital: South Shore Hospital
Emergency Room
55 Fogg Road
South Weymouth, MA 02190

Directions:

1. Take MA Route 3A North,
2. Turn left on East Howard Street, left on Quincy Avenue, and right onto Front Street.
3. Follow Front Street to Main Street.
4. Turn right onto Main Street.
5. Drive to your destination.

A map depicting the emergency hospital route is included as **Attachment A**.

Site/Hazard Overview

Site Description and History

Prior to the 1900s, Kings Cove and the surrounding area were flowed tidelands. In the 1920s, a north-south oriented timber bulkhead was constructed within Kings Cove and the area behind the bulkhead was filled in connection with the construction of a coal-fired power station located south of Bridge Street. The source of OHM at the KCCRA is fill containing coal, coal ash, clinkers and other debris that was placed in the 1920s and 1930s.

Environmental History

RTN 4-26230 was issued in July 2016 following the identification of evidence of a historical release of petroleum in soil at the Compressor Station portion of the Disposal Site. The subsequent RTNs have been linked to this primary RTN 4-26230. A Partial Permanent Solution was filed for the Compressor Station portion of the Disposal Site in 2022.

The KCCRA portion of the Disposal Site was assigned subsequent RTNs in 2020 and 2021 in response to the identification of concentrations of arsenic and chromium in shallow soil and fill. Arsenic and lead in fill are the primary constituents of concern (COCs) in the Upland portion of the KCCRA and nickel and vanadium in sediment below mean high water (MHW) are the primary COCs for the Shore portion of the KCCRA.

Tasks

As discussed in the Phase IV RIP, the preferred Remedial Action Alternative includes the following ground intrusive work: dredging sediment/impacted fill within an intertidal area, extending the rip rap revetment in the northern area of the Project Site to contain eroding impacted fill, and establishing a cobble beach to create a gradual surficial transition between the dredging area and the revetment.

The construction of the preferred Remedial Action Alternative consists of the following:

- Collection of soil/sediment samples for laboratory analysis for determining appropriate disposition;
- Before any construction work begins, installing erosion and sedimentation controls according to the Project plans, including controls for in-water work, setting up temporary construction fencing, and selecting dust monitoring locations;
- Dredging the remediation area during low tide cycles;
- Placing dredged material in stockpile staging area and/or roll-off containers awaiting reuse or disposal;
- Placing clean cobble cover within the dredged area and up to the base of the new revetment;
- Constructing the rip rap revetment, including placing a subset of the dewatered dredged material behind the rip rap;

- Off-site disposal of remaining dredge material;
- Restoration of disturbed construction access and staging areas (loaming and seeding);
- Removing erosion and sedimentation controls.

The exact sequence and schedule will be finalized by the selected remediation contractor.

Hazard Assessment

The following table presents a general overview of hazards which VHB has identified as being potentially present at the KCCRA.

Table 2 Hazards of Concern

☒ **Heat Stress**	☒ **Excavation/Trenching**	☐ Radiological
☒ **Cold Stress**	☒ **General Construction**	☐ Biological
☐ Explosion/Flammable	☒ **Inorganic Chemicals**	☒ **Noise**
☐ Confined Space	☐ **Volatile Organic Chemicals**	☐ Corrosives
☒ **Physical Hazards**	☒ **Semi-Volatile Organic Chemicals**	☒ **Other (Dust, Working Near Water)**

The following sections discuss the hazards that may be present at the KCCRA in further detail.

Heat Stress

During the summer months, warm weather may become a health factor. Personnel working on-Site may have to wear protective clothing, which would increase the chance of workers suffering from heat-related problems. The situation will be monitored on days when the ambient temperature exceeds 70°F. Workers must be briefed on the signs and symptoms of heat-related problems and on preventative measures.

The three levels of Heat Stress are:

- Heat Cramps
- Heat Exhaustion
- Heat Stroke

Symptoms of heat cramps include painful muscle spasms. Treatment includes providing liquid with electrolytes.

Weakness, fatigue, dizziness, heavy sweating, headache, nausea, fainting and pale, cool moist skin are all symptoms of heat exhaustion. Treatment includes resting in a cool place and providing plenty of liquids with electrolytes if the person is conscious; if unconscious, seek medical help immediately.

Symptoms of heat stroke are very dry, hot skin, mottled blue or red appearance, confusion, convulsions, rapidly rising temperature and unconsciousness. If any person experiences these symptoms, seek medical attention immediately. **Heat stroke is a life-threatening emergency**.

Cold Stress

During the fall and winter months, cold weather may become a health factor. Personnel working on-site may have to wear protective clothing to protect themselves from wind and other cold weather exposures that may lead to hypothermia and frostbite. The situation will be monitored periodically on days when the ambient temperature is below 32 degrees Fahrenheit. (° F), or when the local weather forecasting agencies suggest a wind chill factor of 32° F or lower. Workers must be briefed on the signs and symptoms of frostbite and on preventive measures if work is performed when the ambient temperature is below 32°.

Frostbite occurs when skin tissue and blood vessels are damaged from exposure to temperatures below 32 ° F. It most commonly affects the toes, fingers, earlobes, chin, cheeks and nose, body parts that are often left uncovered in cold temperatures. Frostbite can occur gradually or rapidly. The speed with which the process progresses depends upon how cold or windy the temperature conditions are and the duration of exposure to those conditions.

Frostbite has three stages of progression:

- Frostnip
- Superficial Frostbite
- Deep Frostbite

Frostnip – In this stage, the individual experiences a pins and needles sensation with the skin turning very white and soft. No blistering occurs. This stage produces no permanent damage and may be reversed by soaking in warm water or breathing warm breath on the affected area.

Superficial Frostbite – In this stage, blistering may occur. The skin feels numb, waxy and frozen. Ice crystals form in the skin cells and the rest of the skin remains flexible.

Deep Frostbite – This is the most serious stage of frostbite. In this stage, blood vessels, muscles, tendons, nerves and bone may be frozen. This stage can lead to permanent damage, blood clots and gangrene, in severe cases. No feeling is experienced in the affected area and there is usually no blistering. Serious infection and loss of limbs frequently occurs after frostbite reaches this stage. However, even with deep frostbite, some frozen limbs may be saved if medical attention is obtained as soon as possible.

Frostbite risk can be reduced by practicing the following:

- Wear several layers of clothing when in extremely cold conditions since the air pockets between the layers will help to retain warmth.
- Limit the use of alcohol and smoking tobacco in daily life. Alcohol causes the blood to cool quickly and tobacco inhibits circulation to extremities.
- Avoid going outdoors during extremely cold weather.

- When outside, shield the face and other body parts from the cold wind and temperatures by wearing protective clothing, scarves, earmuffs, gloves, etc.
- Wear waterproof skin moisturizer on exposed areas.
- Do not spend extended periods in extreme temperatures when exhausted, or when wet.

If, after being in extremely cold conditions, any of the following are experienced, seek emergency care.

- skin swelling
- loss of limb function and absence of pain
- memory loss
- drastic skin color changes
- blisters
- slurred speech

Physical Hazards

The operation of heavy equipment poses hazards. Physical hazards may be associated with the malfunction, misuse, or improper operation of such equipment. Personnel will use care when handling equipment and will only use equipment for its intended purpose. **Personnel should wear hard-hats, high-visibility clothing, eye protection and hearing protection during Site activities**. Personnel should be aware of these physical hazards at all times and take the necessary precautions to avoid them while at the KCCRA.

Job sites may contain rough or unfamiliar terrain that can lead to injury. Slips, trips, and falls are the most common accidents caused by varying terrain. These accidents may result in cuts, bruises, and sprains. Falls may result in broken bones. Carefully examine unfamiliar terrain. Look out for holes, undergrowth, and open water.

VHB staff shall wear boots with good ankle support and good traction, long pants, long-sleeved shirts, and long socks in the field. Under no circumstances will shorts, tube tops, muscle shirts, or sandals be worn on any VHB work sites.

Excavation/Trenching

Personnel should stand upwind of soil excavations to avoid being exposed to any dust generated during the excavation. During soil excavation operations, if any unusual odors or other unexpected observations are noted, all work must stop immediately. All personnel will retreat to a safe distance away from the excavation, and the VHB project manager will be notified of the situation before any additional action is taken. VHB personnel should not enter trenches greater than four feet in depth and should stand at least two feet away from the edge of any excavation.

General Construction

A potential hazard at most Sites is related to the operation of heavy equipment, especially in the case of malfunction, misuse or improper operation. Personnel not directly involved with equipment operation should stand a safe distance away from the machinery. Personnel should

wear hard-hats, eye and hearing protection, steel toe boots, and reflective safety vests when working near heavy equipment and any time there is a potential hazard from overhead or falling objects.

Vehicular traffic represents one of the most common hazards that cause serious injury or death when working at sites. Risk from vehicular traffic may be minimized by safe operating practices by the employee during site work.

Site personnel will wear high visibility orange safety vests in areas of heavy traffic. Employees should be aware of their surroundings and potentially dangerous traffic areas at all times. If work is being done that will in any way inhibit the employees' ability to continuously be aware of their surroundings, such as crouching down to sample a monitoring well or taking notes, tall orange cones should be placed around the employee to make motorists aware of their presence. Tall orange traffic cones should also be placed in work areas considered to be highly dangerous traffic areas. Any work performed in a road or on the shoulder of the road should require a police detail to monitor worker safety in vehicular traffic in addition to the use of orange vests and orange traffic cones.

Chemical Exposures (Inorganic and Semi-Volatile Organic Chemicals)

A summary of chemicals that have been detected at the KCCRA during previous investigations and other common associated contaminants of concern is provided in **Table 3**. The table includes the associated exposure routes for to such contaminants.

