



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

April 16, 2019

Algonquin Gas Transmission, LLC
Attn: Mr. George McLachlan
890 Winter Street
Waltham, Massachusetts 02451

RE: **WEYMOUTH - BWSC**
Release Tracking Numbers: **4-0026230**
and 4-0026243
Weymouth Compressor Station
6 & 50 Bridge Street
NOTICE OF AUDIT FINDINGS
NOTICE OF NONCOMPLIANCE
NON-00006664

Dear Mr. McLachlan:

The Massachusetts Department of Environmental Protection (MassDEP or the Department), Bureau of Waste Site Cleanup is tasked with ensuring the cleanup of oil and hazardous material releases pursuant to the Massachusetts Oil and Hazardous Material Release Prevention and Response Act (M.G.L. Chapter 21E). The law is implemented through regulations known as the Massachusetts Contingency Plan (310 CMR 40.0000 et seq. – the MCP).

REASON FOR THIS NOTICE

On February 19, 2019, Algonquin Gas Transmission, LLC (hereafter referred to as you or your) was notified that MassDEP began auditing response actions that were conducted to address the release of oil and/or hazardous material at the location identified above.

The audit focused on the response actions undertaken at the Site relative to a release of #2 fuel oil and as documented and addressed in the December 20, 2018 Permanent Solution Statement with Conditions Report (PSC) and accompanying Activity and Use Limitation (AUL). The audit also included a Site inspection conducted by MassDEP personnel on March 7, 2019.

This Notice informs you of the results of the comprehensive audit conducted by MassDEP.

SITE BACKGROUND

The disposal Site is located at 6 & 50 Bridge Street within an area zoned for General Industrial use and located at the mouth of the Fore River in Weymouth, MA. The Site has an extensive history of industrial

use including coal storage, an auto repair shop and steel manufacturing. Significant tideland filling and expansion of the Site occurred in the 1910s and 1920s and, reportedly, approximately eighty percent of the property now consists of filled tidelands. The Site historically contained an 11 million-gallon #2 fuel oil above ground storage tank and a 6,000 gallon above ground multi-component fuel additive tank. The storage tanks were removed in 2004/2005.

On July 29, 2016, Release Tracking Number (RTN) 4-0026230 was issued in response to a 120-day release notification for petroleum hydrocarbons detected in soil above applicable Reportable Concentrations (RCs) for Category S-1 soil (RCS-1). On July 29, 2016, RTN 4-0026243 was issued in response to a 72-hour reportable condition pursuant to 310 CMR 40.0314 when greater than 0.5 inches of light non-aqueous phase liquid (LNAPL) was observed in groundwater monitoring well MW-201. Following discovery of the LNAPL, an Immediate Response Action (IRA) was undertaken pursuant to 310 CMR 40.0412(2). Additional response actions included submission of an Immediate Response Action Completion Report (IRAC) and evaluation of the nature and extent of the fuel oil contamination in soil and groundwater at the Site.

VIOLATIONS IDENTIFIED

The Department has determined that response actions were not performed in compliance with the requirements of the MCP. The enclosed Notice of Audit Findings and Notice of Noncompliance (NOAF/NON) Summary lists the violations and the actions that are required to achieve compliance. Specifically, the NOAF/NON contains: (1) the requirement violated, (2) the date and place that the Department asserts the requirement was violated, (3) either the specific actions which must be taken in order to return to compliance or direction to submit a written proposal describing how and when you plan to return to compliance, and (4) the deadline for taking such actions or submitting such a proposal.

It should be noted that the PSC states that the LNAPL transmissivity (Tn) determined at MW-414 was measured to be 0.0027 [ft²/day], "...which is well below the ASTM Standard criterion of 0.8 [ft²/day]..." However, in Appendix H it is stated that the "Tn ranged from 0.537 to 0.0027 [ft²/day] which are well below the ASTM 2856 criterion of 0.8...." The American Society for Testing and Materials (ASTM) does not have a "criterion" for Tn below which the LNAPL would be unrecoverable. The Interstate Technology & Regulatory Council (ITRC) has reported that several states have closed sites where a Tn value of between 0.1 to 0.8 ft²/day. Given that the range measured at this Site is from 0.537 to 0.0027 ft²/day (below 0.8 ft²/day) and that other "multiple lines of evidence" were used to demonstrate that LNAPL was not recoverable, this oversight is not significant.

