



**REMEDIAL APPROVAL LETTER
RIDEM CASE No. 2009-018**

October 7, 2010

Mr. Robert F. McMahon, Superintendent
Providence Parks Department
Dalrymple Boathouse
Roger Williams Park
Providence, RI 02905

RE: Lincoln Lace & Braid – Mill Site
55-61 Ponagansett Street
Plat 113 / Lots 305 and 429
Providence, Rhode Island

Dear Mr. McMahon:

On February 24, 2004, the Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (OWM) 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 Approval Letter** 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 (i.e., groundwater pump and treat systems, soil vapor extraction systems, etc...).

In the matter of the above referenced Site, the Department has on file the following documents submitted:

- Correspondence entitled **Lab Project # C1203, Client Project # NA**, received by the Department on November 21, 1996, prepared and submitted by Mitkem Corporation (Mitkem);
- Correspondence entitled **Gas Chromatography – Mass Spectrometry Analysis of Extractable Organics in Soils and Sediments – Lace Textile**, received by the Department on December 4, 1996, prepared and submitted by the United States Environmental Protection Agency (USEPA);
- **Results of Subsurface Site Investigation**, received by the Department on December 23, 1996, prepared and submitted by Fuss & O'Neill, Inc. (F&O);
- Correspondence entitled **Client Project #: Lincoln Lace, Lab Project #: E0020**, received by the Department on January 27, 1998, prepared and submitted by Mitkem;

- Correspondence entitled **Work Plan**, received by the Department on October 27, 1998, prepared and submitted by Cyn Environmental Services (Cyn);
- **Short-Term Response Report (Response Report)**, dated February 10, 1999, prepared and submitted by Cyn;
- Laboratory Analytical Data Reports, dated May 27, 1999, prepared and submitted by ESS Laboratory;
- Laboratory Analytical Data Reports, dated June 2, 1999, prepared and submitted by ESS Laboratory;
- Laboratory Analytical Data Reports, dated July 17, 1999, prepared and submitted by ESS Laboratory;
- Correspondence entitled **Former Landfill / Dump Location and Extent**, received by the Department on October 2, 1999, prepared and submitted by F&O;
- **Remedial Evaluation Report**, dated December 1999, prepared by the Department's Office of Waste Management;
- Correspondence entitled **Testing Documentation**, dated December 1999, prepared and submitted by the Trust for Public Land;
- Laboratory Analytical Data Reports, received by the Department on February 24, 2000, submitted by F&O;
- **Pre-Design Investigation Report**, dated August 2000, prepared by the Department's Office of Waste Management;
- Correspondence entitled **Proposal for Limited Subsurface Investigation**, received by the Department on January 11, 2002, prepared and submitted by F&O;
- Correspondence entitled **Proposal for Remedial Assessment**, received by the Department on January 8, 2003, prepared and submitted by F&O;
- **Remedial Evaluation Report Addendum**, received by the Department on February 11, 2003, prepared and submitted by F&O;
- **Remedial Evaluation Report Addendum**, received by the Department on March 17, 2003, prepared and submitted by F&O;
- **Remedial Evaluation Report Addendum**, dated April 2003, prepared by the Department's Office of Waste Management;
- **Public Notice Letters**, notifying abutters of investigation work, received by the Department on

October 10, 2003, prepared and submitted by the Department of Planning and Development for the City of Providence;

- Correspondence entitled **Site Security – Former Lincoln Lace and Braid Property, Providence**, received by the Department on August 10, 2004, prepared and submitted by the Department of Public Parks for the City of Providence;
- Correspondence entitled **Remedial Alternatives Analysis**, received by the Department on May 11, 2009, prepared and submitted by EA Engineering, Science, and Technology, Inc. (EA);
- Correspondence entitled **Revised Remedial Alternatives Analysis**, received by the Department on July 8, 2009, prepared and submitted by EA;
- **\$1,000.00 Remedial Action Approval Application Fee**, received by the Department on July 14, 2009;
- **Historical Site Characterization Site Plan**, received by the Department on July 23, 2009, prepared and submitted by EA;
- **Lincoln Lace and Braid Supplemental Sampling and Analysis Plan**, received by the Department on July 30, 2009, prepared and submitted by EA;
- **Sampling and Analysis Plan and Site-Specific Quality Assurance Project Plan for Supplemental Sediment and Surface Water Sampling**, received by the Department on August 21, 2009, prepared and submitted by EA;
- **Sluiceway Sampling and Analysis Plan**, received by the Department on August 25, 2009, prepared and submitted by EA;
- **Supplemental Sampling Analytical Results**, received by the Department on December 1, 2009, prepared and submitted by EA;
- **Revised Remedial Alternative No. 3**, received by the Department on December 1, 2009, prepared and submitted by EA;
- Correspondence entitled **Lincoln Lace and Braid Response to Comments**, received by the Department on February 1, 2010, prepared and submitted electronically by EA;
- Correspondence entitled **Lincoln Lace and Braid Public Involvement**, received by the Department on February 11, 2010, prepared and submitted electronically by EA;
- Correspondence entitled **Lincoln Lace and Braid Floodplain Revision**, received by the Department on March 23, 2010, prepared and submitted electronically by EA;
- Correspondence entitled **Comments on Lincoln Lace & Braid clean up**, received by the Department on April 16, 2010, prepared and submitted electronically by Rhode Island Legal Services, Inc.;