Table 3 – Contaminants of Concern

Chemical Contaminant	Potential Hazard	OSHA PEL (8-hour TWA)
PAHs	Targets skin, respiratory system, urinary system. Exposure routes include inhalation, skin and/or eye contact.	0.15 mg/m^3 (for coke oven emissions)
Petroleum	Exposure routes include inhalation, skin absorption, ingestion, skin and/or eye contact.	1 ppm (for benzene)
Metals		
Arsenic	Targets liver, kidneys, skin, lungs, lymphatic system. Exposure routes include inhalation, skin absorption, ingestion, skin and/or eye contact.	0.010 mg/m^3
Lead	Targets eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue. Exposure routes include inhalation, ingestion, skin and/or eye contact.	0.050 mg/m^3
Cadmium	Targets respiratory system, kidneys, and blood. Exposure routes include inhalation and injection.	0.005 mg/m^3
Chromium	Targets immunological (immune system), renal (urinary system or kidneys), respiratory (from the nose to the lungs).	0.5 mg/m^3

Chemical Contaminant	Potential Hazard	OSHA PEL (8-hour TWA)
	Exposure routes include inhalation, ingestion, skin and/or eye contact. Irritation eyes, skin; lung fibrosis (histologic).	
Selenium	Targets eyes, skin, respiratory system, liver, kidneys, blood, spleen. Exposure routes include inhalation, ingestion, skin, and/or eye contract.	0.2 mg/m^3
Silver	Targets nasal septum, skin, and eyes. Exposure routes include inhalation, ingestion, skin and/or eye contract.	0.01 mg/m^3
Barium	Targets eye, skin, respiratory system, heart, and central nervous system. Exposure routes include inhalation, ingestion, skin and/or eye contact.	0.5 mg/m^3
Mercury	Targets eyes, skin, respiratory system, central nervous system, kidneys. Exposure routes includes inhalation, skin absorption, ingestion, skin and/or eye contact.	0.1 mg/m^3
Vanadium	Targets eyes, skin, and respiratory system. Exposure routes include inhalation, ingestion, skin and/or eye contract.	0.1 mg/m ^{3}
Antimony	Targets eyes, skin, respiratory system, and cardiovascular system. Exposure routes include inhalation, ingestion, skin, and/or eye contract.	0.5 mg/m^3
Beryllium	Targets eyes, skin, and respiratory system. Exposure routes include inhalation, skin and/or eye contact.	0.0002 mg/m^3
Nickel	Targets nasal cavities, lungs, and skin. Exposure routes include inhalation, ingestion, skin, and/or eye contact.	1 mg/m^3
Thallium	Targets eyes, respiratory system, central nervous system, liver, kidneys, gastrointestinal tract, body hair. Exposure routes include inhalation, skin absorption, ingestion, skin and/or eye contact.	0.1 mg/m^3
Zinc	Targets eyes, skin, and respiratory system. Exposure routes include inhalation, ingestion, skin and/or eye contact.	5 mg/m^3

Hazardous substances fact sheets are included as **Attachment B.** Since additional unidentified hazards may exist at the job site, periodic evaluation of Site conditions will be performed during all on-Site activities. The action levels identified later in this HASP (see **Table 5**) are protective of these exposure limits.

Symptoms of Chemical Exposure

On-Site workers should be aware of the specific symptoms of acute chemical exposure listed in **Table 3** above. In general, workers should also be aware of some indications of toxic effects of chemical exposure which are described below.

Observable by others:

- Changes in complexion, skin discoloration;
- Lack of coordination;
- Changes in demeanor;
- Papillary response;
- Changes in speech pattern; and
- Difficulty breathing.

Not Observable by Others:

- Headaches;
- Dizziness;
- Blurred vision;
- Cramps;
- Irritation of the eyes, skin, or respiratory tract;
- Nausea; and
- Chills.

First Aid

General first aid procedures for exposure include, but are not limited to, the following procedures:

- If contamination contacts eyes, irrigate immediately with large amounts of water;
- If contamination contacts the skin, wash with soap and water promptly;
- If contamination is inhaled, move the person to fresh air at once. If the worker's breathing has stopped, perform artificial respiration **ONLY** if appropriately trained and currently certified by the Red Cross or equivalent organization. Request appropriate medical attention as soon as possible by dialing 911 or other relevant telephone numbers listed in **Table 1**.

On-Site personnel shall keep a First-Aid kit at the job site during Site activities.

Noise

Elevated noise levels may be encountered during the project due to construction equipment. Persons working in close proximity to construction equipment shall wear sufficient hearing protection. This equipment may include foam earplugs or foam earmuffs. Hand signals must be used for communication in these situations. Hand signals shall be established and practiced prior to donning protective hearing equipment.

Dust

Fugitive dust is particulate matter that is generated from the natural or mechanical disturbance of soil and rock. Generation of fugitive dust generally depends upon the specific

type of operations, the silt and moisture content of the soil, local meteorological conditions (i.e. wind speed and precipitation amount) and emission controls that are applied. The quantity of fugitive dust generated is proportional to the area of land being worked and the level of construction activity on the land. Fugitive dust emissions could be generated during site preparation/excavation operations and the related on-site vehicle traffic.

Inhalation of fugitive contaminated dust due to soil disturbance during construction activities presents an exposure risk, and personnel are recommended to conduct ground intrusive activities in a manner to mitigate fugitive dust. Steps to mitigate fugitive dust have been summarized in the Phase IV RIP.

Working Near Water

The KCCRA includes a portion of Kings Cove. Therefore, workers will be excavating in close proximity to the ocean. Preferably at least two people should be in sight of each other at all times. Communication devices such as cell phones or radios should be waterproof. Those working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard-approved life jacket or buoyant work vests. Prior to and after each use, the buoyant work vests or life jackets shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.

On-site Control

The following three work zones will be used to meet operational and safety objectives that will be defined during the tailgate safety meeting:

- **Exclusion Zone**: Within 15 feet of an open excavation or pit within an area where contamination is either known or likely to be present, or because of activity, could present potential harm to personnel. Entry into the Exclusion Zone requires proper PPE and training. No eating, drinking, or smoking is permitted in this zone.
- **Contamination Reduction Zone (CRZ)**: Decontamination area for personnel. This acts as a transition area between the contaminated and clean area. This zone also requires proper PPE and training, similar to the Exclusion Zone. No eating, drinking, or smoking is permitted in this zone..
- **Support Zone**: An uncontaminated area where personnel should not be exposed to hazardous conditions. When possible, the Support Zone will be positioned upwind of the Exclusion Zone.

Personnel Training Requirements

Site personnel must have completed a 40-hour OSHA HAZWOPER training program. If the 40-hour training program was completed more than 12 months prior to commencement of site work, then personnel must have completed an 8-hour refresher training class at a point during the prior 12-month period. A wallet-size copy of the most recent HAZWOPER training certificate must be available at the job site at all times.

A Site-Safety Officer will be designated to coordinate access control to the work zones. No unauthorized personnel should enter the work zone to perform waste site cleanup activities without the appropriate 40-hour OSHA HAZWOPER Training. A summary of the on-Site personnel is provided in the following table.

Table 4 On-site Personnel

Site Safety Officer:	VHB Representative – To be determined.
Regulatory Authority:	N/A
State Agency Representative:	N/A
Local Agency:	To be determined.
Local Agency Representative:	To be determined.
Contractors:	To be determined.
Emergency Contacts:	Emily Straley (VHB) – 617.607.1851 (LSP) Katie Kudzma (VHB) – 617.607.1704 (LSP)

Action Levels, Personnel Monitoring, and Personnel Protection

The initial level of personnel protection will be Level D. Field monitoring action levels are presented in **Table 5**:

Table 5 Action Levels

Location	Action Level	Response
Work Area, Exclusion Zone, Contaminant Reduction Zone, and Support Zone	100 µg/m^3 (0.10 mg/m^3) particulate (PM_{10}) measured with TSI Dustrak™ (or equivalent)	Should this threshold be exceeded within the work area or at a fence line monitoring station, excavation work will temporarily stop, and dust suppression techniques would be employed. The Action Level is applicable to the dust concentration as measured above the background concentration. The Action Level is used as a site management tool to give operational staff the ability to implement corrective actions prior to reaching the Work Stoppage Threshold indicated below.
	150 µg/m^3 (0.15 mg/m^3) particulate (PM_{10}) measured with TSI Dustrak™ (or equivalent)	Should the dust suppression measures taken in response to an Action Level exceedance be unsuccessful at reducing dust levels and dust levels exceed 150 ug/m^3 above background levels within the work area or at a fence line monitoring station for more than two hourly dust readings, excavation work will be stopped pending a technical evaluation by the Contractor and VHB. Additional measures will be selected and employed to mitigate dust generation. This threshold is applicable to the dust concentration as measured above the background concentration.
	5 ppm TVOC (measured with PID calibrated to benzene response factor)	If PID readings are sustained above 5 parts per million per unit volume (ppmV) in the breathing zone for at least 5 minutes, VHB's representative will wait 15 minutes and measure again. If the PID readings are still above 5 ppmV, then the LSP will be contacted to evaluate whether response actions or personal protective equipment (PPE) upgrades are necessary.

Monitoring/Surveillance Equipment

- ☐ OVM
- ☐ Colorimetric Tubes
- ☐ Personal Sampling Pump
- ☒ Photoionization Detector (PID)
- ☐ Metal Detector
- ☐ Four Gas Meter
- ☒ Dust Monitor
- ☐ Multi-Gas Monitor

Personnel Monitoring Plan

Dust Monitoring

Dust monitoring will be conducted during the Remedial Action Alternative implementation as outlined in the Phase IV RIP. Dust monitoring will consist of a five-minute average reading of total particulate matter passing through a PM_{10} filter. Results of monitoring and corrective actions taken will be logged throughout construction.

VOC Monitoring

Total VOCs will be monitored periodically during excavation activities in ambient air within the KCCRA using a photoionization detector (PID).

General Safety Requirements

All persons entering and/or working on the job site shall adhere to the following General Safety Procedures:

- Attend a tailgate health and safety meeting each day prior to the start of work. The tailgate safety meeting procedures are detailed in the following section.
- Adhere to all requirements of this HASP and the Phase IV RIP.
- Wear personal protective equipment (PPE) appropriate for the designated level of protection as discussed in the following section.
- Use safety equipment in accordance with OSHA guidance and labeling instructions.
- Clean hands thoroughly prior to smoking, eating, or other activities outside the restricted area.
- Avoid unnecessary contamination (i.e. walking through known or suspected "hot" zones or contaminated puddles, kneeling or sitting on the ground, leaning against potentially contaminated barrels or equipment).
- Register any visitors. No visitors will be allowed access without the knowledge and consent of the Site Manager and/or Safety Officer. All visitors will be required to be briefed on safety procedures and will be required to be escorted while on-site.

Tailgate Safety Meetings

Tailgate safety meetings will be conducted daily prior to commencement of the work day and following any change in conditions during the work.

Topics covered by the tailgate safety meeting will include, but not be limited to, potential hazards, weather forecast, PPE, emergency procedures and the route to the nearest medical facility.

Safety meetings must also be held to address modifications to this HASP and any addenda prepared to supplement the HASP. Subcontractors and personnel present at the tailgate safety meeting are required to sign an acknowledgement form after each meeting.

Personal Protective Equipment

Based on an evaluation of potential hazards, the following levels of personal protection have been designated for the applicable areas or tasks.

		Level of Protection				
Location	**Job Function**	**A**	**B**	**C**	**D**	**Other**
Exclusion Zone	Construction Areas	☐	☐	☐	☒	☐
Contaminant Reduction Zone	Decontamination	☐	☐	☐	☒	☐
Support Zone	Field Vehicle and Supplies	☐	☐	☐	☒	☐

Level D personnel protection will include:

- Chemical-resistant gloves;
- Boots/shoes (leather or chemical-resistant);
- Safety glasses (ANSI rated) for flying debris/particulates; or chemical splash goggles for gases, vapors or particulates;
- Hard hat; and
- Hearing protection

Decontamination Procedures

All non-expendable equipment will be cleaned according to Standard Operating Protocols. This protocol includes:

- Brush off equipment that has come in contact with soil/fill;
- Rinse with tap water;
- Wash with Alconox detergent (or soap) and water; and
- Rinse with distilled or tap water.

The decontamination procedure for Level D requires the disposal of gloves, Tyvek suits (if used), and boot covers (if used) in plastic lined containers on-Site. Although not considered part of Level D PPE, in the event Tyvek suits or boot covers are used, they should also be disposed in plastic lined containers on-Site. All non-disposable equipment used on-Site that becomes contaminated will be cleaned by the protocol referenced above.

