



RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

December 12, 2011

**REMEDIAL DECISION LETTER  
CASE NO. 2006-011**

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 D) – Phase I  
333 Adelaide Ave., Providence, RI  
**Case No. 2005-059 (Associated with Case No. 97-030)**

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 a timely and cost-effective manner. A **Remedial Decision Letter (RDL)** is a formal, written communication from the Department that approves a site investigation, identifies the preferred remedial alternative and authorizes the development of a Remedial Action Work Plan in order to achieve the objectives of the environmental clean-up.

The Department has the following documents on file in the matter of the above referenced “Site” (as defined in the Industrial Property Remediation and Reuse Act):

1. A Report on the Distribution of Organic Components and Trace Metals in Mashapaug Pond Sediments, prepared by James G. Quinn, James S. Latimer and John T. Ellis of the Graduate School of Oceanography at the University of Rhode Island, and dated April 1986;
2. Correspondence entitled, “*Gorham Manufacturing Co. Facility, Phase I Report*,” prepared by Buonicore-Cashman Associates, and dated July 13, 1987;
3. Environmental Assessment, Adelaide Avenue Plant, Providence, Rhode Island, prepared by Goldberg-Zoino & Associates, Inc., and dated April 1988;

4. Soil and Ground Water Contamination Site Assessment of the Gorham Manufacturing Facility, Providence, RI, prepared by Hunter, Inc., and dated May 25, 1989;
5. Site Investigation Report, Gorham/Textron Site, Providence, Rhode Island, prepared by Camp Dresser & McKee, Inc., and dated June 1993;
6. Correspondence entitled, "*Short-Term Response Action*," and prepared by ABB Environmental Services, Inc., and dated July 11, 1997, (This correspondence also included laboratory analytical data provided under separate cover, entitled, "*Analytical Laboratory Report for Short-Term Response Action – Former Gorham Manufacturing Facility*");
7. Site Investigation Summary Report and Risk Assessment, Former Gorham Manufacturing Property, 333 Adelaide Avenue, Providence, Rhode Island, prepared by Harding Lawson Associates (HLA), and dated July 29, 1999;
8. Responses to RIDEM Comments on Site Investigation Report and Risk Assessment, prepared by HLA, and received June 6, 2000;
9. Revised Development Plan and Application of Remedial Alternatives, prepared by HLA, and dated March 9, 2001;
10. Notification to Abutters of Completion of Site Investigation Activities, dated October 30, 2000, and received May 1, 2001;
11. Remedial Action Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, prepared by Harding ESE (Harding), and dated April 25, 2001;
12. Letter from Harding to the Department, Re: *Response to RIDEM Comments on the Remedial Action Work Plan, Former Gorham Manufacturing Property, 333 Adelaide Avenue, Providence, Rhode Island*, dated July 24, 2001;
13. Data Review for Mashapaug Pond, Providence, Rhode Island, prepared by the U.S. Environmental Protection Agency, and dated August 2001;
14. Letter from Harding to the Department, Re: *Response to RIDEM Comments Dated September 4, 2001, Remedial Action Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island*, dated September 25, 2001;
15. Letter from IT Corporation (IT) to the Department, Re: *Remedial Action Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI*, dated November 28, 2001;
16. Memorandum from Harding to the Department (delivered via e-mail), Re: *TPH soil issue at Gorham*, dated November 26, 2001, (revised December 18, 2001, at the request of the Department);

