



August 10, 2012

REMEDIAL APPROVAL LETTER

Case No. 2005-059 (Associated with Case No. 97-030)

Mr. Gregory L. Simpson
Project Manager
Textron, Inc.
40 Westminster Street
Providence, RI 02903

RE: Former Gorham Manufacturing Facility
Park Parcel (a.k.a. Parcel C-1; f.k.a. Parcel D) – Phase I
333 Adelaide Ave., Providence, RI

Dear Mr. Simpson:

On November 9, 2011, the Rhode Island Department of Environmental Management (the Department) amended the 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. A **Remedial Approval Letter** (RAL) is a document used by the Department to approve remedial actions at contaminated sites that do not involve the use of complex engineered systems or techniques (e.g., groundwater pump and treat systems, soil vapor extraction systems, etc.).

The Department's Office of Waste Management (OWM) has the following documents on file in the matter of the above referenced "Site" (as defined in the Industrial Property Remediation and Reuse Act), submitted on behalf of Textron, Inc. (Textron):

1. Draft Remedial Action Work Plan, Phase I Soil Capping: Parcel D, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island (Draft RAWP), prepared by AMEC Environment & Infrastructure (AMEC), and dated February 27, 2012;
2. Draft Environmental Land Usage Restriction (ELUR) and Soil Management Plan (SMP), submitted via e-mail by Textron, Inc., on April 5, 2012;

3. Department Comment Letter, Re: Draft Remedial Action Work Plan, Former Gorham Manufacturing Facility – Park Parcel (a.k.a. Parcel D), 333 Adelaide Ave., Providence, RI, Case No. 2005-059 (Associated with Case No. 97-030), and dated May 10, 2012;
4. Remedial Action Work Plan, Phase I Soil Capping: Parcel C-1, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by AMEC, dated June 13, 2012, and received June 20, 2012;
5. Response to May 10, 2012 Comments, Rhode Island Department of Environmental Management, Draft Remedial Action Work Plan, Former Gorham Manufacturing Facility - Park Parcel (a.k.a. Parcel C-1), 333 Adelaide Ave., Providence, RI, Case No. 2005-059 (Associated with Case No. 97-030), prepared by AMEC, dated June 14, 2012, and received June 20, 2012;
6. Revised Response to May 10, 2012 Comments, Rhode Island Department of Environmental Management, Draft Remedial Action Work Plan, Former Gorham Manufacturing Facility - Park Parcel (a.k.a. Parcel C-1), 333 Adelaide Ave., Providence, RI, Case No. 2005-059 (Associated with Case No. 97-030), prepared by AMEC, and dated August 1, 2012; and
7. Remedial Action Work Plan, Phase I Soil Capping: Parcel C-1, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island (RAWP), prepared by AMEC, dated and received August 10, 2012.

Subject to the conditions herein, these documents fulfill the requirements of Section 8.00 (Risk Management) and Section 9.00 (Remedial Action Work Plan) of the Remediation Regulations, and describe a plan to remediate existing contamination pursuant to 23-19.14-1 et seq., and the Department's Remediation Regulations, as amended November 9, 2011, in accordance therewith.

This RAL places primary responsibility for the construction, operation, maintenance and monitoring of the approved Remedial Action Work Plan (RAWP) and its associated remedy on Textron. As the responsible party and performing party, Textron is expected to implement the RAWP in an expeditious and professional manner that prevents non-compliance with the RAL and RAWP, and protects human health and the environment.

