December 17, 2012

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

RE: Former Gorham Manufacturing Facility – Parcel A - Groundwater Pump and Treat System
333 Adelaide Ave., Providence, RI
Case No. 97-030

Dear Mr. Simpson:

Enclosed please find the Order of Approval (Order) for the proposed Remedial Action Work Plan for the above referenced facility. Please review the stipulations of this Order thoroughly to ensure your compliance with the requirements. This Order places primary responsibility for the construction, operation, maintenance and monitoring of the approved Remedial Action Work Plan (RAWP) on Textron, Inc. (Textron). In order to enable the Department to monitor Textron’s compliance with the RAWP, the Order requires Textron to notify the Department of any condition that is non-compliant with the Order or that constitutes an interruption of the RAWP. In order to maintain compliance with the Order and the RAWP, Textron’s responsibilities under the Order necessarily include the responsibility to respond to and correct non-compliant conditions in a timely and professional manner that minimizes non-compliance with the Order and RAWP, and protects human health and the environment.

Please notify this office 48 hours prior to the beginning of any work related to the remediation of the property. If you have any questions regarding this matter, please contact me by telephone at (401) 222-2797 x7109 or by e-mail at joseph.martella@dem.ri.gov. This Order shall be recorded in the land evidence records of the City of Providence as required by law, within ten (10) days of execution of this Order, and a recorded copy must be returned to the Department within ten (10) days of recording.

Sincerely,

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

cc: Terrence D. Gray, P.E., Assistant Director, RIDEM/AW&C
Leo Hellested, P.E., RIDEM/OWM
Kelly J. Owens, RIDEM/OWM
Susan Forcier, Esq., RIDEM/OLS
Joseph Haberek, RIDEM/OWR/RIPDES Program
Douglas McVay, RIDEM/OAR
Barbara Morin, RIDEM/OAR
Alisa Richardson, RIDEM/OWR
Hon. Angel Taveras, Mayor, City of Providence
Senator Juan M. Pichardo, District 2
Representative Scott A. Slater
Councilman Wilbur W. Jennings Jr., Ward 8
Robert E. Azar, Providence Planning Department
April H. Wolf, Providence Planning Department
Richard P. Michalewich, AECOM
Amelia Rose, EILRI
Knight Memorial Library – Project Repository
ORDER OF APPROVAL

In the above entitled matter wherein, Textron, Inc. (Textron), in its capacity as Former Owner, Responsible Party and Performing Party for the remediation of property located at 333 Adelaide Avenue, Providence, further identified by the City of Providence Tax Assessor’s Office as Plat 51, Lot 326 (the Site), has filed the following documents with the Rhode Island Department of Environmental Management’s (the Department’s) Office of Waste Management (OWM). The following documents collectively fulfill the requirements of Section 9.00 (Remedial Action Work Plan) of the Department’s November 9, 2011, amended Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, (the Remediation Regulations):

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;


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;


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;


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;


26. Supplemental Site Investigation Work Plan, Park Parcel/Mashapauq 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;


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;


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;


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;

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;


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 Stakeholders Comments, First Opportunity for Public Response, dated September 5, 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. Retail Complex Soil Investigation, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated May 28, 2008;

59. Retail Complex Groundwater Investigation, Former Gorham Manufacturing Facility, Retail Complex, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated May 28, 2008;

60. Adelaide Avenue Soil Vapor and Groundwater Investigation, Former Gorham Manufacturing Facility, Retail Complex, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated June 5, 2008;

61. Status Report: May 2008 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw Environmental, Inc. (Shaw), and dated June 5, 2008;


63. Mashapaug Cove Groundwater Investigation, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated December 12, 2008;

64. Status Report: November 2008 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated December 15, 2008;

65. Status Report: February 2009 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated April 7, 2009;

66. Status Report: August and September 2009 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated October 12, 2009;
67. Groundwater Investigation Work Plan, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, and dated October 14, 2009;

68. Status Report: February 2010 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated March 25, 2010;

69. 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;

70. Status Report: August 2010 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated September 20, 2010;


73. Status Report: February 2012 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated March 20, 2012;

74. Update - Former Gorham Manufacturing Facility Site, Proposed Groundwater Remediation System, prepared by Textron, dated August 2012, and received August 13, 2012;

75. Email Re: Comments/Questions on Groundwater Proposed Remedy, submitted by the Environmental Justice League of Rhode Island (EJLRI), and dated September 12, 2012;

76. Responses to questions – Proposed groundwater remediation system, Former Gorham Manufacturing facility, Providence, RI, prepared by Textron, and dated September 14, 2012;

77. Status Report: August 2012 Activities, Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, RI, Site Remediation Case No. 97-030, prepared by Shaw, and dated September 24, 2012;
78. Remedial Action Work Plan, Former Gorham Manufacturing Facility, Textron, Providence, RI, prepared by AECOM Environment (AECOM), dated October 2012, and received October 31, 2012; and

79. Addendum/Response to Remedial Action Work Plan - Comments, 12/04/12, Former Gorham Silver Facility, Adelaide Avenue, Providence, RI, Case No. 97-030, prepared by AECOM, and dated December 5, 2012.

These documents describe a plan to remediate existing contamination pursuant to Rhode Island General Laws Chapter 23-19.14-1 et seq., and the Department’s Remediation Regulations, as amended November 9, 2011, in accordance therewith.

