



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

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

February 2, 2007

RE: Former Gorham Manufacturing Facility – Park Parcel, 333 Adelaide Ave., Providence, RI
Former Slag Pile Area Supplemental Removal Action Work Plan - Comments
Case No. 2005-059 (Associated with Case No. 97-030)

Dear Mr. Simpson:

On February 24, 2004, 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. In the matter of the above referenced property (the **Site**), the Department's Office of Waste Management (OWM) has received the following documents, submitted on behalf of Textron, Inc. (Textron):

- 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) (the “Work Plan”), prepared by MACTEC Engineering and Consulting, Inc. (MACTEC), dated May 24, 2006, received via e-mail on May 25, 2006;
- Supplemental Site Investigation Report, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island (SSIR), prepared by MACTEC, dated July 2006, received August 9, 2006;
- Slag Removal Action Summary Report, Former Gorham Manufacturing Site, 333 Adelaide Avenue, Providence, Rhode Island, prepared by MACTEC, dated September 2006, received October 3, 2006;
- Letter from Textron to the Department, Re: Response to RIDEM Slag Pile Removal Comments, Former Gorham Manufacturing Facility, Providence, RI, dated October 3, 2006;
- 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, dated October 26, 2006;

- 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;
- E-mail from Textron to the Department, Subject: Response to RIDEM November 6, 2006 Letter, dated November 7, 2006; and
- 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) (the “Supplemental RAWP”), prepared by MACTEC, dated January 16, 2007.

Based upon review of the referenced documents in accordance with Sections 7.00 (Site Investigation), 8.00 (Risk Management), and 9.00 (Remedial Action Work Plan) of the Remediation Regulations, and in consideration of discussions with representatives of Textron, MACTEC and the US Environmental Protection Agency (EPA), Department personnel have the following comments, clarifications, concerns, requests and requirements specific to the Supplemental RAWP:

- 1) As the record of correspondence concerning the remediation of the slag-pile area clearly indicates, there have been a number of disagreements between Textron and the Department, which have significantly stalled this portion of the project. Items in dispute include a) the extent to which slag-pile related contamination should be removed; b) what the remedial objective compliance standard should be; c) how compliance should be measured and demonstrated; d) what the appropriate sampling method and protocol should be; and e) whether the remaining lead poses a significant threat to leach into Mashapaug Cove surface water and sediments in the future. The Superior Court Consent Order for the “Park Parcel” requiring the excavation of the slag-pile was issued on March 29, 2006. While the Department would prefer to resolve these outstanding issues without resorting to further Superior Court action, the Department will be forced to take that action if Textron again fails to submit a remedial action work plan that satisfactorily addresses all of these concerns and results in a prompt and complete remediation of the remainder of the slag-pile.
- 2) As Textron is aware, the Toxicity Characteristic Leaching Procedure (TCLP) analysis was performed on three samples from the slag-pile prior to the start of excavation activities, and all three samples exceeded the EPA’s leachable lead toxicity standards for characteristically hazardous waste. The Department requested that the TCLP analysis be included in the compliance sampling for the slag-pile excavation. Textron declined, despite the detection of significant lead contamination in the sediments of Mashapaug Cove at the foot of the slag-pile, citing as its reason the levels of lead detected in groundwater collected and analyzed from monitoring well GZA-5 (formerly located within the slag-pile area). Textron indicated in its letter dated October 3, 2006, that it believes that *“Groundwater analytical results from this well dating back to 1998 did not exhibit any elevated lead concentrations that would indicate the slag material was a source of leaching contaminants into the environment.”* Textron has

consistently presented the groundwater data from this single well as its justification for its absolute refusal to date to include the TCLP analysis in its soil compliance sampling for the slag-pile excavation. In an effort to move the stalled project forward in a manner that was fair to Textron, but still assured an environmentally sound and protective remedy, the Department proposed the use of the Synthetic Precipitation Leaching Procedure (SPLP), which is recognized as representing a somewhat more realistic means to measure the potential for a contaminant to leach. In its recently submitted Supplemental RAWP, Textron agrees to perform the SPLP analysis, but proposes to include only four (4) of the 19 locations which exceed the Department's Industrial/Commercial Direct Exposure Criteria (I/CDEC) for lead. It remains the Department's position that the leaching potential of the remaining material at the limits of the excavation must be measured by either the TCLP or SPLP method for the following reasons:

