



RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

May 23, 2006

Alan Sepe, Acting Director
Department of Public Properties
City of Providence
25 Dorrance Street
Providence, RI 02903

RE: Remedial Action Work Plan Comments - Proposed Providence Public School Site
(Former) Gorham Textron Dump Property, 333 Adelaide Avenue, Parcel B, Providence
City of Providence Tax Assessor's Office Plat 51, Lot 323, Parcel B
Case No. 2005-029 (Formerly part of Case No. 97-030)

Dear Mr. Sepe:

On 24 February 2004, the Rhode Island Department of Environmental Management (the Department) enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner.

In the matter of the above referenced site, the Department's Office of Waste Management (OWM) has received the following documents submitted on behalf of the City of Providence (the City):

- A. Remedial Action Work Plan, Former Gorham Manufacturing Facility, Parcel B, Adelaide Avenue, Providence, Rhode Island (RAWP), prepared by EA Engineering, Science, and Technology, Inc. (EA), dated April 2006, received April 26, 2006; and
- B. Electronic mail from EA to the Department, Re: Gorham ... Proposed Indoor Air Sampling, dated April 28, 2006.

Based upon the Department's review of the above listed documents for consistency with Sections 8.00 (Risk Management) and 9.00 (Remedial Action Work Plan) of the Remediation Regulations, the OWM has the following comments:

1. Regarding the air objectives in Section 4.4 and the estimates of venting system effluent in Section 6.2:

2. Regarding the description of site improvements in Section 5.1.4, the specified base course material to be used under the four (4) inches of asphalt and/or the four (4) inches of concrete must be clean non-regulated material appropriate for use in an engineered control cap.
3. Regarding the first bulleted item on page 15, in Section 5.5, the City shall provide written notification of the exceedance within 72 hours, consistent with what has been approved by the Department for the YMCA of Greater Providence (YMCA), in the April 24, 2006, Order of Approval.
4. With respect to the Indoor Methane Sensor Concentration decision matrix detailed on page 16, please specify that the City shall immediately notify the Department for all methane detections greater than 1% of the lower explosive level (LEL).
5. With respect to the final bulleted item on page 16, the frequency change for periodic compliance monitoring of the sub-slab venting system from weekly during the first three (3) months of system operation, to monthly for the remainder of the first year of operation will be contingent upon there being no exceedances of the action levels.
6. The Department requests clarification with respect to the final paragraph on page 17, indicating that the City representative's certification signature demonstrates a commitment to fully fund all costs associated with the operation, monitoring, and maintenance (OM&M) of the proposed remedial action for a minimum of 20 years from the date the facility is occupied. In the prior situation involving the Springfield Street School, the Providence School Board provided a resolution that indicated its commitment to fully fund all OM&M costs of the proposed remedial action for a minimum of 20 years. The Department requires a similar written acknowledgement from Alan Sepe, Acting Director of the Department of Public Properties, indicating that the Department of Public Properties will assume full responsibility for all OM&M costs of the proposed remedial action for a minimum of 20 years. If the Department of Public Properties is not assuming all OM&M costs, then the Department requires a similar written acknowledgement and appropriate documentation from the City agency, board or authority that will assume full responsibility for all OM&M costs of the proposed remedial action for the minimum of 20 year period.
7. Regarding Section 6.3 on page 20, the Department acknowledges the City's concerns about the detection of VOCs inside the new school resulting from various sources not related to subsurface site contamination. It is anticipated that establishing baseline levels of VOCs in both the sub-slab and indoor air will help resolve any questions about the sources of the VOC vapors, should any be detected in indoor air. In response to Department concerns about this issue the City submitted previously listed document 2 which states the following:

"Based upon our discussions regarding the RAWP, and in addition to the VOC sampling schedule for the sub-slab and indoor areas proposed in the RAWP, the City will also collect three VOC baseline air samples from within the building interior prior to sub-slab venting system startup and building occupancy. Three additional VOC samples will be

collected from both the sub-slab area and the building interior after system startup and quarterly thereafter for the first full year of building occupancy. After successfully demonstrating one year of compliant system operation the City may submit a request to RIDEM that the indoor air sampling frequency for VOCs be reduced. As discussed, sub-slab negative pressure measurements will be routinely monitored in accordance with the schedule proposed in the RAWP, but no VOC Action Levels for sub-slab soil gas will be included in the Order of Approval."

The VOC Action Level for indoor air in the Order of Approval shall be the Connecticut Residential Proposed Target Indoor Air Concentrations (TACs). However, since the Department does not regulate VOC emissions resulting from new building construction materials, it shall be the responsibility of the City to determine an appropriate response to mitigate the presence of any elevated levels of VOCs in indoor air that are not the result of infiltration from soil gas or otherwise related to contamination at the site.