In addition, the AUL Transmittal Form - BWSC 113, Sections G.1. and G.1.a., indicate that both record-interest holders were notified and that there were no record interest holders for the Site. The date of certified mailing was not provided on the form in Section G.1.b. nor was the box in Section G.1.c. checked off to indicate that the names and addresses of all record interest holders is attached. However, documentation was provided in the PSC indicating that the Massachusetts Water Resources Authority (MWRA) is a record interest holder and notification was made to them in a letter dated September 26, 2018. BWSC 113 should be corrected to correct this contradiction on the form.

LICENSED SITE PROFESSIONAL (LSP)

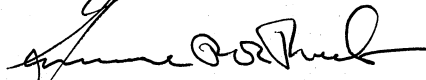
A copy of this notice has been sent to James Doherty, the current Licensed Site Professional (LSP)-of-Record for the disposal Site. However, you, not your LSP, are responsible for responding to this Notice of Noncompliance and correcting the violations identified therein.

LIMITATIONS

The Department's findings were based on the certainty of the information reviewed during the audit. These findings do not: (1) apply to actions or other aspects of the Site that were not reviewed in the audit, (2) preclude future audits of past, current, or future actions at the Site, (3) in any way constitute a release from any liability, obligation, action or penalty under M.G.L. c. 21E, the MCP, or any other law, regulation, or requirement, or (4) limit the Department's authority to take or arrange, or to require any Responsible Party or Potentially Responsible Party to perform, any response action authorized by M.G.L. c. 21E which the Department deems necessary to protect health, safety, public welfare, or the environment.

If you have any questions regarding this Notice, please contact Mark Panni at (508) 946-2848. Please reference the Release Tracking Number 4-0026230 and Enforcement Tracking Number NON-00006664 in any future correspondence to the Department regarding the Site.

Sincerely,



GERARD M. R. MARTIN

For: Deborah A. Marshall-Hewlitt

Chief, Audit Section

Bureau of Waste Site Cleanup

MP/DM-H/lg

Enclosure: Notice of Audit Findings and Notice of Noncompliance

CERTIFIED MAIL # 7017 1450 0000 1137 3176

ec: Mayor's Office
kknapp@weymouth.ma.us

Board of Health
dmccormack@weymouth.ma.us

Margaret Bellafiore
Representative for the Public Involvement Plan participants
margaret@mobius.org

James Doherty, LSP
jdoherty@trcsolutions.com

DEP-SERO
Attn: Gerard Martin, Deputy Regional Director, BWSC
Attn: Mark Panni, Audit Section, BWSC
Attn: Lisa Ramos, Regional Enforcement Office

cc: DEP-SERO
Attn: Regional Enforcement Office

NOTICE OF AUDIT FINDINGS
NOTICE OF NONCOMPLIANCE

NON-00006664
RTNs 4-0026230 & 4-0026243

NAME OF ENTITY IN NONCOMPLIANCE:

Algonquin Gas Transmission, LLC

LOCATION WHERE NONCOMPLIANCE OCCURRED OR WAS OBSERVED:

Proposed Weymouth Compressor Station
6 & 50 Bridge Street
Weymouth, Massachusetts

DATES WHEN NONCOMPLIANCE OCCURRED OR WAS OBSERVED:

December 20, 2018 - the date the Permanent Solution Statement with Conditions (PSC) and Activity and Use Limitation (AUL) was submitted to MassDEP.

