



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

SIR COMMENT LETTER

April 19, 2017

File No. SR-26-0934A

(Formerly Case No. Case No. 95-022)

Mr. Jesse Edmands
Project Manager
National Grid
40 Sylvan Road
Waltham, MA 02451

RE: Tidewater Manufactured Gas Plant (former)
Tidewater Street
Pawtucket, Rhode Island
Plat Map 65B / Lots 647, 648 & 649

Dear Mr. Edmands:

The Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (OWM) has reviewed several documents for the above referenced property (the Site), which were submitted in accordance with Section 7.00 of the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations).

After careful review of the above referenced documents, the Department requires a response to the attached comments, questions, and concerns about the submittals, which must be fully addressed in writing to receive a Program Letter.

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, ext. 7109, or by E-mail at joseph.martella@dem.ri.gov.

Sincerely,

Joseph T. Martella II
Senior Engineer
Office of Waste Management

cc: Kelly Owens, RIDEM/OWM
Ronald Gagnon, RIDEM/OCTA
Ruth Gold, RIDEM. OAR

Alisa Richardson, RIDEM/OWR
Neil Personeus, RIDEM/OWR/WQC
Barbara Morin, RIDOH
Tracy A. Silvia, RI CRMC
Susan Mara, Pawtucket Planning
Andrew Silvia, Pawtucket/DPW
Gerard Charbonneau, Chairman, Pawtucket School Committee
Michele Leone, National Grid
Julie Nora, Ph.D., International Charter School
Carolyn Sheehan, Blackstone Academy
Mary Murray, Francis J. Varieur Elementary School
Dania Alejandra Flores-Heagney, EJLRI
James J. Clark, GZA

DEPARTMENT COMMENTS

April 19, 2017

Site Investigation Data Report, dated January 11, 2011
Gasholder Nos. 7 and 8 Decommissioning and Demolition Completion Report, dated July 8, 2011
Remedial Alternative Evaluation Report, dated July 29, 2011

Tidewater Manufactured Gas Plant (former)
Pawtucket, Rhode Island

1. Regarding the January 11, 2011, Site Investigation Data Report (SIDR):
 - a. Section 8.30 (Exposure Pathways) pg. 102, identifies seven (7) potential exposure pathways. It is the Department's position that the potential inhalation of volatile vapors by workers in future buildings (if the volatilization to indoor air pathway is not mitigated), as well as potential inhalation exposure to future construction/utility workers, represent additional potential exposure pathways.
 - b. Section 8.30 (Exposure Pathways) pg. 104, paragraph 2, and Section 9.20 (Summary of Investigations and Results) Subsection (Sediments) pg. 113, paragraph 2, both noted in general the likelihood that upgradient/regional impacts to the Seekonk River and other possible upgradient industrial sources could have degraded sediment quality adjacent to the Site. Please clarify if any specific upgradient sediment contamination sources (industrial or otherwise) have been identified as potentially contributing to sediment contamination adjacent to the Tidewater Site.
 - c. Please correct the title of Figure 14B to replace the word "Subsurface" with "Surface."
2. Regarding the July 8, 2011, Gasholder Nos. 7 and 8 Decommissioning and Demolition Completion Report, the fourth paragraph on page 16 indicates that the analytical testing results for the imported fill and loam used to backfill the gasholder footprints was compared to the Department's Method 1 Industrial/Commercial Direct Exposure Criteria (I/CDEC). The analytical results for imported clean material should have been compared to the Department's Method 1 Residential Direct Exposure Criteria (RDEC). Please clarify and/or explain exactly what was done and if all imported material was determined to be compliant with the Department's Method 1 RDEC.
3. Regarding the July 29, 2011, Remedial Alternative Evaluation Report (RAER):
 - a. Section 2.20 (Site Investigation Results) Subsection (Sediments) pg. 13, paragraph 2, indicates "*Given the localized nature of observed sediment impact and the likely existence of additional upgradient/regional sources, future response*

actions specific to sediment impact do not appear to be warranted and have therefore not been included as part of this evaluation. However, as described further herein, in the development and evaluation of remedial alternatives for the Site, potential migration of impacts to the Seekonk River was considered a key exposure pathway to be addressed.” At this time the Department acknowledges that the investigation of the terrestrial upland portion of the Site has been completed. While no Remedial Alternative specific to the impacted sediments in the Seekonk River adjacent to the Site has been proposed or approved, the Department also acknowledges that the proposed containment wall, if it performs properly as designed, should provide a barrier to future releases of hazardous materials from the Site to the sediments. National Grid may continue to move forward through the regulatory process for the terrestrial upland portion of the Site. Please be advised however, that the subsequent Program Letter, Remedial Decision Letter (RDL) and Order of Approval (Order) for this Site, unless otherwise specified by the Department, shall be limited to the investigation and proposed remediation of the terrestrial upland portion of the Site, and does not preclude additional investigation and/or remediation activities related to sediments impacted by historic or ongoing releases of hazardous materials at or from the Site.