- Correspondence entitled **Lincoln Lace and Braid Public Involvement Letter**, received by the Department on April 23, 2010, prepared and submitted electronically by EA;
- Correspondence entitled **Lincoln Lace and Braid Dioxin Sampling Summary**, received by the Department on May 20, 2010, prepared and submitted electronically by EA;
- Correspondence entitled **Lincoln Lace and Braid Public Comments**, received by the Department on May 24, 2010, prepared and submitted electronically by EA;
- Correspondence entitled **RE: Lincoln Lace and Braid Public Comments**, received by the Department on June 4, 2010, prepared and submitted electronically by EA;
- **RIPDES Remediation General Permit Application**, received by the Department on June 9, 2010, prepared and submitted by EA;
- **Stormwater Pollution Prevention Plan**, received by the Department on June 9, 2010, prepared and submitted by EA;
- **Remedial Action Work Plan**, received by the Department on June 9, 2010, prepared and submitted by EA;
- Correspondence entitled **RE: Lincoln Lace and Braid Public Comments**, received by the Department on June 11, 2010, prepared and submitted electronically by EA; and
- **Remedial Action Work Plan (RAWP) – Lincoln Lace & Braid Mill Site with responses to Department comments**, received by the Department on September 10, 2010, prepared and submitted by EA.

The preferred remedial alternative involves restricting the future use of the property by capping the entire property with a Department approved cap to act as engineered controls for eliminating direct exposure to the public. This cap will consist of seven separate capping scenarios:

- **Cover System 1 – One (1) foot of clean fill over a geotextile liner following the removal of sixteen (16) inches of soil for floodplain compensation.**
- **Cover System 2 – One (1) foot of clean fill over a geotextile liner following the placement of the soils removed from cover system 1 for floodplain compensation.**
- **Cover System 3 – One (1) foot of clean fill over a geotextile liner.**
- **Cover System 4 – One (1) foot of gravel over a geotextile liner in the area of the future bike path followed by placement of erosion control matting.**
- **Cover System 5 – Six (6) inches of one and a half (1.5) inch minus crushed stone overlain a geotextile liner and a geogrid in the contaminated area of the sluiceway.**
- **Cover System 6 – Six (6) inches of clean fill over construction fencing to ensure slope stability and to allow the existing trees to thrive.**
- **Cover System 7 – Six (6) inches of one and a half (1.5) inch minus crushed stone overlain construction fencing installed around trees to be preserved to allow the existing trees to thrive. This capping will extend out in a thirty (30) foot diameter from the tree or the area**

under the tree canopy, whichever is smaller.

In addition, the proposed remedy also calls for the maintenance and monitoring of the engineered controls through the recording of an institutional control in the form of a Department approved Environmental Land Usage Restriction (ELUR) and Soil Management Plan (SMP). The ELUR will require maintenance of all engineered controls and will act to further limit direct exposure to contaminated areas. As part of the ELUR, it is the responsibility of the property owners 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 terms of the ELUR.

Based upon review and consideration of the above referenced documents, the Department approves the RAWP through this **Remedial Approval Letter (RAL)** provided that:

1. All work must be performed in accordance with all applicable regulations and the Department approved RAWP.
2. All excess excavated regulated soil, if any, shall be capped onsite in accordance with Cover System 2 or disposed of off-site at an appropriately licensed disposal facility in accordance with all local, State, and Federal laws. Copies of the material shipping records and / or manifests associated with the disposal of the material shall be included along with a Closure Report and also maintained by the site owner and included in the annual inspection report for the site.
3. Areas of the property where contaminated soils are to be excavated must be staged and temporarily stored in a designated area of the property with proper polyethylene covers, which shall be used under the stockpile and also covering the stockpile. Within reason, the storage location will be selected to limit the unauthorized access to the materials (i.e., away from public roadways/walkways). No regulated soil will be stockpiled on-site for greater than 60 days. In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (i.e. drum or lined roll-off) or secondary containment will be required and utilized.
4. The Department no longer requires the submittal of analytical data prior to clean fill being brought to a Site. It is the sole responsibility of the Performing Party and their consultant to analyze the material, certify that the material meets the Department's Residential Direct Exposure Criteria (RDEC), as defined by the Remediation Regulations, for all constituents, and is suitable for use on the Site. The Department strongly suggests that enough representative samples of the clean fill are collected prior to moving the material to the Site to satisfy the Performing Party and their consultant that the material meets the RDEC. Please note that the Department reserves its rights to sample the clean fill, if suspect, to confirm compliance with the RDEC.
5. All regulated soil remaining on-site shall be encapsulated by an engineered control consistent with those described in the Department approved RAWP and this RAL.
6. Dust suppression techniques (i.e. watering, etc.) must be employed at all times during all soil disturbing/handling activities at the Site in order to minimize the generation of fugitive dust and any stockpiled materials, including clean fill, must be underlain and covered with polyethylene sheeting and be secured at the end of each day with all appropriate erosion and sediment controls to limit the

