



RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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TDD 401-222-4462

Ms. Amy Legare
National Remedy Review Board Chair
US Environmental Protection Agency
1200 Pennsylvania Avenue, NW, MC5204P
Washington, DC 20460

August 2, 2010

RE: Rhode Island Department of Environmental Management comments to the National Remedy Review Board regarding the Centredale Manor Restoration Project Superfund Site

Dear Ms. Legare:

The Rhode Island Department of Environmental Management (the Department) appreciates the opportunity to provide comments to the United State Environmental Protection Agency (the Agency) National Remedy Review Board (the Board) regarding the Centredale Manor Restoration Project Superfund Site (the Site; CMRP). The Department has been involved in this Site with the Agency from its discovery to this critical juncture in the project. Based upon this involvement and the results of actions to date, we would like to emphasize our position on the following aspects of the potential remedies for the Site:

1) Interim Caps 1 and 2

Since the later 1990s, there have been several removal actions, both time critical and non-time critical. The first of these removal actions were the construction of interim caps within the source area to mitigate the migration of potentially impacted soils to the Woonasquatucket River, Allendale and Lyman Mill Ponds. These caps were constructed as part of a time critical removal action in 2000, generally comprised of two feet of clean fill, then a geotextile material, followed by at least eight inches of clean fill and four inches of top soil over these areas. They are currently fenced off, and not for use by residents of the Centredale Manor and Brook Village housing units. During the design of these caps, they were intended for a five-year life cycle.

While the caps have persisted in adequate condition over the past ten years, they have now gone well past their original design life. As part of the various removal actions, these caps have been used as staging areas for equipment and in recent years, the maintenance of these caps has been inconsistent, resulting in the establishment of woody vegetation. These caps were not designed to withstand these types of activities or growth, and may have been affected to a greater extent than can be seen at the surface. Moving forward, the integrity and permanency of these caps is paramount to the protectiveness of this remedy.



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As a result, the Department strongly suggests upgrading these caps to meet RCRA Subtitle C or equivalent requirements, and ensure a proper and consistent operation and maintenance program for the Site.

2) Tailrace Cap (Cap 3)

In 2003, another removal action was performed to address the contaminated sediment in the source area, in an area known as the tailrace. The tailrace was heavily vegetated and served as a drainage area which ultimately leads to Allendale Pond. To mitigate the mobilization of contaminated sediment from the tailrace to Allendale Pond, and subsequently downstream, the Performing Parties agreed to address this area with a time critical removal action.

Ultimately the action consisted of a small area in which contaminated sediment was encased and covered with a geotextile fabric and two feet of clean material (twenty inches of gravel and four inches of topsoil) at the top of the containment area. For the slopes of the containment area, and within the shallow channel created to allow drainage from the storm drain on Smith Street and runoff from the housing complex, the cap was comprised of six inches of sand, a geotextile, and six inches of gravel stabilized by a polyethylene cellular confinement system. A sediment trap was also installed at the outfall of a storm drain which services a portion of Smith Street.

Sedimentation of this trap and the tailrace was discussed and debated at length during the design and construction of the tailrace cap. If sedimentation of the cap system was not curtailed with regular maintenance, sediment would eventually both provide an opportunity for unwanted vegetation to establish in the drainage channel and also significantly hinder drainage towards Allendale Pond. As part of the removal action, the Performing Parties entered into a maintenance agreement with Rhode Island Department of Transportation (RIDOT) to clean the sediment trap semi-annually. This agreement was not regularly enforced and as a result of insufficient maintenance and a major flooding event in October of 2005, the tailrace cap has experienced considerable sedimentation and the establishment of substantial vegetation within the drainage channel and on the cap of the containment area. The design of the cap was meant to promote drainage while preventing ponding and vegetation from establishing and potentially affecting the cap or cellular confinement system. The Department is very concerned with the long term operation and maintenance of this area and feels that continued indifference towards the maintenance of this area could result in failure of the cap system and release of contaminated sediment to the Woonasquatucket River.

Given these conditions, the Department feels that the cap should be re-evaluated with the long term protectiveness in mind. While, currently, there is no known exposed contaminated soil, there is a great degree of ponding and vegetative growth. If one or more of the trees growing in the cap or channel were to be uprooted, there would certainly be an exposure of contaminated sediment. We recommend steps be taken to ensure that this cap is functioning properly now and into the future.

3) Institutional Controls and Long-Term Stewardship

Institutional Controls (ICs) have become a vital component of remedial actions at sites large and small, Superfund, and State-lead, all across the country. They are meant to provide a means to manage activities and uses for sites where contamination remains during or after a remedial action. The long term protectiveness of ICs, however, can sometimes be called into question, neglected, or become difficult to enforce for a multitude of reasons, including extreme weather events, wear and tear over time, property transfers and bankruptcy.

At CMRP, many proposed remedies include enclosure of contaminated material within a containment area or placing a cap over existing contaminated material. These actions will require ICs and long-term stewardship in perpetuity to insure the effectiveness and permanence of the remedy. Much of the Site is uncontrolled and easily accessed by recreational users and trespassers alike, and monitoring such an extensive area is difficult at best, impossible at worst. Containment areas could potentially be impacted without regulators knowledge, exposing the public and the environment.