17. Letter from Textron to the Department, Re: *Response to RIDEM Comments, Remedial Action Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI*, dated January 10, 2002;
18. Letter from IT to the Department, Re: *Remedial Action Work Plan Revisions, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI*, dated January 28, 2002;
19. Letter from IT to the Department, Re: *Remedial Action Work Plan Revisions, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI*, dated February 12, 2002;
20. Mashapaug Pond Data Report and Analysis, prepared by Environmental Science Services, Inc., and dated February 15, 2002;
21. Revised Site Map for Remedial Action Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, prepared by IT, and submitted March 5, 2002;
22. Supplemental Site Investigation Work Plan to Support Human Health and Ecological Risk Assessment Activities, Park Parcel/Mashapaug Cove, Former Gorham Manufacturing Property, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC Engineering and Consulting, Inc. (MACTEC), dated November 2005, and received November 17, 2005;
23. Quality Assurance Project Plan, Short-Term Limited Site Investigation, Former Gorham Property and Mashapaug Cove, Providence, Rhode Island, prepared by Fuss & O'Neill (F&O), and dated December 2005;
24. Supplemental Site Investigation, Gorham Manufacturing Property & Mashapaug Cove, prepared by F&O, and dated April 2006;
25. Slag Removal Work Plan, Former Gorham Manufacturing Facility, Plat 51 – Lots 323, 324, and 326, 333 Adelaide Avenue, Providence, Rhode Island, 97-030 (Including Case No. 2005-029 and Case No. 2005-059), prepared by MACTEC, and dated May 24, 2006;
26. Supplemental Site Investigation Work Plan, Park Parcel/Mashapug Cove, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated June 2006;
27. Supplemental Site Investigation Report, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island (SSIR), prepared by MACTEC, dated July 31, 2006, and received August 9, 2006;
28. Letter from MACTEC to Robert Dorr, Re: *Historical Records, Former Gorham Site, 333 Adelaide Ave., Providence, RI*, dated September 12, 2006;

29. Letter from the City of Providence to the Department, Re: *Reply to Slag Pile Removal Letter Dated 21 September 2006, Former Gorham Manufacturing Facility – Park Parcel, 333 Adelaide Ave., Providence, Rhode Island*, and dated September 29, 2006;
30. Slag Removal Action Summary Report, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated September 29, 2006;
31. Submittal of Technical Report, Geophysical Survey, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, prepared by MACTEC, and dated October 2, 2006;
32. Letter from Textron to the Department, Re: *Response to RIDEM Slag Pile Removal Comments, Former Gorham Manufacturing Facility, Providence, RI*, dated October 3, 2006;
33. Letter from Robert Dorr to EA Engineering Science and Technology, Inc. (EA), Re: *Alternative Route to Park Parcel*, dated October 6, 2006;
34. Park Parcel Consent Order Compliance - Summary of Soil & Debris Pile Removal, Former Gorham Manufacturing Facility, Plat 51 – Lots 323, 324, and 326, 333 Adelaide Avenue, Providence, Rhode Island, Case No. 97-030 (Including Case No. 2005-029 and 2005-059), prepared by EA, and dated October 19, 2006;
35. Former Slag Pile Area Supplemental Removal Action Work Plan, Former Gorham Manufacturing Facility, Plat 51 – Lots 323, 324, and 326, 333 Adelaide Avenue, Providence, Rhode Island, Case No. 97-030 (Including Case No. 2005-029 and 2005-059), prepared by MACTEC, and dated October 26, 2006;
36. Letter from Robert Dorr to Mactec Re: *MACTEC Files - Textron UST Closure Reports Jan '81 thru Jan '99*, dated October 28, 2006;
37. Electronic mail (e-mail) from Textron to the Department, Subject: *Former Gorham Manufacturing Site - Slag Information*, dated November 2, 2006, including attachments a) Letter from Kenneth Kastner (Hogan & Hartson) to Jamieson Schiff (Textron), and b) Enclosures to Letter from Kenneth Kastner to Jamieson Schiff, both dated November 1, 2006;
38. E-mail from Textron to the Department, Subject: *Response to RIDEM November 6, 2006 Letter*, dated November 7, 2006;
39. Letter from Robert Dorr to Textron Re: *Community Response to Textron's Assertion that the Gorham Manufacturing Smelter was a former "Primary Lead Processing Facility,"* dated November 14, 2006;
40. Remedial Project Information Sheet – July 2006, Supplemental Investigation of Parcels C & D and Mashapaug Cove, Former Gorham Manufacturing Facility, prepared by Textron, and Distributed at the December 4, 2006, Gorham/Textron Site Public Meeting;