Emergency Medical Care

First Aid shall be made available on-Site at the following locations:

First Aid Kit:	Located in field vehicle
Emergency Eye Wash:	Emergency eye wash kits must be kept on-Site. Water is kept in vehicles, or call 911
Emergency Shower:	Water is kept in the vehicles, or call 911
Other (Specify):	N/A

Site Resource(s) and their locations:

Water Supply:	Water is kept in vehicles
Telephones:	All personnel are required to have personal mobile telephones
Communication Systems:	Mobile telephones
Other (Specify):	N/A

Emergency Procedures

On-Site personnel will use the following standard emergency procedures. These procedures may be modified as appropriate and required for each incident. The Site-Safety Officer will be notified of any on-Site emergencies and will be responsible for ensuring that the appropriate procedures are followed.

- **Fire/Explosion**: The fire department will be notified, and all personnel moved to a safe distance from the involved area.
- **Personal Protective Equipment Failure**: If any site worker experiences a failure or malfunction of personal protective equipment that adversely affects the protection factor that person and his/her buddy will immediately leave the Exclusion Zone and/or Contaminant Reduction Zone. Re-entry will not be permitted until the equipment has been repaired or replaced.
- **Other Equipment Failure**: If any other equipment on-Site fails to operate properly, the Site Manager and Site Safety Officer will be notified and will then evaluate the effect of such failure on continuing operations. If the failure affects personnel safety or prevents completion of the investigation activities, all personnel will leave the Exclusion Zone and/or the Contamination Reduction Zone until the situation is remedied through appropriate action(s).

Signature Page

We, the undersigned, have prepared this Site-Specific Health and Safety Plan utilizing all available resources to provide guidance on health and safety practices and to inform VHB personnel of potential hazards that may be encountered on the job Site.

Prepared By:

Paige Cochrane, VHB

Signature

4/23/2024

Date

Reviewed By:

Katherine Kudzma, VHB

Signature

4/23/2024

Date

Personnel Acknowledgement

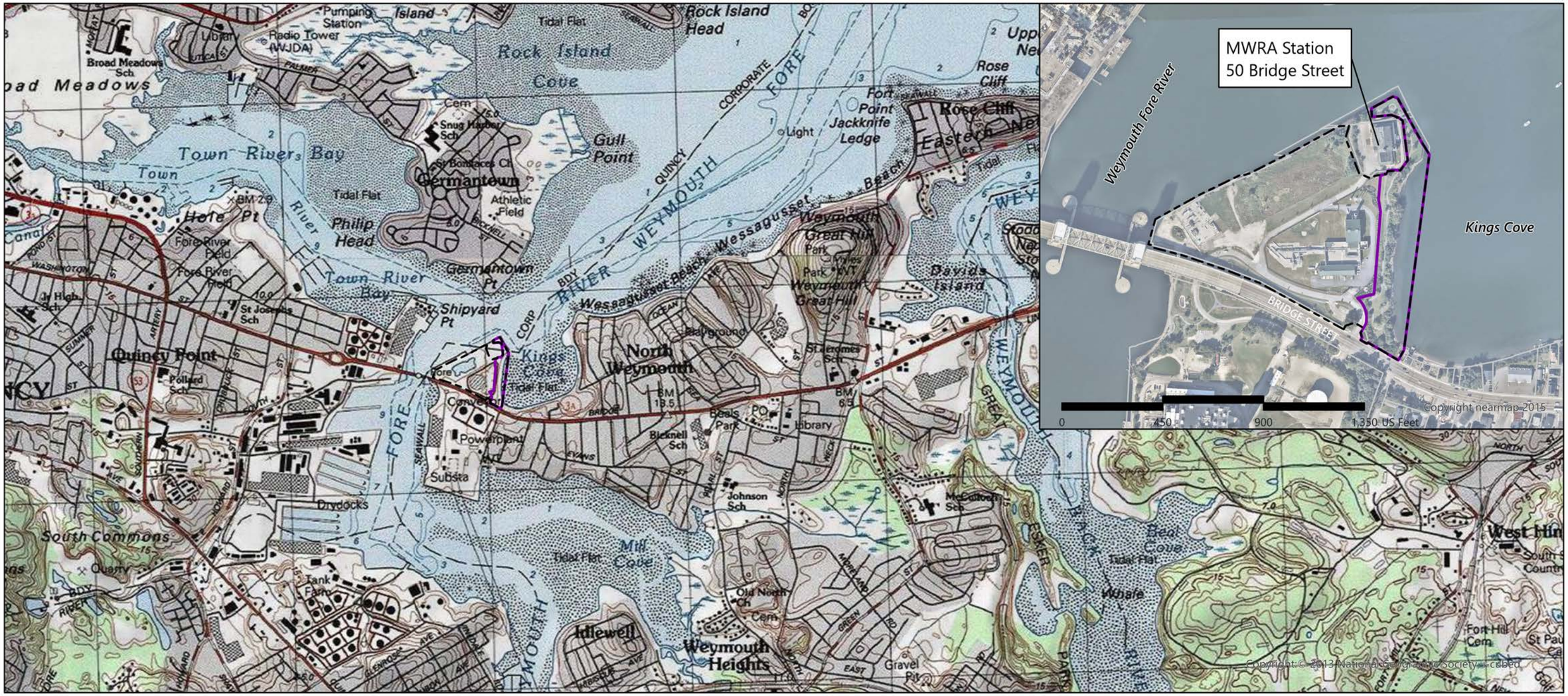
I have read, understood, and agree to comply with the provisions set forth in this Site-Specific Health and Safety Plan and as reviewed in the Health and Safety Briefing by the Site-Safety Officer. Refer to **Attachment C** for additional signature pages if needed.

Signature	Date

Figures

Figure 1: Site Location and Local Area Map

Kings Cove Conservation Restriction Area | Weymouth, Massachusetts

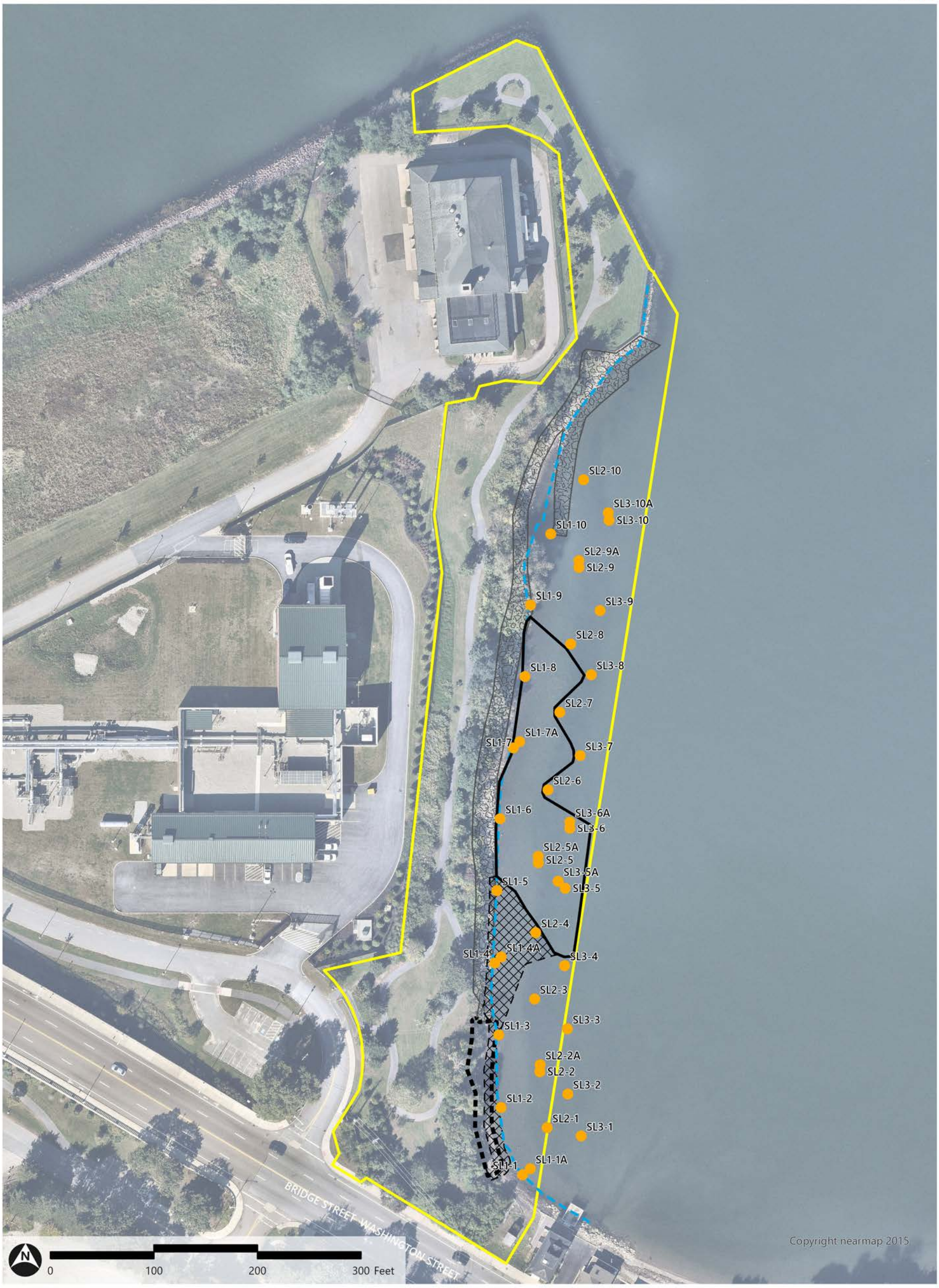


Source: USGS Topo Map, NearMap Imagery

Path: \\vhb.com\gis\proj\Wat-EV\16105.00 Enbridge-Compressor Sta\Project\SIR\SIR.aprx (User: pcochrane, Date: 4/2/2024)

Figure 2: Remedial Action Alternative Location

Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



Path: \\vhb.com\gis\proj\Wat-EV\16105.00 Enbridge-Compressor Sta\Project\SIR\SIR.aprx (User: pcochrane, Date: 4/2/2024)

Source: NearMap Imagery, MassDOT Roads, TRC July 2023 Phase II Remedial Action Plan