DESCRIPTION OF REQUIREMENT(S) NOT COMPLIED WITH:

1. Violation of 310 CMR 40.0904, Site Information Required for Risk Characterization (Class II)

“An adequate characterization of the disposal site is a prerequisite to the characterization of risk of harm to health, safety, public welfare and the environment, although the appropriate type and amount of information required to complete a Risk Characterization will depend on the unique characteristics of a release and/or disposal site. Particular attention shall be paid to the following site assessment parameters:

(2) Extent of Release: The documentation of the Risk Characterization shall contain a description of the source and extent of the release of the oil and/or hazardous material . . .”

- The PSC concludes that “...Historic Fill was identified throughout the four-acre North Parcel of the Property. The pre-existing Historic Fill exhibiting concentrations of PAHs and metals consistent with Anthropogenic Background was identified during test pit and boring installations.” Section 4.0 – Risk Characterization (310 CMR 40.0900) of the PSC states that “Historic Fill constituents have been excluded from the risk characterization because it has been demonstrated in Section 3 that the Historic Fill present at the Property meets the definition of Anthropogenic Background.”

The PSC also states that “As described in the Class B-1 partial RAO [Response Action Outcome] statement, emplacement of significant quantities of fill material occurred prior to 1922 in association with the Edgar Station located south of Bridge Street (ABB, 1997). In

1925, coal-fired generating units were commissioned, initiating the start of electrical power generation at the Edgar Station (ABB, 1997). Consistent with the timeframe for development of the Edgar Station, the Sanborn® Fire Insurance Map from 1927 indicates significant filling has occurred between the Weymouth Fore River and King's Cove and the Illuminating Company of Boston is depicted as occupying and staging coal at the Property. Following tideland filling activities in approximately the late 1910s/early 1920s, the aerial footprint of the Property as depicted in the historic record remains largely unchanged through the submittal of this PSCS. In addition, a 1991 Site Inspection Report prepared by Weston for the U.S. Environmental Protection Agency (EPA) states that "... [Boston Edison] landfilled fly ash, bottom ash, and slag material on-site. Indications of this practice were visually observed at several locations onsite during the WESTON/ARCS on-site reconnaissance. Also, on-site soil borings conducted by Guild Drilling Company in August 1989 revealed the presence of this material to a depth of 28 feet (WESTON/ARCS, 1991a; UEC, 1989)."

Given that the fill material originated from operations or activities at the location of emplacement and that the fill is a manufacturing waste, the fill cannot be considered Historic Fill [see items (d) and (f) in the definition of Historic Fill at 310 CMR 40.0006]. As such, the nature and extent of metals in the soil and groundwater attributable to the fill must be assessed and considered when conducting the Risk Characterization.

In addition, pursuant to 310 CMR 40.0904(2)(c)(1), if hazardous materials are present in the groundwater at the site within 200 feet of a surface water body then the concentrations of hazardous materials in the sediment and surface water must be measured to determine whether such material at or from the site has been or is being transported in a manner that would result in surface water or sediment concentrations of potential ecological significance, unless the need for such measurements is obviated by a technical justification consistent with 310 CMR 40.0193.

- The extent of light non-aqueous phase liquid (LNAPL) west of MW-407, B-319 and MW-406 was not evaluated. The NAPL thicknesses measured in these wells were 2.5, 2.5 and 3.5 feet, respectively, and no monitoring wells have been installed to the west, which is in a downgradient location. In fact, the 1.7-foot groundwater contour depicted in Figure 5 of the PSC indicated that there may be a zone with higher hydraulic conductivity in that area that may have been a preferential migration pathway. The extent of LNAPL west of these monitoring wells must be evaluated and, if necessary, considered as part of the Risk Characterization.

In addition, pursuant to 310 CMR 40.0904(2)(c)(3), if non-aqueous phase liquid (NAPL) at or from a site is present within 200 feet of a surface water body then the concentrations of hazardous materials in the sediment and surface water must be measured to determine whether such material at or from the site has been or is being transported in a manner that would result in surface water or sediment concentrations of potential ecological significance, unless the need for such measurements is obviated by a technical justification consistent with 310 CMR 40.0193.