41. Letter from Sylvia Aldredge to the Department, Re: *Textron Remediation Responsibilities – (former) Gorham Textron Dump Site, 333 Adelaide Avenue, Parcel D, the So-Called Park Parcel*, and dated December 7, 2006;
42. Former Slag Pile Area Supplemental Removal Action Work Plan, Former Gorham Manufacturing Facility, Plat 51 – Lots 323, 324, and 326, 333 Adelaide Avenue, Providence, Rhode Island, Case No. 97-030 (Including Case No. 2005-029 and 2005-059), prepared by MACTEC, and dated January 16, 2007;
43. Response to Comments, Supplemental Site Investigation Report, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, July 2006, prepared by MACTEC, and dated February 1, 2007;
44. Response to Comments, Former Slag Pile Area Supplemental Removal Action Work Plan, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, January 16, 2007, prepared by MACTEC, and dated February 26, 2007;
45. Letter from Robert Dorr to Textron Re: *Slag Pile Removal Action Work Plan – Community Comments*, dated April 22, 2007;
46. Community Information Session Newsletter, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated June 25, 2007;
47. Supplemental Site Investigation Report Addendum June 2007, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated June 28, 2007;
48. Letter from the Gorham area Community to Mactec, Re: *Park Parcel - Accelerated Phase 1 Remediation, Supplemental Site Investigation Report Addendum, Community Concerns and Comments*, dated July 11, 2007;
49. Letter from the Gorham area Community to Textron, Re: *Community Stakeholders*, dated July 23, 2007;
50. Letter from Textron to Robert Dorr Re: *Former Gorham Manufacturing Site, Providence, RI*, dated July 26, 2007;
51. Letter from the Gorham area Community to the Department, Re: *Textron's Park Parcel Remediation Plan, Community Stake holder's Comments, First Opportunity for Public Response*, dated September 5, 2007;
52. Gorham Public Questions & Answers, Park Parcel Public Meeting, Former Gorham Manufacturing Site, Providence, Rhode Island, August 23, 2007, prepared by MACTEC, and dated October 22, 2007;

53. December 2007 Investigation Activities, Building N Underground Storage Tanks, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated January 8, 2008;
54. Letter from Textron to the Department, Re: Phase I Park Parcel Closure, Former Gorham Manufacturing Site, prepared by Textron, and dated February 20, 2008;
55. Letter from Textron to the Department, Re: Park Parcel Remediation, Former Gorham Site, prepared by Textron, and dated March 12, 2008;
56. Building N Underground Storage Tanks Closure Report, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated April 3, 2008;
57. Letter from the Gorham area Community to RIDEM, Re: *Park Parcel Remediation - Incomplete Investigation – RAWP*, dated April 4, 2008;
58. Mashapaug Cove Groundwater Investigation, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated December 12, 2008;
59. Groundwater Investigation Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated October 14, 2009;
60. Data Summary Report, Mashapaug Cove Groundwater Investigation, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated April 7, 2010;
61. Letter from Environmental Justice League of Rhode Island (EJLRI) to the Department, dated May 19, 2010;
62. Park Parcel Phase I, Recommended Remedial Action, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated May 17, 2011;
63. Notes from Textron Public Meeting on Parcel D Phase 1 Remediation Plan, July 12, 2011, 6pm-8pm, Renaissance Church, 77 Reservoir Avenue, prepared by the Environmental Justice League of Rhode Island (EJLRI), and received via e-mail on July 20, 2011;
64. E-mail comments - Subject: Gorham – Textron Public Meeting – Tuesday, July 12<sup>th</sup> 6pm, dated July 15, 2011, and forwarded to the Department by the EJLRI on August 8, 2011;
65. Comment letter, submitted on behalf of the EJLRI, dated August 8, 2011, and received via e-mail on August 8, 2011;

66. Comment letter, submitted on behalf of the Brown University Superfund Research Program Community Engagement Core, and received via e-mail on August 9, 2011;
67. Technical Review of Recommended Remedial Action, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by GEI Consulting (GEI), dated August 9, 2011, and submitted via e-mail by the EJLRI on August 9, 2011; and
68. Response to Comments, July 12, 2011 Phase I Park Parcel Public Meeting, Former Gorham Manufacturing Facility, 333 Adelaide Ave., Providence, RI, prepared by AMEC Environment & Infrastructure (AMEC), and dated November 16, 2011.