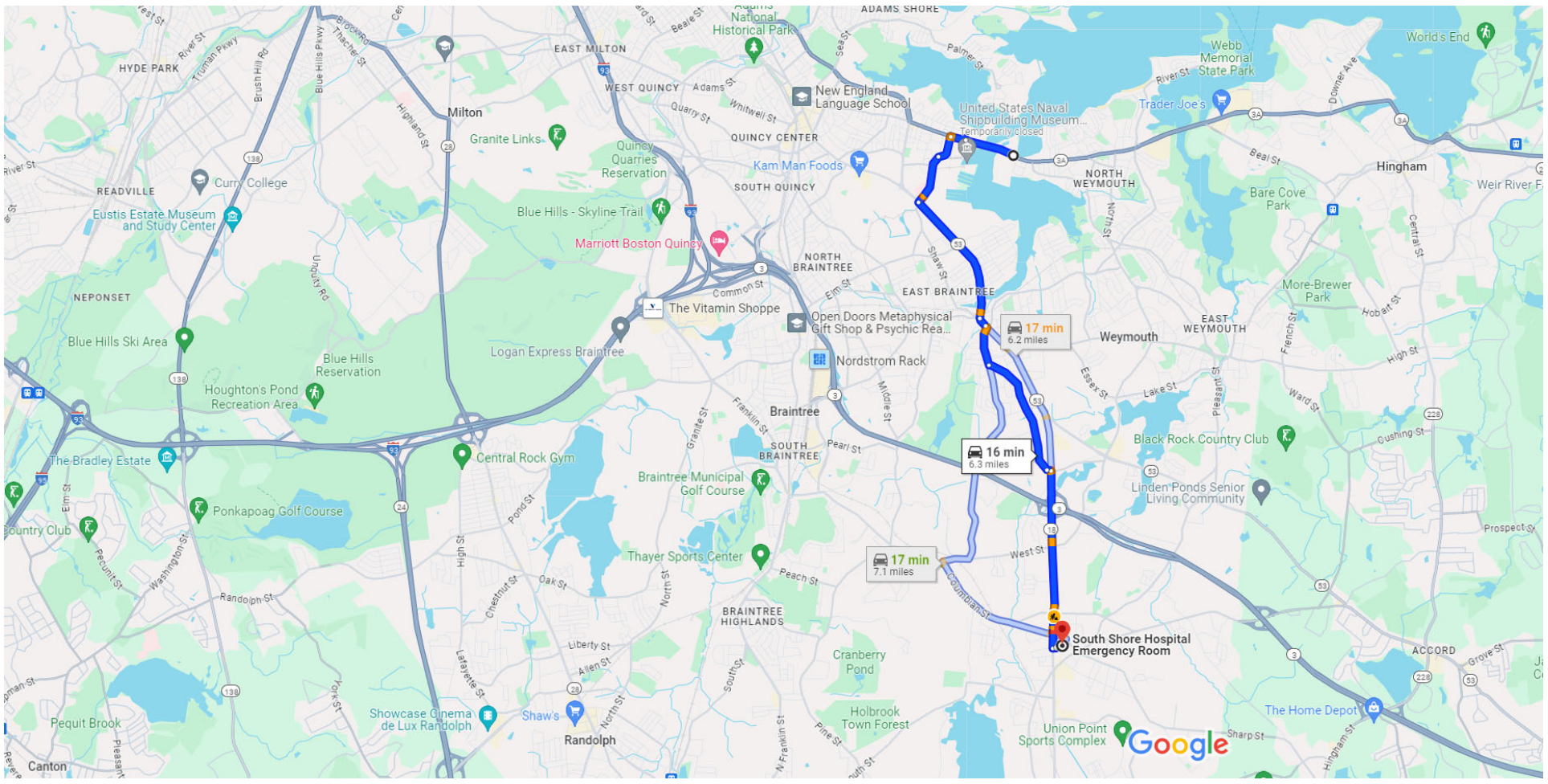
Attachment A: Emergency Hospital Route

Google Maps

82 Bridge St to South Shore Hospital Emergency Room, 55 Fogg Rd, South Weymouth, MA 02190

Drive 6.3 miles, 16 min

Hospital Route



82 Bridge St

Take MA-3A N, E Howard St and Quincy Ave to Front St

8 min (3.2 mi)

1. Head northwest on MA-3A N/Bridge St
   Continue to follow MA-3A N

0.5 mi

2. At the traffic circle, take the 1st exit onto Washington St

0.2 mi

3. Turn left onto South St

0.3 mi

4. Continue onto E Howard St

0.5 mi

5. Turn left onto Quincy Ave

1.3 mi

6. Continue onto Commercial St

492 ft

7. Turn right onto Front St

0.4 mi

Follow Front St to Main St

3 min (1.3 mi)

8. Turn left to stay on Front St

1.2 mi

9. Turn left onto Winter St

223 ft

10. Turn right onto Main St

4 min (1.7 mi)

Drive to your destination

1 min (0.1 mi)

11. Turn left onto Fogg Rd

171 ft

12. Turn left

66 ft

13. Turn right
    Destination will be on the left

331 ft

Attachment B: Hazardous Substance Fact Sheets for Suspected Site Contaminants

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Thallium (soluble compounds, as Tl)

SYNONYMS & TRADE NAMES

CAS NO.

RTECS NO.

DOT ID & GUIDE

1707 151(compounds, n.o.s.)

FORMULA

CONVERSION

IDLH

15 mg/m^3 (as Tl)
See: thallium

EXPOSURE LIMITS

NIOSH REL
TWA 0.1 mg/m^3 [skin]
OSHA PEL
TWA 0.1 mg/m^3 [skin]

MEASUREMENT METHODS

NIOSH 7300 , 7301 , 7303 , 9102;
OSHA ID121
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Appearance and odor vary depending upon the specific soluble thallium compound.

MOLECULAR WEIGHT

Properties vary depending upon the specific soluble thallium compound.

INCOMPATIBILITIES & REACTIVITIES

Varies

EXPOSURE ROUTES

inhalation, skin absorption, ingestion, skin and/or eye contact

SYMPTOMS

nausea, diarrhea, abdominal pain, vomiting; ptosis, strabismus; peri neuritis, tremor; retrosternal (occurring behind the sternum) tightness, chest pain, pulmonary edema; convulsions, chorea, psychosis; liver, kidney damage; alopecia; paresthesia legs

TARGET ORGANS

Eyes, respiratory system, central nervous system, liver, kidneys, gastrointestinal tract, body hair

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Water flush promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

NIOSH/OSHA

Up to 0.5 mg/m^3:
(APF = 5) Any quarter-mask respirator.
Click here for information on selection of N, R, or P filters.

Up to 1 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 2.5 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 5 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 15 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION MEDICAL TESTS: 0228

Page last reviewed: October 30, 2019

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research NIOSH

Antimony

SYNONYMS & TRADE NAMES

Antimony metal, Antimony powder, Stibium

CAS NO.

7440-36-0

RTECS NO.

CC4025000

DOT ID & GUIDE

1549 157(inorganic compounds, n.o.s.)
2871 170(powder)
3141 157(inorganic liquid compounds, n.o.s.)

FORMULA

Sb

CONVERSION

IDLH

50 mg/m^3 (as Sb)
See: 7440360

EXPOSURE LIMITS

NIOSH REL
TWA 0.5 mg/m^3 [*Note: The REL also applies to other antimony compounds (as Sb).]
OSHA PEL
TWA 0.5 mg/m^3 [*Note: The PEL also applies to other antimony compounds (as Sb).]

MEASUREMENT METHODS

NIOSH P&CAM261 (II-4) , 7301 , 7303;
OSHA ID121 , ID125G , ID206
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Silver-white, lustrous, hard, brittle solid; scale-like crystals; or a dark-gray, lustrous powder.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
121.8	2975°F	1166°F	Insoluble	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT		
6.69	NA	NA	NA		

Noncombustible Solid in bulk form, but a moderate explosion hazard in the form of dust when exposed to flame.

INCOMPATIBILITIES & REACTIVITIES

Strong oxidizers, acids, halogenated acids [Note: Stibine is formed when antimony is exposed to nascent (freshly formed) hydrogen.]

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

irritation eyes, skin, nose, throat, mouth; cough; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; unable to smell properly

TARGET ORGANS

Eyes, skin, respiratory system, cardiovascular system

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

NIOSH/OSHA

Up to 5 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 12.5 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 25 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION ICSC CARD: 0775

Page last reviewed: October 30, 2019

Barium nitrate (as Ba)

SYNONYMS & TRADE NAMES

Barium dinitrate, Barium(II) nitrate (1:2), Barium salt of nitric acid

CAS NO.

10022-31-8

RTECS NO.

CQ9625000

DOT ID & GUIDE

1446 141

FORMULA

$Ba(NO_3)_2$

CONVERSION

IDLH

50 mg/m^3 (as Ba)
See: IDLH INDEX

EXPOSURE LIMITS

NIOSH REL
TWA 0.5 mg/m^3 [*Note: The REL also applies to other soluble barium compounds (as Ba) except Barium sulfate.]
OSHA PEL
TWA 0.5 mg/m^3 [*Note: The PEL also applies to other soluble barium compounds (as Ba) except Barium sulfate.]

MEASUREMENT METHODS

NIOSH 7056;
OSHA ID121
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

White, odorless solid.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
261.4	Decomposes	1094°F	9%	Low	?

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT		
3.24	NA	NA	NA		

Noncombustible Solid, but will accelerate the burning of combustible materials.

INCOMPATIBILITIES & REACTIVITIES

Acids, oxidizers, aluminum-magnesium alloys, (barium dioxide + zinc) [Note: Contact with combustible material may cause fire.]

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

irritation eyes, skin, upper respiratory system; skin burns; gastroenteritis; muscle spasm; slow pulse, extrasystoles; hypokalemia

TARGET ORGANS

Eyes, skin, respiratory system, heart, central nervous system

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Water flush immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

NIOSH/OSHA

Up to 5 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 12.5 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 25 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION ICSC CARD: 1480

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research NIOSH

Cadmium dust (as Cd)

SYNONYMS & TRADE NAMES

Cadmium metal

CAS NO.

7440-43-9 (metal)

RTECS NO.

EU9800000 (metal)

DOT ID & GUIDE

2570 154(cadmium compound)

FORMULA

Cd (metal)

CONVERSION

IDLH

Ca [9 mg/m^3 (as Cd)]
See: 7440439

EXPOSURE LIMITS

NIOSH REL
Ca See Appendix A [*Note: The REL applies to all Cadmium compounds (as Cd).]
OSHA PEL
[1910.1027] TWA 0.005 mg/m^3 [*Note: The PEL applies to all Cadmium compounds (as Cd).]

MEASUREMENT METHODS

NIOSH 7048 , 7300 , 7301 , 7303 , 9102;
OSHA ID121 , ID125G , ID189 , ID206
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Metal: Silver-white, blue-tinged lustrous, odorless solid.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
112.4	1409°F	610°F	Insoluble	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT
8.65 (metal)	NA	NA	NA

Metal: Noncombustible Solid in bulk form, but will burn in powder form.

INCOMPATIBILITIES & REACTIVITIES

Strong oxidizers; elemental sulfur, selenium & tellurium

EXPOSURE ROUTES

inhalation, ingestion

SYMPTOMS

pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen]

TARGET ORGANS

respiratory system, kidneys, prostate, blood

CANCER SITE

[prostatic & lung cancer]

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: Daily
Remove: No recommendation
Change: Daily

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

(See Appendix E)

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

Page last reviewed: October 30, 2019

Chromium metal

SYNONYMS & TRADE NAMES

Chrome, Chromium

CAS NO.

7440-47-3

RTECS NO.

GB4200000

DOT ID & GUIDE

FORMULA

Cr

CONVERSION

IDLH

250 mg/m^3 (as Cr)
See: 7440473

EXPOSURE LIMITS

NIOSH REL
TWA 0.5 mg/m^3 See Appendix C
OSHA PEL
TWA 1 mg/m^3 See Appendix C [*Note: The PEL also applies to insoluble chromium salts.]

MEASUREMENT METHODS

NIOSH 7024 , 7300 , 7301 , 7303 , 9102;
OSHA ID121 , ID125G
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Blue-white to steel-gray, lustrous, brittle, hard, odorless solid.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
52.0	4788°F	3452°F	Insoluble	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT		
7.14	NA	NA	NA		

Noncombustible Solid in bulk form, but finely divided dust burns rapidly if heated in a flame.