The selected remedial alternative involves a three phased approach to the remediation of the Park Parcel and Mashapaug Cove. **The RAWP and associated documents for Phase I, describe a plan to remediate the existing soil contamination at the property through the limited removal of surface soil with post-removal confirmation sampling at three locations in the western shoreline area, additional soil removal at two locations within the former slag pile area, and encapsulation of any soil exceeding a residential direct exposure criteria within the Park Parcel Phase I area, in order to contain historic fill material, prevent direct exposure, limit infiltration in the former slag pile area, and restrict wind erosion or surface run-off. Upon completion of the remedial activities, an Environmental Land Usage Restriction (ELUR)**

will be recorded on the deed for the Park Parcel (designated Parcel C-1). The ELUR shall include a post-construction Soil Management Plan (SMP), which will outline the procedures for managing the soils on site should disturbances below the cap be required. As part of the ELUR, it shall be the responsibility of the property owner to provide for annual inspections of the property by a qualified environmental professional, and to submit a report, subject to review by the Department, which shall certify that the property is in compliance with the Department approved remedy and the terms of the ELUR. The Department will also perform random audits of the remedy. Textron shall maintain and monitor the completed engineered cap in the Phase I area until the responsibility is taken over by the City of Providence, Providence Redevelopment Authority (PRA), or a future successor.

The proposed Phase I soil cap consists of three distinct components including a fill area cap, a wetland buffer cap, and a former slag area cap. The fill area extends along the top of the western slope and extends along the shoreline of Mashapaug Pond's inner cove. The fill area will be capped with a marker fabric and minimum of two feet of clean soil consisting of 18 inches of cover soil covered by six inches of top soil, then seeded or stabilized with erosion control matting. The portions of the fill area cap along the area of the Gorham site known as Parcel B (a.k.a. Alvarez High School) and Parcel C (a.k.a. the undeveloped lot to the west of Alvarez High School, formerly proposed for a YMCA), will match the existing grade at the High School boundary and the proposed future grade at the Parcel C boundary. The wetland buffer area consists of the area within the 50 foot wetland boundary (delineated approximately five to ten feet upland from the Mashapaug cove shoreline). The limit of work will be approximately 10 feet above the waterline; therefore no Phase I work will be conducted within the delineated wetland. An effort will be made to save as many large trees within the buffer zone as possible, however clearing and grubbing of the wetland buffer zone scrub material will be conducted to support the installation of the soil cap. One foot of soil at the toe of the wetland buffer zone will be removed to allow the soil cap to key into the existing grade above the wetland boundary. A marker fabric will be installed over the fill material surface. Twelve inches of clean soil will then be spread throughout the buffer zone to provide the soil cap. The finished surface for the wetland buffer cap will be stabilized with erosion control matting and Department approved wetland grasses as part of the wetland buffer area restoration.

All of the Phase I work will be conducted outside of the wetland boundary, with all of the remediation work within the freshwater wetlands to be conducted in the future as part of the Phase II cove sediment remediation. The cap design for the former slag area includes a geotextile membrane to limit infiltration and restrict contact with the underlying soils. The existing soil will be graded and capped with six inches of clean sand, followed by a 40-mil geotextile membrane, a drainage composite layer, twelve inches of clean cover soil, and an additional six inches of clean top soil, which will be seeded or stabilized with erosion control matting. The existing chain link fence will be relocated along the boundary between Parcels C and C-1, until the cove sediments (Phase II) and remaining Parcel C-1 surface

soils (Phase III) have been remediated. All existing groundwater monitoring wells within the Phase I cap will be secured during construction activities and maintained for future groundwater monitoring purposes. Former groundwater monitoring well GZA-5 will be restored to its location within the former slag pile area, and one additional monitoring well will be installed downgradient of the former slag pile area for future groundwater monitoring purposes. The implementation and completion of the Phase I work shall in no way interfere with the eventual implementation and completion of Phase II, Phase III, or an eventual groundwater remedy for the overall Gorham site. Upon Textron's completion of remedial activities on the Park Parcel and stable establishment of the cap, responsibility for maintaining the remedy in the future and any future development of the Park Parcel shall be assumed by the owner of the property, currently the City of Providence through the PRA.