loss of the cover and protect against storm-water and / or wind erosion (i.e. hay bales, rocks, etc). These appropriate sedimentation and erosion controls must be in place and in proper working order at all times until all disturbed and capped areas are stabilized and re-vegetated as proposed. Extra measures (i.e. dust screens, etc...) shall be taken at the property boundaries for all residential abutting properties to minimize the amount of exposed soil and airborne dust that may be migrating offsite.

7. All work on the subject property must take place in accordance with the aforementioned site plans received on September 10, 2010, entitled "Lincoln Lace and Braid Remediation Project, Providence, Rhode Island, Prepared For The City Of Providence Parks Departments," sheets one through seven of seven, bearing a revision date of August 25, 2010.
8. Establishment of new vegetation on the subject property must be in strict accordance with sheet seven of seven of the above referenced site plans.
9. In accordance with the aforementioned site plans accompanying the RAWP, all trees with a diameter of twelve (12) inches or greater that exist on the subject property within the two-hundred (200) foot riverbank wetland of the Woonasquatucket River must be preserved during and after the capping procedure. This also includes all trees on the subject property in the riverbank wetland that are not depicted on the aforementioned site plans. Prior to the proposed remediation activities, diligent measures must be taken to protect all trees greater than or equal to twelve (12) inches diameter by installation of tree armor where appropriate.
10. Within sixty (60) days of completion of the work described in the Department approved RAWP, a Closure Report detailing the Remedial Action and the results of any applicable sampling shall be submitted to the OWM.
11. Within sixty (60) days of completion of the work described in the Department approved RAWP revisions, the final Department approved ELUR shall be recorded in the City of Providence Land Evidence Records (pending approval by the Department) for the property and a stamped, certified copy returned to the Department within fifteen (15) days of recording. Upon the receipt of a copy of the recorded (stamped) ELUR, the Department will issue an Interim Letter of Compliance. Upon completion of the final bike path construction, along with the construction of the post and beam fencing and the planting of "deterrent, thorny" species, the Department will issue a Letter of Compliance.
12. Following recording of the ELUR, the site shall be maintained and annually inspected to evaluate the compliance status of the site with the ELUR. Within thirty (30) days of each annual inspection, an evaluation report shall be prepared and submitted to the Department detailing the findings of the inspection and noting any compliance violations at the site.
13. Any changes in the activities detailed in the RAWP revisions shall be reported to the Department by telephone within one (1) working day and in writing within five (5) working days.
14. The OWM shall be notified 48 hours prior to initiating the remedial activities at the site associated with the Department approved RAWP revisions.

15. The OWM shall be immediately notified of any site or operation condition that results in non-compliance with this RAL.

Please note that at this time the Department does not approve the ELUR for recording in the Land Evidence Records with the City of Providence. The draft ELUR and SMP shall be reviewed and approved by the Department under separate cover, followed by recording at the completion of all remedial work.

This **Remedial Approval Letter** does not remove your obligation to obtain any necessary permits from other local, State, and/or Federal agencies, including but not limited to the Army Corp. of Engineers.

Please contact me by telephone at 401-222-2797, extension 7147, or by E-mail me at tim.fleury@dem.ri.gov if you have any questions.

Sincerely,



Timothy M. Fleury
Senior Engineer
Office of Waste Management

Authorized by,



Kelly J. Owens
Assoc. Supervising Engineer
Office of Waste Management

Cc: Jeffrey P. Crawford, Office of Waste Management
Elizabeth Stone, Office of the Director
Ronald Gagnon, Office of Customer and Technical Assistance
Martin Wencek, Office of Water Resources – Wetlands
Aaron Mello, Office of Water Resources – RIPDES
Alan Peterson, U.S. Environmental Protection Agency
Steven Fischbach, R.I. Legal Services, Inc.
Gilberta Taylor, Hartford Park Residents Association
Lisa Aurecchia, Woonasquatucket River Watershed Council
Frank Postma, EA Engineering, Science, and Technology, Inc.
Ronald Mack, EA Engineering, Science, and Technology, Inc.