INCOMPATIBILITIES & REACTIVITIES

Strong oxidizers (such as hydrogen peroxide), alkalis

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

irritation eyes, skin; lung fibrosis (histologic)

TARGET ORGANS

Eyes, skin, respiratory system

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

NIOSH

Up to 2.5 mg/m^3:
(APF = 5) Any quarter-mask respirator.
Click here for information on selection of N, R, or P filters.*

Up to 5 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.*
(APF = 10) Any supplied-air respirator*

Up to 12.5 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode*
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.*

Up to 25 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter*
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 250 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION ICSC CARD: 0029

Page last reviewed: October 30, 2019

Coke oven emissions

SYNONYMS & TRADE NAMES

CAS NO.

RTECS NO.
GH0346000

DOT ID & GUIDE

FORMULA

CONVERSION

IDLH

Ca [N.D.]
See: IDLH INDEX

EXPOSURE LIMITS

NIOSH REL
Ca TWA 0.2 mg/m^3 (benzene-soluble fraction) See Appendix A See Appendix C
OSHA PEL
[1910.1029] TWA 0.150 mg/m^3 (benzene-soluble fraction)

MEASUREMENT METHODS

OSHA 58
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Emissions released during the carbonization of bituminous coal for the production of coke. [Note: See Appendix C for more information.]

MOLECULAR WEIGHT

Properties vary depending upon the constituent.

INCOMPATIBILITIES & REACTIVITIES

None reported

EXPOSURE ROUTES

inhalation, skin and/or eye contact

SYMPTOMS

irritation eyes, respiratory system; cough, dyspnea (breathing difficulty), wheezing; [potential occupational carcinogen]

TARGET ORGANS

Skin, respiratory system, urinary system

CANCER SITE

[skin, lung, kidney & bladder cancer]

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: Daily
Remove: No recommendation
Change: Daily

FIRST AID

(See procedures)
Eye: Irrigate immediately

Breathing: Respiratory support

RESPIRATOR RECOMMENDATIONS

(See Appendix E)

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION MEDICAL TESTS: 0056

Page last reviewed: October 30, 2019

Lead

SYNONYMS & TRADE NAMES

Lead metal, Plumbum

CAS NO.

7439-92-1

RTECS NO.

OF7525000

DOT ID & GUIDE

FORMULA

Pb

CONVERSION

IDLH

100 mg/m^3 (as Pb)
See: 7439921

EXPOSURE LIMITS

NIOSH REL
TWA (8-hour) 0.050 mg/m^3 See Appendix C [*Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.]
OSHA PEL
[1910.1025] TWA 0.050 mg/m^3 See Appendix C [*Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.]

MEASUREMENT METHODS

NIOSH 7082 , 7105 , 7300 , 7301 , 7303 , 7700 , 7701 , 7702 , 9100 , 9102 , 9105;
OSHA ID206 , ID121 , ID125G
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

A heavy, ductile, soft, gray solid.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
207.2	3164°F	621°F	Insoluble	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT		
11.34	NA	NA	NA		

Noncombustible Solid in bulk form.

INCOMPATIBILITIES & REACTIVITIES

Strong oxidizers, hydrogen peroxide, acids

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension

TARGET ORGANS

Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: Daily
Remove: When wet or contaminated
Change: Daily

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap flush promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

(See Appendix E)
NIOSH/OSHA

Up to 0.5 mg/m^3:
(APF = 10) Any air-purifying respirator with an N100, R100, or P100 filter (including N100, R100, and P100 filtering facepieces) except quarter-mask respirators.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 2.5 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Up to 100 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION ICSC CARD: 0052 MEDICAL TESTS: 0127

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Selenium

SYNONYMS & TRADE NAMES

Elemental selenium, Selenium alloy

CAS NO.

7782-49-2

RTECS NO.

VS7700000

DOT ID & GUIDE

2658 152(powder)

FORMULA

Se

CONVERSION

IDLH

1 mg/m^3 (as Se)
See: 7782492

EXPOSURE LIMITS

NIOSH REL
TWA 0.2 mg/m^3 [*Note: The REL also applies to other selenium compounds (as Se) except Selenium hexafluoride.]
OSHA PEL
TWA 0.2 mg/m^3 [*Note: The PEL also applies to other selenium compounds (as Se) except Selenium hexafluoride.]

MEASUREMENT METHODS

NIOSH S190 (II-7) , 7300 , 7301 , 7303 , 9102;
OSHA ID121
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Amorphous or crystalline, red to gray solid. [Note: Occurs as an impurity in most sulfide ores.]

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
79.0	1265°F	392°F	Insoluble	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT
4.28	NA	NA	NA

Combustible Solid

INCOMPATIBILITIES & REACTIVITIES

Acids, strong oxidizers, chromium trioxide, potassium bromate, cadmium

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

irritation eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; In Animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage

TARGET ORGANS

Eyes, skin, respiratory system, liver, kidneys, blood, spleen

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: No recommendation
Wash skin: When contaminated
Remove: When wet or contaminated
Change: No recommendation
Provide: Quick drench

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

NIOSH/OSHA

Up to 1 mg/m^3:
(APF = 5) Any quarter-mask respirator.
Click here for information on selection of N, R, or P filters.*
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.*/

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.*
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.*
(APF = 10) Any supplied-air respirator*
(APF = 50) Any self-contained breathing apparatus with a full facepiece

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION ICSC CARD: 0072

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research NIOSH

Vanadium dust

SYNONYMS & TRADE NAMES

Divanadium pentoxide dust, Vanadic anhydride dust, Vanadium oxide dust, Vanadium pentaoxide dust

CAS NO.

1314-62-1

RTECS NO.

YW2450000

DOT ID & GUIDE

2862 151

FORMULA

V_2O_5

CONVERSION

IDLH

35 mg/m^3 (as V)
See: vandust

EXPOSURE LIMITS

NIOSH REL
C 0.05 mg V/m^3 [15-minute] [*Note: The REL applies to all vanadium compounds except Vanadium metal and Vanadium carbide (see Ferrovanadium dust).]
OSHA PEL
C 0.5 mg V_2O_5/m^3 (resp) See Appendix G

MEASUREMENT METHODS

NIOSH 7300 , 7301 , 7303 , 7504 , 9102;
OSHA ID185
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Yellow-orange powder or dark-gray, odorless flakes dispersed in air.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
181.9	3182°F (Decomposes)	1274°F	0.8%	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT		
3.36	NA	NA	NA		

Noncombustible Solid, but may increase intensity of fire when in contact with combustible materials.

INCOMPATIBILITIES & REACTIVITIES

Lithium, chlorine trifluoride

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

irritation eyes, skin, throat; green tongue, metallic taste, eczema; cough; fine rales, wheezing, bronchitis, dyspnea (breathing difficulty)

TARGET ORGANS

Eyes, skin, respiratory system

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: No recommendation

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

NIOSH (as V)

Up to 0.5 mg/m^3:
(APF = 10) Any air-purifying respirator with an N100, R100, or P100 filter (including N100, R100, and P100 filtering facepieces) except quarter-mask respirators.
Click here for information on selection of N, R, or P filters.*
(APF = 10) Any supplied-air respirator*

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode*
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.*

Up to 2.5 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter*
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 35 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

SEE ALSO

INTRODUCTION MEDICAL TESTS: 0240

Page last reviewed: October 30, 2019

Zinc stearate

SYNONYMS & TRADE NAMES

Dibasic zinc stearate, Zinc distearate, Zinc salt of stearic acid

CAS NO.

557-05-1

RTECS NO.

ZH5200000

DOT ID & GUIDE

FORMULA

$Zn(C_{18}H_{35}O_2)_2$

CONVERSION

IDLH

N.D.
See: IDLH INDEX

EXPOSURE LIMITS

NIOSH REL
TWA 10 mg/m^3 (total) TWA 5 mg/m^3 (resp)
OSHA PEL
TWA 15 mg/m^3 (total) TWA 5 mg/m^3 (resp) See Appendix G

MEASUREMENT METHODS

NIOSH 0500 , 0600
See: NMAM or OSHA Methods

PHYSICAL DESCRIPTION

Soft, white powder with a slight, characteristic odor.

MOLECULAR WEIGHT	BOILING POINT	MELTING POINT	SOLUBILITY	VAPOR PRESSURE	IONIZATION POTENTIAL
632.4	?	266°F	Insoluble	0 mmHg (approx)	NA

SPECIFIC GRAVITY	FLASH POINT	UPPER EXPLOSIVE LIMIT	LOWER EXPLOSIVE LIMIT		MINIMUM EXPLOSIVE CONCENTRATION
1.10	(oc) 530°F	?	?		20 g/m^3

Combustible Solid

INCOMPATIBILITIES & REACTIVITIES

Oxidizers, dilute acids [Note: Hydrophobic (i.e., repels water).]

EXPOSURE ROUTES

inhalation, ingestion, skin and/or eye contact

SYMPTOMS

irritation eyes, skin, upper respiratory system; cough

TARGET ORGANS

Eyes, skin, respiratory system

PERSONAL PROTECTION/SANITATION

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

FIRST AID

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash
Breathing: Fresh air
Swallow: Medical attention immediately

RESPIRATOR RECOMMENDATIONS

Not available.

Important additional information about respirator selection

SEE ALSO

INTRODUCTION ICSC CARD: 0987

Page last reviewed: October 30, 2019

Attachment C: Acknowledgement Page

I have read, understood, and agree to comply with the provisions set forth in this Site-Specific Health and Safety Plan and as reviewed in the Health and Safety Briefing by the Site-Safety Officer.

Signature	**Date**

Appendix F: Public Notifications

April 26, 2024

Mayor Robert Hedlund
Weymouth Town Hall
75 Middle Street
Weymouth, MA 02189

Re: **Public Notice Requirement: Notice of Availability - Draft Phase IV Remedy Implementation Plan**
Kings Cove Conservation Restriction Area, 82-90 Bridge Street, Weymouth, Massachusetts
Release Tracking Number (RTN) 4-26230

Dear Mayor Hedlund:

On behalf of Algonquin Gas Transmission, LLC, Vanasse Hangen Brustlin, Inc. (VHB) is informing you, pursuant to the Massachusetts Contingency Plan (MCP), 310 CMR 40.1403(3)(e), that a Draft Phase IV Remedy Implementation Plan has been completed for the Kings Cove Conservation Restriction Area located at 82-90 Bridge Street in Weymouth, Massachusetts. Attached are pertinent excerpts from the Draft Phase IV Remedy Implementation Plan per, 310 CMR 40.1403(3)(e).

The Draft Phase IV Remedy Implementation Plan was submitted to the Massachusetts Department of Environmental Protection (MassDEP) via eDEP on April 26, 2024 and is available for public review. The report can be obtained by searching under RTN 4-26230 on the MassDEP Waste Site Database:
https://eeaonline.eea.state.ma.us/portal#!/search/wastesite

The report can also be reviewed at the Public Information Repositories at Tufts Public Library and the Weymouth Health Department.