Based upon review and consideration of the above referenced documents, the Department approves the proposed RAWP through this RAL provided that all activities, procedures, operations, and schedules detailed in the RAWP, and the conditions listed below, are strictly adhered to:

- 1) All work, operations, activities and schedules shall be performed in accordance with the terms and conditions of this RAL, the Department approved RAWP, and all other applicable federal, state and local laws and regulations.
- 2) Textron shall prepare and distribute a community notice to the residents in the reservoir triangle neighborhood and to other interested parties (e.g. community groups and local elected officials). The notice shall be printed in English and Spanish and shall include an estimated schedule for remedial activities and construction, a brief description of the work to be performed and the precautions to be taken to protect the community, and relevant contact information for Textron, Amec and its on-site contractors as applicable (i.e. name, phone, e-mail ... etc.) for questions and complaints.
- 3) Work shall be initiated at the Site within thirty (30) days of receipt of this RAL.
- 4) No hazardous waste shall be accepted from any off-site sources for treatment or disposal at the Site.
- 5) Sampling and analysis of all media involved in the Remedial Action shall be conducted in accordance with the requirements of the RAWP and this RAL.
- 6) The Department shall be notified as soon as possible, in accordance with Section 9.08 of the Remediation Regulations, of any consultant or contractor that has not yet been determined at the time that this approval was granted. This requirement also includes the name and contact information for the receiving licensed disposal facility(s) to be utilized in the event that

proper off-Site disposal of any excess excavated regulated material or collected water from dewatering activities is required.

- 7) Any significant changes to the RAWP shall be pre-approved by the OWM, and any minor changes shall be reported to the OWM by telephone within one (1) working day and in writing within five (5) working days.
- 8) Appropriate procedures shall be implemented to manage, control and monitor regulated soil and dust in a manner consistent with the RAWP and the RAL, including but not limited to the following:
 - a) Air monitoring will be completed during all remedial activities at the Site that have the potential to disturb fill/soil. Strict operational controls shall be in place to reduce the potential for dust emissions during the remediation activities and air quality within and surrounding the work area shall be monitored (including exposure monitoring for on-site workers in the work area and ambient air monitoring within the work area and at the work area perimeter).
 - b) The air monitoring program shall include visual monitoring and a handheld mini-RAM to measure dust levels immediately downwind of the construction activities. Readings will be logged every two hours of the work day and shall include notations regarding ongoing construction activities being monitored, engineering controls being implemented, the monitoring results and any required corrective actions. At the end of each week the logs shall be scanned and PDF files provided to the OWM via email the following Monday for upload to the project website. The perimeter monitors shall run the length of time that activity is conducted at the Site.
 - c) If visible dust conditions are sustained for more than one minute within the work zone, dust suppression methods (i.e., water spray) will be implemented immediately to reduce airborne dust levels. Dust suppression will be performed throughout the capping activities and will include spraying of fine mist of water over exposed soils to suppress dust as needed.
 - d) If dust concentrations reach the action level (0.29 mg/m^3) within the work area (sustained for more than 1 minute), soil disturbing operations will be suspended and dust control measures implemented to prevent recurrence. The source of the elevated dust will be identified and immediate steps will be taken to reduce dust levels and correct the problem. For the perimeter dust monitors, the alarm level will be set to trigger at 0.2 mg/m^3 . If an alarm is triggered, the source of the elevated dust reading will be investigated and identified if possible, and immediate steps will be taken to reduce dust levels