- Section 4.3.2 of the PSC states that "Disposal Site-related contamination is not present within 3 feet of ground surface." However, no shallow soil samples inside the footprint of the former above-ground storage tank (AST) were collected/analyzed for petroleum hydrocarbons. Additionally, MassDEP notes that soil samples from ten (10) surficial soil borings (0 to 1-foot

below grade) obtained from areas located east of the footprint of the former AST were not analyzed for petroleum hydrocarbons either, but rather only herbicides and metals. Shallow soil samples should be collected from this area and analyzed for petroleum hydrocarbons (volatile petroleum hydrocarbons [VPH] and extractable petroleum hydrocarbons [EPH]) to support an adequate risk characterization of the Site.

2. Violation of 310 CMR 40.1056 Content of Permanent Solution Statement (Class II)

(2) Except where previously submitted, all documentation, plans and/or reports necessary to support the Permanent Solution shall be submitted to the Department, including, without limitation, the following: (b) a succinct summary of the Conceptual Site Model.

- According to 310 CMR 40.0006, a Conceptual Site Model “means a site-specific description of how contaminants entered the environment, how contaminants have been and may be transported within the environment, and routes of exposure to human and environmental receptors that provides a dynamic framework for assessing site characteristics and risk, identifying and addressing data gaps and managing uncertainty, eliminating or controlling contaminant sources, developing and conducting response action strategies, and evaluating whether those strategies have been effective in achieving desired endpoints.” The CSM discussion in Section 3 of the report did not contain all of the elements of this definition. You must provide a CSM figure and discuss all of the subjects listed above in your revised report.

DESCRIPTION AND DEADLINES OF ACTIONS TO BE TAKEN:

By **Friday, July 19, 2019**, you must either:

1a. Submit data documenting that hazardous materials in the groundwater and LNAPL at or from the Site is not present within 200 feet a surface water body (the Fore River and/or Kings Cove). It must be demonstrated that:

- i. the hazardous materials and/or LNAPL are not present within 200 feet of the surface water; or
- ii. if hazardous material and/or LNAPL are present, the need for sampling and analyzing surface water and sediment is obviated by a technical justification consistent with 310 CMR 40.0193;

and,

- iii. if the Risk Characterization using the data for metals in soil and groundwater, extent of LNAPL and the concentrations of petroleum hydrocarbons determined for the shallow soil samples support a conclusion of No Significant Risk, then submit a Revised Permanent Solution Statement with Conditions (PSC) and a corrected AUL, via a Confirmatory, Amended or Terminated and re-filed AUL, whichever is deemed applicable;

OR

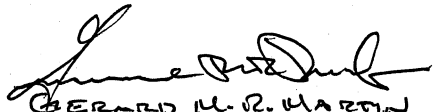
1b. Retract the existing PSC, terminate the AUL and continue with Comprehensive Response action pursuant to 310 CMR 40.0800. Based on the date of initial Tier Classification of July 28, 2017, the Phase II Comprehensive Site Assessment Report is due on July 28, 2020.

AND,

3. Submit a Post-Audit Completion Statement prepared in accordance with 310 CMR 40.1170 on the form established by the Department (BWSC-111). Please note that as of January 1, 2009, all submittals for this release that require an LSP Opinion, must be submitted through e-DEP, MassDEP's electronic document and form submittal repository. You may obtain a copy of BWSC-111 from the Department's web site at the following address:
<http://www.mass.gov/dep/cleanup/approvals/trforms.htm>.

If the required actions are not completed by the deadlines specified, an administrative penalty may be assessed for every day that the noncompliance occurs or continues after the date of this Notice. The Department reserves its rights to exercise the full extent of its legal authority in order to compel compliance with all applicable requirements, including but not limited to, criminal prosecution, civil action including court-imposed civil penalties, or administrative action, including administrative penalties imposed by the Department.

By:


GERARD M. R. MARROW
FOR: Deborah A. Marshall-Hewlitt
Chief, Audit Section
Bureau of Waste Site Cleanup

Date: April 16, 2019