A public meeting for the document will take place at Weymouth High School, 1 Wildcat Way, Weymouth, Massachusetts on May 14, 2024 from 7:00pm to 9:00pm (location to be confirmed). Additional information on joining the meeting will be available at https://projects.vhbapps.com/weymouth-pip/

Sincerely,

VHB

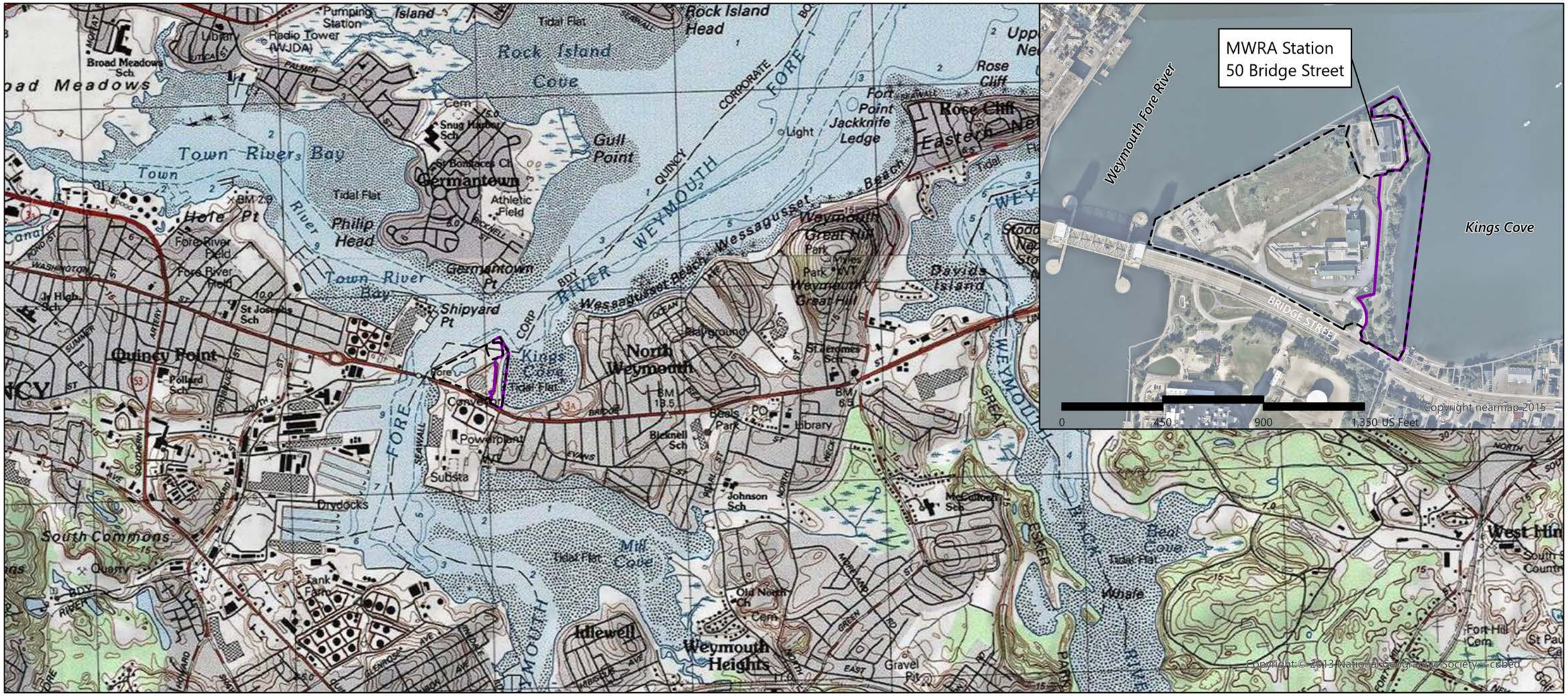
Katherine E. Kudzma, LSP
Director, Site Investigation & Remediation

Attachments: Figure 1 – Site Location and Local Area Map
Figure 2 – Disposal Site Plan
Description of the Remedial Action Alternative

Engineers | Scientists | Planners | Designers
260 Arsenal Place #2, Watertown, Massachusetts 02472
P 617.924.1770 **F** 617.924.2286 www.vhb.com

Figure 1: Site Location and Local Area Map

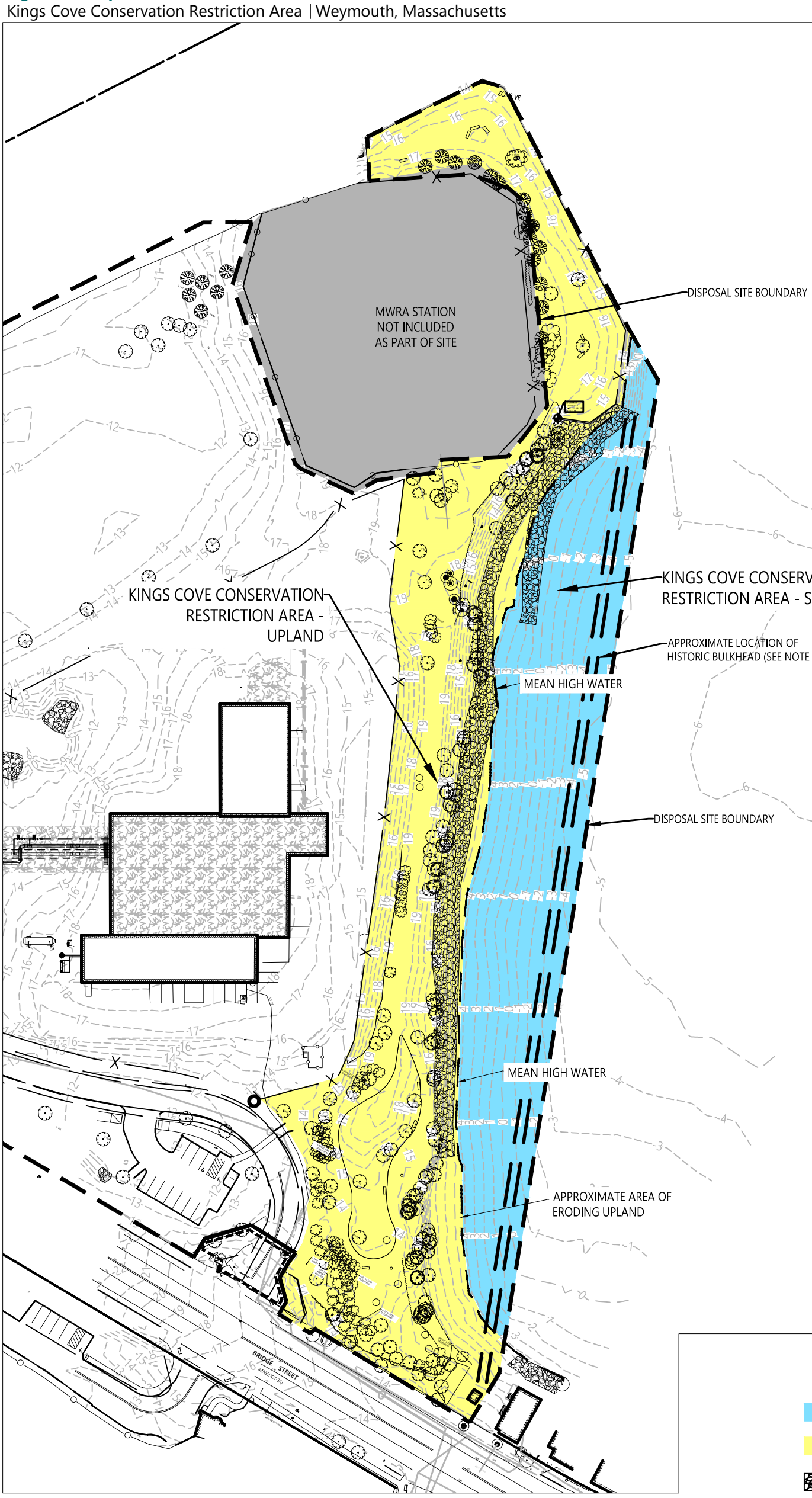
Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



Source: USGS Topo Map, NearMap Imagery

Path: \\vhb.com\gis\proj\Wat-EV\16105.00 Enbridge-Compressor Sta\Project\SIR\SIR.aprx (User: pcochrane, Date: 4/2/2024)

Figure 2 - Disposal Site Plan
Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



0 25 50 100 Feet

Record Owner

ALGONQUIN GAS TRANSMISSION, LLC
A TEXAS LIMITED LIABILITY COMPANY
5400 WESTHEIMER COURT
HOUSTON, TX 77056
BOOK 36146 PAGE 163
PARCEL G–1
PARCEL G–2
LOT B–1
PARCEL AQ 1–A
PARCEL AQ 1–B

General Notes

1) BASEMAP WAS PREPARED FROM A COPY OF A PLAN ENTITLED "ATLANTIC BRIDGE WEYMOUTH COMPRESSOR STATION EXISTING CONDITIONS" PRPEPARED BY VHB FOR ENBRIDGE OF HOUSTON TEXAS, DATED 2020 ORIGINAL SCALE 1"= 60 FT., DWG. NO BB–A–2000.

2) THE PROPERTY LINES SHOWN ON THIS PLAN ARE A COMBINATION OF FIELD EVIDENCE, RECORD PLANS GIS.

3) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE THE RESULT OF AN ON THE GROUND SURVEY PERFORMED IN AUGUST 2014 AND SUPPLEMENTED IN DECEMBER OF 2020.

4) HORIZONTAL DATUM IS BASED ON UTM 19 PROJECTIONS, NAD 1983. VERTICAL DATUM IS BASED ON GPS OBSERVATION IN NAVD 88.

5) BULKHEAD WAS DIGITIZED FROM A DWG. ACCOMPANYING LICENSE NO. 936, DATED AUGUST 7, 1928, RECORDED IN BOOK 1811, PAGE 39; TO MAINTAIN, AS NOW BUILT, BULKHEADS, PILE WHARVES, SIX PILE DOLPHINS, INTAKE WELLS AND A DISCHARGE FLUME, AND SOLID FILLING, AS PLACED, AND TO BUILD AND MAINTAIN ADDITIONAL BULKHEADS AND PLACE ADDITIONAL FILLING. THIS LICENSE, SO FAR AS IT RELATES TO CERTAIN OF THE STRUCTURES ALREADY BUILT AND TO FILLING IN PLACE, IS GRANTED TO RECTIFY ANY DISCREPANCY BETWEEN WORK ACTUALLY DONE AND WORK DESCRIBED IN LICENSES PREVIOUSLY GRANTED: LICENSE NO 177 (1921); LICENSE NO 276 (1922); LICENSE NO 394 (1924) AND LICENSE NO 710 (1926). ORIGINAL SCALE 1"=300FT

Legend

- KINGS COVE CONSERVATION RESTRICTION AREA - SHORE
- KINGS COVE CONSERVATION RESTRICTION AREA - UPLAND
- RIP RAP
- TREE LINE
- 2 — TOPOGRAPHIC BATHYMETRIC CONTOURS
- APPROX. LOCATION OF HISTORIC BULKHEAD
- DISPOSAL SITE BOUNDARY
- MASS. DOT PARCEL
- EOP — EDGE OF PAVEMENT
- CC — CONCRETE CURB
- VGC — VERTICAL GRANITE CURB
- SGE — SLOPED GRANITE EDGE
- BB — BITUMINOUS BERM
- BC — BITUMINOUS CURB
- CHAIN LINK FENCE

Description of the Kings Cove Conservation Restriction Area Remedial Action Alternative (RTN 4-26230)

The Phase III Remedial Action Plan (RAP) submitted to MassDEP in August 2023 identified a preferred Remedial Action Alternative to achieve a Condition of No Significant Risk for the Kings Cove Conservation Restriction Area (KCCRA). The preferred Remedial Action Alternative includes dredging of fill within an intertidal area, and extending the rip rap revetment in the northern area of the KCCRA to contain eroding impacted fill. In addition, the Phase IV Remedy Implementation Plan (RIP) includes a new element of the Remedial Action Alternative, which consists of placement of cobble to create a gradual surficial transition between the area to be dredged and the revetment. The preferred Remedial Action Alternative has been designed to minimize potential impacts to the Upland area of the KCCRA through construction access directly from Bridge Street, rather than through the KCCRA.