It has also been indicated that control of VOC levels in indoor air will be dependent upon maintaining proper negative pressure beneath the building within the sub-slab. Since the proposed monitoring frequency will decrease from weekly after the first 3 months of operation, to monthly for the remainder of the first year (with the potential to decrease frequency further based upon reported results), is it possible to tie several negative pressure monitors into the indoor methane alarm system, or alternatively install a parallel alarm system dedicated to insuring that the required negative pressure is maintained and not allowed to fail unnoticed for extended periods of time?

8. Please submit a track changes version of the proposed Environmental Land Usage Restriction (ELUR) in both hard copy and electronic format for the purpose of facilitating its review by the Department's Office of Legal Services.
9. Regarding the Soil Management Plan (SMP) attached as Exhibit B to the proposed ELUR, please include the following items in Section B.5 on page 3 of 5:
 - a. All clean fill brought to the site and utilized in the engineered control cap shall be subject to the sampling and analysis requirements of the final Department approved RAWP and segregated from regulated soils at the site to prevent potential cross contamination.
 - b. All existing site soils, including the closure cap subgrade to be prepared from the existing site grade, shall be presumed to be regulated and shall not be utilized as clean fill or in any of the clean components of the engineered control caps.
 - c. Following installation of the engineered control caps, all site soils under the engineered control caps shall be presumed to be regulated and, in the case of any future development or soil disturbance activities:

- a. Please describe the nature, extent and methodology employed in the recent soil vapor survey completed on October 5, 2005, including a site figure indicating sampling locations.
- b. Please indicate if any other previously unreported investigation activities have been performed. If there have been any previously unreported investigation activities, please include the relevant documentation in the response to this letter.
- c. Please explain the likely reason for the precipitous drop in volatile organic compound (VOC) vapors detected in soil vapor on site in the October 5, 2005 sampling event (e.g. trichloroethene [a.k.a. TCE] was detected at a maximum concentration of only $2.7 \mu\text{g}/\text{m}^3$), vs. the February 2005 sampling event (maximum TCE detection of $2,000 \mu\text{g}/\text{m}^3$, minimum detection of $500 \mu\text{g}/\text{m}^3$), and the June 2006 sampling event (maximum TCE detection of $4,020 \mu\text{g}/\text{m}^3$, minimum detection of $101 \mu\text{g}/\text{m}^3$).
- d. Please make sure that appropriate and representative data are being used to estimate venting system effluent, and to determine the likely need for effluent treatment or a Permit from the Department's Office of Air Resources (OAR).
- e. Once the sub-slab venting system is operational, actual venting system effluent samples must be collected and analyzed to facilitate calculation of representative estimates of the maximum hourly, daily and yearly emissions, and to verify whether effluent treatment or a permit from OAR is needed.
- f. Please make sure that appropriate detection limits are utilized to allow proper evaluation of venting system effluent, as well as for any other air samples collected to evaluate VOC's or methane in indoor air or within the sub-slab.
- g. With respect to the need for personal air monitoring devices for site workers, the Department will defer to the Occupational Safety and Health Administration (OSHA) rules, regulations and requirements. It is the responsibility of the City, its consultants and contractors to insure that all work is performed in a safe manner and in compliance with all applicable OSHA rules, regulations and requirements.
- h. With respect to the fifth bulleted item on page 7, if all dust sampling data collected during the first week of intrusive construction activities are less than the applicable action levels, the frequency of nuisance dust sampling may be reduced to once per week, not month.
- i. With respect to the final bulleted item on page 8, copies of all dust sampling data shall be forwarded to the Department immediately if an applicable action level is exceeded, with the frequency of nuisance dust sampling returned to daily for the following one week period.

- i. All excavated regulated soil shall be segregated, contained, managed and secured in a manner to prevent cross contamination of the clean surficial soils or the engineered control cap and to prevent potential human exposure.
- ii. The regulated soil shall only be reused on site if returned to a location under a Department approved engineered control cap.
- iii. No excavated regulated soil shall be shall be utilized to restore any of the clean components of the engineered control caps.
- iv. All excess regulated soil shall be properly disposed of off site at a licensed facility in accordance with all applicable laws.

If you have any questions regarding this letter or if you would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797 x7109 or by e-mail at joseph.martella@dem.ri.gov.

Sincerely,



Joseph T. Martella II, Senior Engineer
Office of Waste Management
Department of Environmental Management

cc: Terrence D. Gray, P.E., Assistant Director, RIDEM/AW&C
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Senator Juan M. Pichardo, District 2
Representative Thomas Slater
Providence City Councilman Ronald Allen
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