- 9) Any temporarily stockpiled soils shall be placed upon and covered with polyethylene of thickness at least 6-mil or greater to prevent tearing, and segregated from clean fill material to prevent cross contamination.
- 10) All excess fill material generated on site shall have all solid waste and debris removed prior to reuse as closure cap subgrade beneath the marker fabric layer.
- 11) Any material discovered during excavation activities that qualifies as "Solid Waste," as defined by the Department's Solid Waste Regulations, must be disposed of at a licensed Solid Waste Facility.
- 12) Any portion of the RAWP conducted on the Site which falls under the jurisdiction of the Department's Freshwater Wetlands Program, and is not considered an exempt activity under Rule 6.08 (Site Remediation) of the Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (the Wetlands Regulations), must be done in accordance with the Wetlands Regulations, including but not limited to the timely acquisition of a Wetlands Permit.
- 13) Any portion of the RAWP conducted on the Site which falls under the jurisdiction of the Department's Office of Water Resources (OWR), Rhode Island Pollution Discharge Elimination System (RIPDES) Program, must be performed in compliance with all appropriate OWR/RIPDES Rules and Regulations, including but not limited to the timely acquisition of a RIPDES Permit or a General Permit for Storm Water Discharge Associated with Construction Activity as appropriate and/or applicable.
- 14) All waste derived from implementation of the RAWP shall be managed in accordance with the Department's Remediation Regulations, Rules and Regulations for Hazardous Waste Management, and Solid Waste Regulations, as appropriate. In accordance with Rule 11.07 (Initiator) of the Remediation Regulations, Textron must comply with the requirements of the Solid Waste Regulations, as amended, for all solid waste shipments that they initiate, and documentation of disposal shall be provided to the OWM.
- 15) Within sixty (60) days of completion of the Remedial Action described in the RAWP, a Remedial Action Closure Report, detailing the Remedial Action and current site status, shall be submitted to the OWM for review and approval. The Remedial Action Closure Report shall include at a minimum the following items:
 - a) A post remediation survey of the entire Phase I Park Parcel Site with as-built plans demarcating the exact location (e.g. vertical and horizontal extent and type) of the installed engineered controls, including: geotextile marker fabric, clean fill, and as applicable any utilities, structures, basins, swales, storm water management features, and current groundwater monitoring locations.

- b) Analytical results and summary of all air and dust monitoring and/or sampling performed throughout the project.
 - c) All original laboratory analytical data results from the remedial activities, compliance and confirmation sampling, as applicable.
 - d) Documentation that all excess regulated soil, solid waste, remediation waste, etc. was properly disposed of off site at an appropriately licensed facility in accordance with all applicable laws.
- 16) Textron, its representatives, employees, agents and contractors shall adhere to the following timelines in its management, operation and maintenance of the Site.
- a) Textron shall immediately notify the OWM of any Site or operating condition that results in non-compliance with this RAL.
 - b) The OWM shall be notified in writing immediately if Textron suspects or has reason to believe that any of the remedial objectives will not be met.
 - c) The OWM will be notified a minimum of five (5) working days in advance of any changes in contractors and/or consultants for the remedial activities in this RAWP, and will be promptly supplied with complete contact information for each new contractor or consultant (including but not limited to company name and address, contact name and address, contact telephone number and e-mail address).
 - d) Any RAWP interruptions shall be reported to the OWM by telephone within one (1) working day and in writing within seven (7) days.

Please be advised that the latest version of the draft ELUR is currently under review by the Department's Office of Legal Services (OLS) and any comments resulting from that review will be promptly forwarded to Textron and the City of Providence. Once the language of the ELUR is finalized, and the Department has approved the Remedial Action Closure Report, Textron shall direct the City of Providence to have the final Department approved ELUR recorded in the Providence land evidence records, and submit a recorded (stamped) copy to the OWM within fifteen (15) days of the date that it is recorded in accordance with Rule 8.09 of the Remediation Regulations.

This RAL does not remove Textron's obligation to obtain any other necessary permits from other local, state, and/or federal agencies (including the Department) that may be necessary to comply with this RAL. Textron is reminded of its obligation for securing any required permits and other approvals prior to commencing any Site activities. **Please notify the OWM at least forty-eight (48) hours in advance of any remedial work.**

As the performing party, Textron shall be responsible for properly conducting the above-listed activities. Please review the stipulations of this RAL thoroughly to ensure your compliance with the requirements.

All correspondences should be sent to my attention. If you have any questions regarding this letter or if you would like the opportunity to meet again 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
Rhode Island DEM
Office of Waste Management

Authorized by,



Kelly J. Owens
Supervising Engineer
Rhode Island DEM
Office of Waste Management

cc: Terrence D. Gray, P.E., Assistant Director, RIDEM/AW&C
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Knight Memorial Library – Project Repository