The construction of the preferred Remedial Action Alternative consists of the following:

- Collection of soil/sediment samples for laboratory analysis for determining appropriate disposition;
- Before any construction work begins, installing erosion and sedimentation controls according to the design plans, including controls for in-water work, setting up temporary construction fencing, and selecting dust monitoring locations;
- Dredging during low tide cycles;
- Placing dredged material in a staging area and/or roll-off containers awaiting reuse or disposal;
- Placing clean cobble cover within the dredged area and up to the base of the new revetment;
- Constructing the rip rap revetment, including placing a subset of the dewatered dredged material behind the rip rap;
- Off-site disposal of remaining dredged material;
- Restoration of disturbed construction access and staging areas (loaming and seeding);
- Removing erosion and sedimentation controls.

Access to the area in which the preferred Remedial Action Alternative is being implemented will be restricted. Temporary construction fencing will be placed along the western boundary of the southern portion of the KCCRA where Kings Cove is generally accessible via foot. In addition, the access to the KCCRA along Route 3A is already fenced with a locked gate at the proposed construction entrance. The northern portion of the KCCRA is already inaccessible by foot due to the presence of a combination of existing stone revetment and dense vegetation and/or fencing. The eastern edge of the KCCRA is considered inaccessible by foot due to the presence of Kings Cove. Sandbags will also be placed within the KCCRA to prevent wildlife or watercraft from entering the work area.

The area in which the preferred Remedial Action Alternative is being implemented will be fenced to keep unauthorized personnel out of the work zones. Dust monitoring will be conducted to verify that Site workers are not exposed to hazardous levels of dust or associated OHM.

Wetland resource areas will be protected from impacts during implementation of the preferred Remedial Action Alternative through the employment of an erosion and sedimentation control program, which includes provisions to limit erosion through stabilization and prevent sediment from leaving the KCCRA by the use of structural controls. The preferred Remedial Action Alternative has been designed to minimize potential impacts to the Upland portion of the KCCRA through construction access directly from Bridge Street, rather than through the KCCRA.

Plans and details of the Remedial Action Alternative can be found in Appendix D of the Draft Phase IV RIP.

April 26, 2024

Maureen DelPrete, Chairman
Weymouth Board of Health
75 Middle Street
Weymouth, MA 02189

Re: **Public Notice Requirement: Notice of Availability - Draft Phase IV Remedy Implementation Plan**
Kings Cove Conservation Restriction Area, 82-90 Bridge Street, Weymouth, Massachusetts
Release Tracking Number (RTN) 4-26230

Dear Mayor Hedlund:

On behalf of Algonquin Gas Transmission, LLC, Vanasse Hangen Brustlin, Inc. (VHB) is informing you, pursuant to the Massachusetts Contingency Plan (MCP), 310 CMR 40.1403(3)(e), that a Draft Phase IV Remedy Implementation Plan has been completed for the Kings Cove Conservation Restriction Area located at 82-90 Bridge Street in Weymouth, Massachusetts. Attached are pertinent excerpts from the Draft Phase IV Remedy Implementation Plan per, 310 CMR 40.1403(3)(e).

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Sincerely,

VHB

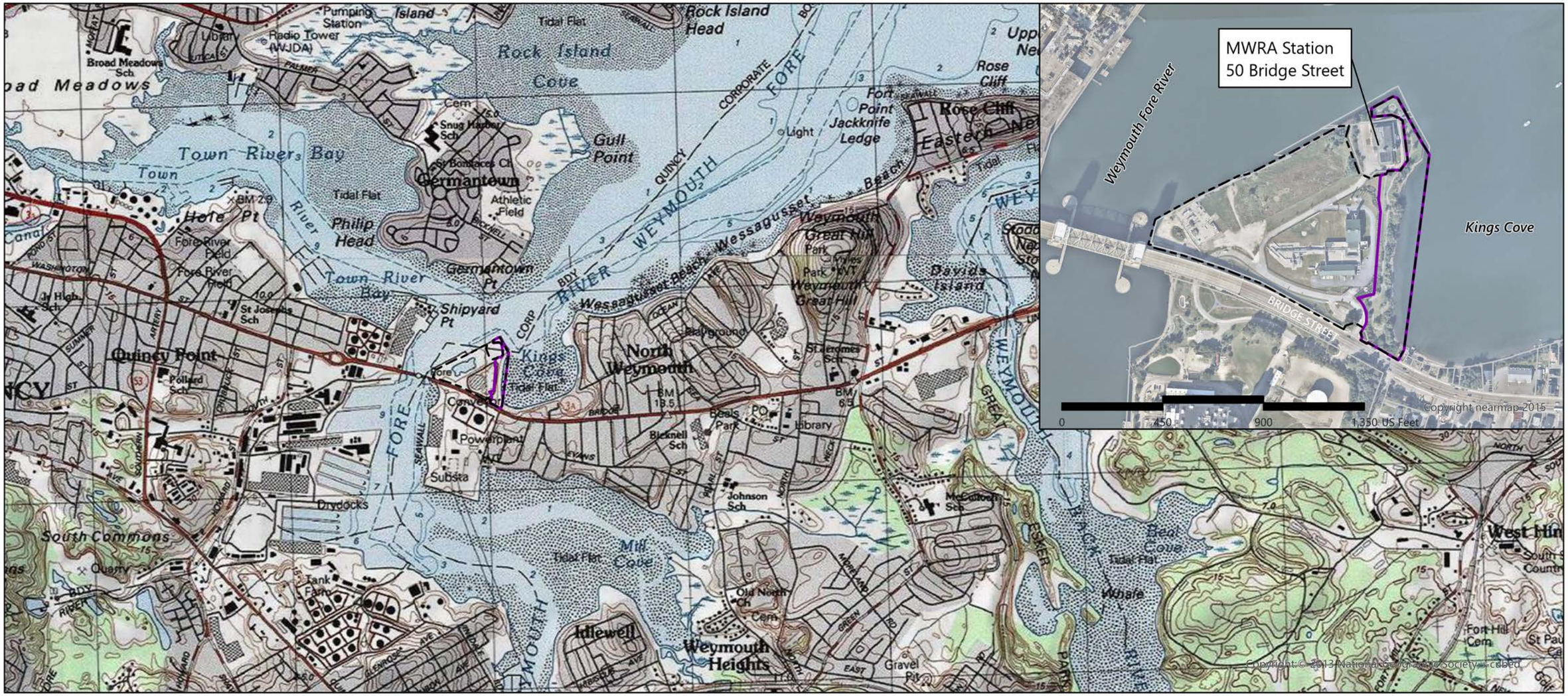
Katherine E. Kudzma, LSP
Director, Site Investigation & Remediation

Attachments: Figure 1 – Site Location and Local Area Map
Figure 2 – Disposal Site Plan
Description of the Remedial Action Alternative

Engineers | Scientists | Planners | Designers
260 Arsenal Place #2, Watertown, Massachusetts 02472
P 617.924.1770 **F** 617.924.2286 www.vhb.com

Figure 1: Site Location and Local Area Map

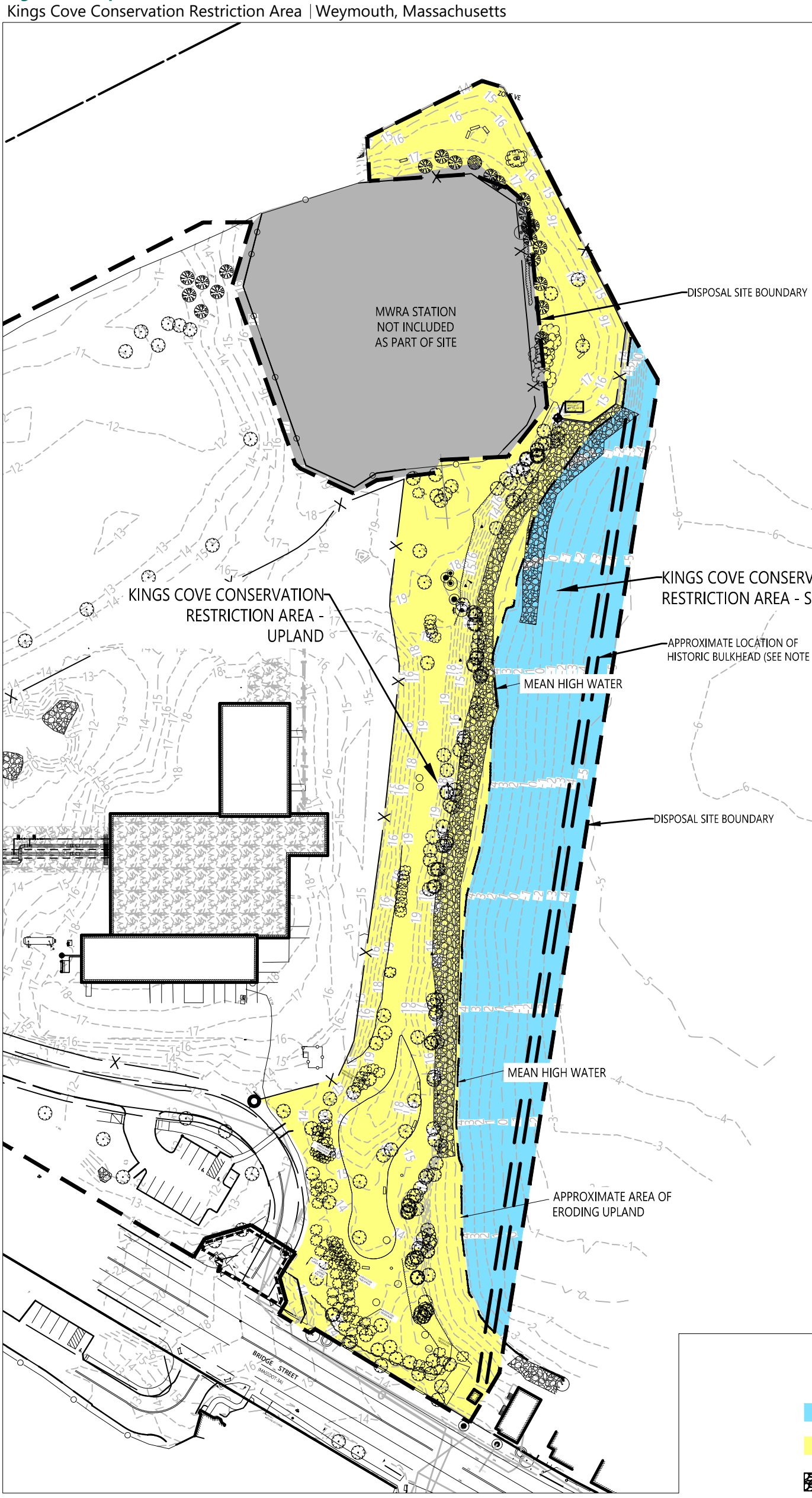
Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