- a) Based upon recent conversations with EPA, it is important to characterize the leaching potential of soils at the horizontal and vertical limits of the slag-pile excavation because any remaining soil which exceeds the toxicity characteristic for lead (or any other constituent) would need to be managed as a hazardous waste should it ever be disturbed or moved in the future. Therefore the proper characterization of the remaining soil is a necessary step in the preparation of a Soil Management Plan (SMP) for the Site; and
 - b) Textron has not conclusively demonstrated to the Department's satisfaction that the lead contaminated slag has not historically leached to the surface water and sediments of Mashapaug Cove, and that the remaining lead contaminated soil at the current limits of the excavation will not contribute to future surface water and sediment contamination. Therefore accurate measurement of the leaching potential of the remaining soil is necessary to properly evaluate and design an appropriate long-term monitoring plan.
- 3) In an effort to fairly evaluate Textron's persistent assertions that the slag-pile material was not actively leaching lead, the Department reexamined the SSIR surface water data. Following a more extensive Quality Assurance/Quality Control (QA/QC) review of the submitted surface water data, it became apparent that the laboratory Method Reporting Limits (MRLs) for many of the constituents of concern exceeded their respective Ambient Water Quality Criteria (AWQC), as listed in Appendix B of the Department's Water Quality Regulations. In some cases the MRL was as high as four orders of magnitude greater than the corresponding AWQC. Clearly a hazardous substance cannot be demonstrated to be compliant with its respective regulatory criteria, if the minimum concentration that can be reliably detected is orders of magnitude above the maximum allowable concentration. Therefore, the rationale for excluding these constituents from consideration in the Human Health Risk Assessment (HHRA), the Screening Level Ecological Risk Assessment (SLERA), as well as further evaluation for compliance with the Water Quality Regulations is flawed. In addition, since lead and copper (primary constituents of the slag) were among the inorganic constituents with a calculated AWQC lower than their respective surface water MRLs, the provided data does not support the argument that the slag has not leached and that remaining material will not leach at concentrations exceeding applicable regulatory criteria. A non-exhaustive review of the laboratory data sheets indicated that the MRLs of the following constituents exceeded one or more of their respective AWQC: dissolved metals - arsenic, cadmium, chromium VI, copper,

lead, mercury, and silver; total metals - beryllium, selenium, and thallium; polynuclear aromatic hydrocarbons (PAHs) - benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene; organochlorine pesticides - 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, aldrin, alpha-BHC, chlordane, dieldrin, endrin, heptachlor, heptachlor epoxide, and toxaphene; volatile organic compounds (VOCs) - vinyl chloride. A complete review of the laboratory data sheets should be conducted to determine if there are other high MRLs not noted above.

- 4) Please be reminded that in order to generate useful data of sufficient quality, all samples submitted to the laboratory for analysis (whether for investigation or remedial compliance purposes), must utilize detection limits that are below the Department's applicable criteria for all substances analyzed. In situations where the laboratory detection or reporting limits are greater than the Department's applicable criteria, and no detections are reported, the reported detection limit shall be construed to represent the detected contaminant concentration for compliance comparison and risk assessment purposes, until such time as new analytical data, utilizing the correct detection or reporting limits, is presented.
- 5) Regarding the section entitled "Site Preparation Activities" sub-section "Temporary Access Road Grading and Loading Pad" on page 3 of the Supplemental RAWP:
 - a) This section indicates "*Site soil and/or existing stone fill will be used to construct a new loading pad for excavation equipment and trucks transporting the soil off site for disposal.*" Textron must completely document the source (i.e. original location) of any "*Site soil*" moved at the site for any purpose including construction of a new loading pad.
 - b) Documentation must include aerial extent of "*site soil*" and depth of material applied.
 - c) Please be advised that Department approval of the road or loading pad is temporary and is not intended to approve the permanent installation of these structures. In addition, the area where the road and pad are proposed may be subject to future investigation and remedial actions requiring the removal of the road or pad.
- 6) Regarding the section entitled "Excavation and Test Pitting Activities" on page 3 of the Supplemental RAWP:
 - a) The Department concurs with the additional excavation activities proposed for the two remaining lead contaminated hot spot locations (SS-SI41B1 and SS-SI51S100), however it does not concur with conditionally limiting SPLP compliance sampling based upon the results of total lead analysis. Compliance sampling at the horizontal and vertical limits of the excavation and analysis for both total and SPLP lead must be conducted.
 - b) Test pits must be excavated in all of the remaining locations where exceedances of the I/CDEC for lead have been reported in compliance samples.
 - c) The Department appreciates and accepts Textron's invitation to have a Department staff representative on-site to observe the test pitting activities.

- 7) Regarding the section entitled "Confirmation Soil Sampling" on page 4 of the Supplemental RAWP:
- a) Each confirmatory sampling location should be submitted for both total and SPLP lead analysis.
 - b) Appropriate sampling protocols must be implemented to insure that the samples are collected from the bottom or side of the actual excavation, and not from an area that was prematurely backfilled. Documentation of the proposed sampling protocols must be submitted to the Department prior to the initiation of fieldwork.
- 8) Regarding the section entitled "Site Restoration" on page 5 of the Supplemental RAWP:
- a) Since the leaching potential of the residual contamination at the limits of the slag-pile excavation has not been completely characterized, and because the aerial extent of the slag-pile has been revealed to be much greater than originally represented in earlier environmental assessment reports, the Department will require the installation and long-term monitoring of several downgradient groundwater monitoring wells in addition to the proposed reinstallation of GZA-5.
 - b) The exact number and location of these additional monitoring wells will likely be determined during the Park Parcel Remedial Action Work Plan (Park Parcel RAWP) portion of the project.

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797 x7109 or by e-mail at joseph.martella@dem.ri.gov.

Sincerely,



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