This Order of Approval (Order) places primary responsibility for the construction, operation, maintenance and monitoring of the approved Remedial Action Work Plan (RAWP) and its associated remedy on Textron. In order to enable the Department to monitor Textron’s compliance with the RAWP, the Order requires Textron to notify the Department of any condition that is non-compliant with the Order or that constitutes an interruption of the RAWP and to take immediate action to correct the non-compliant condition. 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 Order and RAWP, and protects human health and the environment.

Upon consideration thereof, and in accordance with Rule 10.1 (Remedial Action Approvals) of the Remediation Regulations, the Department’s OWM approves said RAWP to remediate contamination through this Order, provided that:

1) All work, operations, activities and schedules shall be performed in accordance with the terms and conditions of this Order, the Department approved RAWP, Section 11.00 (Remedial Action) of the Remediation Regulations, and all other applicable federal, state and local laws and regulations.

2) Work shall be initiated at the Site within sixty (60) days of receipt of this Order.

3) All work, operations, and activities shall be performed to ensure the applicable remedial objectives for the site are achieved for all hazardous substances at the site, so as to manage actual or potential risks to human health and the environment.

4) All Site soil, groundwater, dust and air emissions shall be managed in accordance with the requirements of the RAWP, as applicable.

5) Sampling and analysis of all media involved in the Remedial Action shall be conducted in accordance with the requirements of the RAWP, the Remediation Regulations and this Order.

6) The Site remedy as described in the RAWP shall incorporate the following:
a) Construction, installation, maintenance and continuous operation of a groundwater remediation system designed to remove and treat volatile organic compound (VOC) impacted groundwater and to contain impacted groundwater from moving off the Site. The proposed system shall consist of three groundwater extraction wells pumping groundwater to a central groundwater treatment system located in a cargo container placed on a concrete pad behind the Parcel A Retail building. The system shall include a filtering unit, an air stripper (to remove VOCs from the groundwater), an air treatment vessel (to remove VOCs from the air flowing out of the air stripper before it is discharged to ambient air), and a final filtering unit. Once treated, water shall be discharged to a storm drain that connects to the large basin behind the Parcel A retail building under a Department issued Rhode Island Pollution Discharge Elimination System (RIPDES) permit. The treatment system shall also be equipped with "fail-safe" controls that will automatically shut the system down in the event of system malfunction.

b) Following the installation of the groundwater remediation system, its proper operation shall be tested to demonstrate:

i) Compliance with the Department approved performance criteria in the final RAWP;

ii) Compliance with the discharge criteria and requirements of the RIPDES Permit; and

iii) Compliance of actual air emission values with the applicable air pollution emissions threshold requirements of the Department's Office of Air Resources (OAR) Air Pollution Control (APC) Regulation No. 9.

c) Implementation of a long term groundwater monitoring program sufficient to ensure site conditions are maintained in compliance with the applicable remedial objectives. Said monitoring program shall include at a minimum:

i) Performance of quarterly groundwater sampling, analysis and reporting for the first year of operation, and semi annually thereafter. After completion of one (1) year of remedial system operation and four (4) consecutive quarterly rounds of groundwater monitoring for VOCs at the Department approved locations, Textron may prepare and submit a proposed groundwater monitoring optimization plan for Department review and approval.

ii) Periodic sampling of points of compliance shall be conducted on the Department approved schedule, to document compliance with the Department’s Method 1 GB Groundwater Objectives for all contaminants of concern at the Site property boundaries.

d) Compliance with the Order shall be documented in a Closure Report submitted to the Department for review and approval.

7) All waste derived from implementation of the RAWP shall be managed in accordance with the Department's Remediation Regulations, the Rules and Regulations for Hazardous Waste
Management, and the Rules and Regulations for Solid Waste Management Facilities, as well as any other applicable State and Federal regulations and policies. Documentation of proper disposal shall be provided to the OWM.

8) The OWM shall be immediately notified of any Site or operation condition that results in non-compliance with this Order.

9) The OWM shall 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).

10) Any RAWP interruptions shall be reported by telephone to Joseph T. Martella II of the OWM (401 222-2797 x7109) within one (1) working day and in writing within seven (7) days of occurrence.

11) This Order does not remove Textron’s obligation to obtain any other necessary permits from other state, local, or federal agencies.

12) It is Textron’s sole obligation to obtain all necessary approvals and permits required to implement the RAWP in a timely manner consistent with the RAWP schedule and deadlines in this Order.

13) All RAWP activities shall be performed in compliance with all appropriate Office of Air Resources Rules and Regulations, including but not limited to the monitoring and control of any air emissions and the timely acquisition of any required Air Pollution Control Permits (Air Permits) as applicable.

14) 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, and in accordance with the requirements in the November 2, 2012, Remediation General Permit.

15) Textron shall request that the City of Providence have this Order recorded in the City of Providence, land evidence records of the subject property within ten (10) days of execution of this Order, and a recorded copy shall be forwarded back to the OWM within ten (10) days of recording of this Order.

16) Based upon the results of the groundwater pump and treat remedial system operation and performance, the Department reserves its rights to require additional remedial actions at the Property to achieve final compliance at the Site, if warranted.
17) Closure and removal of the groundwater pump and treat remedial system at the conclusion of the remedy will be contingent upon final Department approval.

This Order shall remain in full force and effect provided said RAWP is implemented in a condition satisfactory to the Department. Failure to comply with all points outlined in the Department approved RAWP and stipulated in this Order shall result in the issuance of a Notice of Violation and Order against Textron.

This Order shall be subject to modification or revocation in accordance with law.

Entered as an approval by the Department this 17th day of December, 2012.

By: ____________________________

Leo Hellested, P.E.
Chief, Office of Waste Management
Department of Environmental Management