Source: USGS Topo Map, NearMap Imagery

Path: \\vhb.com\gis\proj\Wat-EV\16105.00 Enbridge-Compressor Sta\Project\SIR\SIR.aprx (User: pcochrane, Date: 4/2/2024)

Figure 2 - Disposal Site Plan
Kings Cove Conservation Restriction Area | Weymouth, Massachusetts



0 25 50 100 Feet

Record Owner

ALGONQUIN GAS TRANSMISSION, LLC
A TEXAS LIMITED LIABILITY COMPANY
5400 WESTHEIMER COURT
HOUSTON, TX 77056
BOOK 36146 PAGE 163
PARCEL G–1
PARCEL G–2
LOT B–1
PARCEL AQ 1–A
PARCEL AQ 1–B

General Notes

1) BASEMAP WAS PREPARED FROM A COPY OF A PLAN ENTITLED "ATLANTIC BRIDGE WEYMOUTH COMPRESSOR STATION EXISTING CONDITIONS" PRPEPARED BY VHB FOR ENBRIDGE OF HOUSTON TEXAS, DATED 2020 ORIGINAL SCALE 1"= 60 FT., DWG. NO BB–A–2000.

2) THE PROPERTY LINES SHOWN ON THIS PLAN ARE A COMBINATION OF FIELD EVIDENCE, RECORD PLANS GIS.

3) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE THE RESULT OF AN ON THE GROUND SURVEY PERFORMED IN AUGUST 2014 AND SUPPLEMENTED IN DECEMBER OF 2020.

4) HORIZONTAL DATUM IS BASED ON UTM 19 PROJECTIONS, NAD 1983. VERTICAL DATUM IS BASED ON GPS OBSERVATION IN NAVD 88.

5) BULKHEAD WAS DIGITIZED FROM A DWG. ACCOMPANYING LICENSE NO. 936, DATED AUGUST 7, 1928, RECORDED IN BOOK 1811, PAGE 39; TO MAINTAIN, AS NOW BUILT, BULKHEADS, PILE WHARVES, SIX PILE DOLPHINS, INTAKE WELLS AND A DISCHARGE FLUME, AND SOLID FILLING, AS PLACED, AND TO BUILD AND MAINTAIN ADDITIONAL BULKHEADS AND PLACE ADDITIONAL FILLING. THIS LICENSE, SO FAR AS IT RELATES TO CERTAIN OF THE STRUCTURES ALREADY BUILT AND TO FILLING IN PLACE, IS GRANTED TO RECTIFY ANY DISCREPANCY BETWEEN WORK ACTUALLY DONE AND WORK DESCRIBED IN LICENSES PREVIOUSLY GRANTED: LICENSE NO 177 (1921); LICENSE NO 276 (1922); LICENSE NO 394 (1924) AND LICENSE NO 710 (1926). ORIGINAL SCALE 1"=300FT

Legend

- KINGS COVE CONSERVATION RESTRICTION AREA - SHORE
- KINGS COVE CONSERVATION RESTRICTION AREA - UPLAND
- RIP RAP
- TREE LINE
- 2 — TOPOGRAPHIC BATHYMETRIC CONTOURS
- APPROX. LOCATION OF HISTORIC BULKHEAD
- DISPOSAL SITE BOUNDARY
- MASS. DOT PARCEL
- EOP — EDGE OF PAVEMENT
- CC — CONCRETE CURB
- VGC — VERTICAL GRANITE CURB
- SGE — SLOPED GRANITE EDGE
- BB — BITUMINOUS BERM
- BC — BITUMINOUS CURB
- CHAIN LINK FENCE

Description of the Kings Cove Conservation Restriction Area Remedial Action Alternative (RTN 4-26230)

The Phase III Remedial Action Plan (RAP) submitted to MassDEP in August 2023 identified a preferred Remedial Action Alternative to achieve a Condition of No Significant Risk for the Kings Cove Conservation Restriction Area (KCCRA). The preferred Remedial Action Alternative includes dredging of fill within an intertidal area, and extending the rip rap revetment in the northern area of the KCCRA to contain eroding impacted fill. In addition, the Phase IV Remedy Implementation Plan (RIP) includes a new element of the Remedial Action Alternative, which consists of placement of cobble to create a gradual surficial transition between the area to be dredged and the revetment. The preferred Remedial Action Alternative has been designed to minimize potential impacts to the Upland area of the KCCRA through construction access directly from Bridge Street, rather than through the KCCRA.

The construction of the preferred Remedial Action Alternative consists of the following:

- Collection of soil/sediment samples for laboratory analysis for determining appropriate disposition;
- Before any construction work begins, installing erosion and sedimentation controls according to the design plans, including controls for in-water work, setting up temporary construction fencing, and selecting dust monitoring locations;
- Dredging during low tide cycles;
- Placing dredged material in a staging area and/or roll-off containers awaiting reuse or disposal;
- Placing clean cobble cover within the dredged area and up to the base of the new revetment;
- Constructing the rip rap revetment, including placing a subset of the dewatered dredged material behind the rip rap;
- Off-site disposal of remaining dredged material;
- Restoration of disturbed construction access and staging areas (loaming and seeding);
- Removing erosion and sedimentation controls.

Access to the area in which the preferred Remedial Action Alternative is being implemented will be restricted. Temporary construction fencing will be placed along the western boundary of the southern portion of the KCCRA where Kings Cove is generally accessible via foot. In addition, the access to the KCCRA along Route 3A is already fenced with a locked gate at the proposed construction entrance. The northern portion of the KCCRA is already inaccessible by foot due to the presence of a combination of existing stone revetment and dense vegetation and/or fencing. The eastern edge of the KCCRA is considered inaccessible by foot due to the presence of Kings Cove. Sandbags will also be placed within the KCCRA to prevent wildlife or watercraft from entering the work area.

The area in which the preferred Remedial Action Alternative is being implemented will be fenced to keep unauthorized personnel out of the work zones. Dust monitoring will be conducted to verify that Site workers are not exposed to hazardous levels of dust or associated OHM.

Wetland resource areas will be protected from impacts during implementation of the preferred Remedial Action Alternative through the employment of an erosion and sedimentation control program, which includes provisions to limit erosion through stabilization and prevent sediment from leaving the KCCRA by the use of structural controls. The preferred Remedial Action Alternative has been designed to minimize potential impacts to the Upland portion of the KCCRA through construction access directly from Bridge Street, rather than through the KCCRA.

Plans and details of the Remedial Action Alternative can be found in Appendix D of the Draft Phase IV RIP.

April 26, 2024

Tufts Public Library
46 Broad Street
Weymouth, MA 02188

Re: **Public Repository - Draft Phase IV Remedy Implementation Plan**
Kings Cove Conservation Restriction Area, 82-90 Bridge Street, Weymouth, Massachusetts
Release Tracking Number (RTN) 4-26230

To Whom It May Concern:

At the request of local petitioners, the above RTN has been designated a Public Involvement Plan (PIP) Site pursuant to 310 CMR 40.1404 of the Massachusetts Contingency Plan (MCP). The Tufts Public Library has been established as a document repository for members of the community to access and review documents relevant to the RTN. Please find enclosed a Draft Phase IV Remedy Implementation Plan for Kings Cove Conservation Restriction Area, 82-90 Bridge Street in Weymouth, Massachusetts, dated April 2024, for inclusion within the repository to facilitate review by members of the community.

The document repository will need to be maintained for approximately two years, and additional documents will be added to the repository as time progresses. Please contact me at the email below should you have any questions.

Sincerely,

VHB

Katherine E. Kudzma, LSP
Director, Site Investigation & Remediation

Enclosure: Draft Phase IV Remedy Implementation Plan prepared by VHB, dated April 2024.

April 26, 2024

Weymouth Health Department
75 Middle Street
Weymouth, MA 02189

Re: **Public Repository - Draft Phase IV Remedy Implementation Plan**
Kings Cove Conservation Restriction Area, 82-90 Bridge Street, Weymouth, Massachusetts
Release Tracking Number (RTN) 4-26230

To Whom It May Concern:

At the request of local petitioners, the above RTN has been designated a Public Involvement Plan (PIP) Site pursuant to 310 CMR 40.1404 of the Massachusetts Contingency Plan (MCP). The Weymouth Health Department has been established as a document repository for members of the community to access and review documents relevant to the RTN. Please find enclosed a Draft Phase IV Remedy Implementation Plan for Kings Cove Conservation Restriction Area, 82-90 Bridge Street in Weymouth, Massachusetts, dated April 2024, for inclusion within the repository to facilitate review by members of the community.

The document repository will need to be maintained for approximately two years, and additional documents will be added to the repository as time progresses. Please contact me at the email below should you have any questions.

Sincerely,

VHB

Katherine E. Kudzma, LSP
Director, Site Investigation & Remediation

Enclosure: Draft Phase IV Remedy Implementation Plan prepared by VHB, dated April 2024

April 26, 2024

VIA ELECTRONIC MAIL
Public Involvement Plan Mailing List

Re: **Public Notice Requirement: Notice of Availability - Draft Phase IV Remedy Implementation Plan**
Kings Cove Conservation Restriction Area, 82-90 Bridge Street, Weymouth, Massachusetts
Release Tracking Number (RTN) 4-26230

To Whom It May Concern:

This notification is being provided to you in accordance with the provisions of the Final Public Involvement Plan dated January 30, 2018 for RTN 4-26230. On behalf of Algonquin Gas Transmission, LLC, Vanasse Hangen Brustlin, Inc. (VHB) has prepared this notification to inform you of the availability of the following document:

› Draft Phase IV Remedy Implementation Plan, Kings Cove Conservation Restriction Area, 82-90 Bridge Street, Weymouth, MA, RTN 4-26230, dated April 2024.

The report can be obtained by searching under RTN 4-26230 on the MassDEP Waste Site Database: https://eeaonline.eea.state.ma.us/portal#!/search/wastesite

A public meeting for the document will take place at Weymouth High School, 1 Wildcat Way, Weymouth, Massachusetts on May 14, 2024 from 7:00pm to 9:00pm (location to be confirmed). Additional information on joining the meeting will be available at https://projects.vhbapps.com/weymouth-pip/

Written comments regarding the Phase IV Remedy Implementation Plan can be emailed to WeymouthCompressorStation@vhb.com. The public comment period will run until **May 28, 2024**. Should you wish to be removed from this mailing list, please contact the undersigned.

Sincerely,

VHB

Katherine E. Kudzma, LSP
Director, Site Investigation & Remediation

Engineers | Scientists | Planners | Designers
260 Arsenal Place #2, Watertown, Massachusetts 02472
P 617.924.1770 **F** 617.924.2286 www.vhb.com

Appendix G: Responses to Comments [Reserved]