Collectively, these documents define “Existing Contamination” at the Site, and fulfill the requirements of a Site Investigation Report (SIR) as described in Rule 7.08 of the Remediation Regulations. In addition, according to our records, public notice was conducted to all abutting property owners, tenants, members of the local community, the City of Providence and all utilities with easements on the property regarding the substantive findings of the completed investigation in accordance with Rules 7.07 and 7.09 of the Remediation Regulations. The Department has received documentation demonstrating that the requirements of Rhode Island General Laws (R.I.G.L.), Title 23, Health and Safety, Chapter 23-19.14, Industrial Property Remediation and Reuse Act, 23-19.14-5, Environmental Equity and Public Participation, have been fulfilled. The opportunity for public review and comment on the technical feasibility of the proposed remedial alternatives commenced with a Public Meeting on July 12, 2011, and following a requested 14 day extension, the period closed on August 9, 2011. Comments were received and responded to as documented in the previously referenced items 63 through 68.

The preferred remedial alternative, as stated in the SIR, involves a three phased approach to the remediation of the Park Parcel and Mashapaug Cove. **Phase I, which is the subject of this Remedial Decision Letter, includes 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. 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 or Providence Redevelopment Authority (PRA).**

**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 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). 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. 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 vegetation will be planted 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 D, and temporary fencing will remain in place to restrict access to the steep slope down to the shoreline and until the cove sediments (Phase II) and remaining Parcel D 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 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.

The Department hereby approves the SIR, with the above identified preferred remedial alternative, and requires a Remedial Action Work Plan (RAWP) be submitted for review and approval, and implemented, to achieve the objectives of the environmental clean-up, in accordance with the following conditions:

1. In accordance with Sections 8.0 and 9.0 of the Remediation Regulations, a RAWP, a draft ELUR, and SMP shall be submitted for Department review and approval within 90 days



(February 28, 2012). The RAWP shall describe all technical details, engineer design elements, and schedules associated with the implementation of the proposed remedy. All of the subsections outlined in Section 9.0 of the Remediation Regulations must be included in order to facilitate the review and approval of the RAWP. If an item is not applicable to this Site, simply state that it is not applicable and provide an explanation in the RAWP.

2. Pursuant to Rule 10.02 of the Remediation Regulations, an application fee for Remedial Action Approvals in the amount of one thousand (\$1,000) dollars shall be made payable to the State of Rhode Island General Treasurer and remitted to this office with submission of the RAWP.
3. Once the Department reviews the RAWP for consistency with Sections 8.0 and 9.0 of the Remediation Regulations, any written comments generated and forwarded as a result of the review(s) shall be incorporated forthwith into a revised RAWP, to be re-submitted for final approval.
4. Upon finalization of the RAWP, the Department will issue a Remedial Approval Letter (RAL), signifying Department approval. All remedial measures required by the Department shall be implemented, in accordance with the approved schedule, to ensure all applicable exposure pathways at the Site are appropriately addressed.

**Please be advised that the Department reserves the right to require additional actions under the aforementioned Remediation Regulations at the Property should any of the following occur:**

- A. Conditions at the Site previously unknown to the Department are discovered;
- B. Information previously unknown to the Department becomes available;
- C. Policy and/or regulatory requirements change; and/or
- D. Failure by Textron or any future holder of any interest in the Property to adhere to the terms and conditions of the Department approved RAWP, schedule, RAL, ELUR and/or SMP for the Property.

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797 extension 7109 or by e-mail at [joseph.martella@dem.ri.gov](mailto: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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Senator Juan M. Pichardo, District 2  
Representative Scott A. Slater  
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Thomas Deller, City of Providence  
Robert F. McMahon, Providence Parks Department  
David Heislein, AMEC  
Amelia Rose, EJLRI  
Knight Memorial Library – Project Repository