- b. Section 3.30 (Exposure Pathways) pg. 21, paragraph 4, same comment as SIDR comment 1.a above.
- c. Section 3.30.2 (Direct Contact/Potential Tracking/Erosion - Surface Soils) pg. 24, paragraph 1, indicates *“The entirety of the Site is fenced and restricted to unauthorized access. Therefore, under current Site conditions, the concern related to direct exposure is somewhat mitigated by the presence of a security fence which restricts access to National Grid personnel and authorized visitors.”* The Department acknowledges that the presence of a security fence somewhat mitigates direct exposure by restricting easy access to the Site, however the history of this Site clearly indicates that trespassing is an ongoing possibility and concern which cannot be adequately addressed by fencing alone, reinforcing the need for the installation of a long term barrier to direct exposure to impacted surface soils.
- d. Section 4.00 (Remedial Objectives) pg. 25, paragraph 4, lists 5 overall Remedial Objectives. As indicated in comments 1.a and 3.b above, it is the Department’s opinion that mitigation of potential future vapor intrusion and inhalation exposures in indoor air should be included in the list of overall Site Remedial Objectives.
- e. Section 4.00 (Remedial Objectives) pg. 25, paragraph 5, indicates that the Environmental Land Usage Restriction (ELUR) will include a Materials Management Plan (MMP). Please clarify how the proposed MMP, which is not included in the Remediation Regulations, differs from a Soil Management Plan

(SMP) which is typically associated with an ELUR and is specifically referenced in the draft ELUR template.

- f. Regarding Section 5.00 (Remedial Action Alternative Evaluation) pg. 26, paragraph 2, when evaluating estimated costs for implementing the remedial alternatives, is there an increased cost associated with implementing certain remedies (i.e. source removal and disturbance vs. capping in place) due to the necessity of increased precautions (i.e. stricter odor, dust and vapor controls, associated monitoring and stricter action level thresholds), required by operating in the proximity of sensitive receptors (i.e. students, residents, etc.), and was this cost differential, if it exists, considered as part of the evaluation?
- g. Regarding Section 5.10.2 (Remedial Action Alternative #2: Engineered Cap, Physical Containment and Limited Source Removal) pg. 27:
 - i. Paragraph 1, referring to the design of the impermeable engineered cap indicates *“this cap would consist of an impermeable cap comprised of up to 2 feet of clean soil underlain by a geomembrane or clay material.”* Please be reminded that to be consistent with the Department’s capping requirements, a cap over a geomembrane must consist of a minimum of one (1) foot of clean material.
 - ii. Paragraph 2 indicates this alternative includes focused NAPL recovery immediately upgradient of the containment wall and at other locations on the Site. Please provide additional details regarding the proposed focused NAPL recovery.
 - iii. Paragraph 2 indicates this alternative includes routine groundwater quality monitoring to assess performance. Please provide additional details regarding the proposed routine groundwater quality monitoring and how performance will be assessed.
 - iv. As the Department has previously discussed with National Grid on similar Sites where construction of a subsurface containment wall is proposed, please add language to Remedial Alternative #2 indicating that this alternative will include the installation of an appropriate number of groundwater monitoring wells located downgradient of the newly installed containment wall for the purpose of demonstrating proper performance of the wall. Periodic NAPL gauging and groundwater sampling/analysis of the downgradient wells shall be included in the long-term post-remedial Groundwater Monitoring Plan.
- h. Regarding Section 6.20 (Details of the Preferred Remedial Action Alternative):
 - i. Page 33, paragraph 3 indicates *“The cap across the remainder of the Site (FGPA, FPPA and SFA) would consist of an impermeable cap comprised*

of up to 2 feet of soil, an underlying drainage system, underlain by an impermeable layer (i.e., geomembrane or clay layer).” As stated in comment 3.g.i above, please be reminded that to be consistent with the Department’s capping requirements, a cap over a geomembrane must consist of a minimum of one (1) foot of clean material.

- ii. Page 33, paragraph 3 also indicates “*Cap installation would require clearing/ grubbing and Site grading ...*” Please clarify if the proposed plan is to maintain and protect existing Site groundwater monitoring wells during the cap installation process, or to close all groundwater monitoring wells and reinstall new monitoring wells at appropriate locations and depths when the cap installation has been completed.
 - iii. Regarding page 34, paragraph 3, please be advised that it is the Department’s position that decisions regarding any future changes or modifications to the frequency and/or duration of NAPL gauging and recovery, and/or groundwater sampling and analysis, shall be determined by the Department based upon review and consideration of the periodic NAPL gauging results and trends, the groundwater analytical results and trends, the effectiveness of the containment wall, and the overall Site compliance status at the time of each review
4. General Comment – Please provide a summary of all remedial activities completed since the RAER was submitted, and as applicable, how those activities may change the proposed remedy. For example, any areas of the Site that have been addressed through a Short Term Remedial Action Plan (STRAP) and therefore may not require additional remedial work.
5. Please submit an SIR Addendum that addresses the abovementioned comments on or before May 31 2017.