To this end, if ICs are part of the remedy at the Site, the Department is a firm proponent of establishing a trust or some other centralized mechanism for stronger assurance that ICs will be monitored and enforced throughout the life of the Site. For State-lead site ICs, the Department requires annual inspections by representatives of the site owners and the Department audits of a number of these ICs annually. We have found that without such a system in place, long term effectiveness of ICs becomes problematic.

The Department has also worked with the Agency to address long term IC management at the Peterson-Puritan Superfund Site, Operable Unit 1 in Cumberland, RI. The Potentially Responsible Parties (PRPs) have taken a specific approach to aid in placing ICs on the appropriate properties affected by the remedy. In addition to addressing the complex real estate title work challenges that ICs present, the group which the PRP has enlisted conducts semi-annual inspections of properties and interviews with owners/operators of the properties and local governmental officials, issuing an annual report on their findings and recommendations to ensure the integrity of the land use controls and improve compliance. When properties are transferred, the trust works to ensure that the new owner/operator is aware of and acknowledges their responsibility to safeguard the existing land use controls. The Department strongly advocates that a similar mechanism be created at CMRP for inspecting and maintaining the integrity of permanent on-site remedies and institutional controls.

4) Dioxin Reassessment

It is the Department's understanding that the dioxin reassessment study, of which there was a draft report generated in December 2003, will be finalized and released shortly. This study may significantly impact the remedy in that risk assessments, and therefore remediation goals, may not be consistent with any change in the toxicity or understanding of fate and transport of dioxin. This drastically increases the uncertainty in choosing a remedy, considering that there may be a need to change the remedy once the reassessment is issued. The increased uncertainty, places a

greater importance on the remedial design, and may severely increase the costs associated with that phase of the project.

The Department would appreciate any insight into how the Board suggests the Agency and the Department should proceed if the dioxin reassessment study triggers a radical change in a proposed remedy at the Site prior to issuance of a Record of Decision (ROD).

5) Freshwater Wetlands and Floodplains

The Department is very concerned about the potential impacts on floodplain and the displacement of floodwaters from any filling, capping or encapsulation of contaminated materials. We encourage remedial options that minimize flooding impacts and do not exacerbate existing flooding conditions along the river. This particular stretch of river experienced heavy flooding and property damage during this year's flood events. Moreover, recent statistical analysis of precipitation data by Cornell University indicates that rainfall intensities and depths have increased dramatically in our region in the last decade or so. As a result, the Department is revising its stormwater control design standards for 100-year storm events from the current 7.0 inches of rainfall to 9.3 inches of rainfall (24-hour Type III event). Impacts related to flooding along this stretch of river caused by this increase have not been evaluated or mapped to our knowledge. In consideration of not only the Department's Freshwater Wetland Regulations, but the various Executive Orders on the topic of working within wetland/floodplain areas, the Department supports minimizing impacts in the river system that would exacerbate the current flooding scenario. To this end, any proposed encapsulation of contaminated soils should be done outside of wetland areas and floodplain. This would prevent re-exposure that may occur from future flood flows as well as avoid displacement of floodwaters. If possible, we would prefer that encapsulation should be limited, to the extent possible, to areas that are currently upland in nature and/or denuded of vegetation.

The Department also strongly encourages remedial alternatives that minimize the permanent loss of vegetated freshwater wetlands, particularly the area adjacent to and northerly of Lyman Mill Pond, referred to as "the Oxbow Area". Wetland resources are scarce in this relatively dense urban area, and limiting wetland losses is critical to maintaining valuable wildlife habitat and other functions and values provided by the wetlands associated with the river corridor. This area is the largest forested wetland remaining in the lower Woonasquatucket River Watershed, and should be protected to the greatest extent practicable. Specifically, the Department's Office of Water Resources has significant concerns regarding the placement of three inches of fill material in the effort to enhance natural recovery of the area. This material has the potential to affect the current habitats and adversely impact the flora that have established in this area.

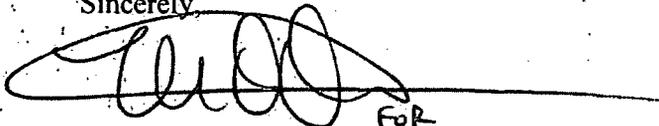
In the unfortunate circumstance they are deemed necessary with no other alternative, any caps located within wetland areas should be designed to allow re-vegetation and subsequent restoration of habitat. This will minimize long-term impacts to the habitat values associated with the wetlands, as well as those associated with water quality functions and recreational resources associated with the subject wetlands.

Finally, the Department would have concerns with the removal of either the Allendale Dam or the Lyman Mill Dam, due to significant impacts aquatic habitat, loss of a valuable recreational resource in this urban setting, and the effects on residential properties along both Allendale and Lyman Mill Ponds. These residents constitute a sizeable stakeholder group to be engaged as part of the community acceptance feasibility criteria.

In closing, we would like to note that the Agency staff in Region 1 should be commended for their efforts in addressing the myriad of difficult issues at this Site. Over the life of this project, the Agency and the Department have had, and continue to maintain, a strong partnership with the Department, while engaging stakeholders throughout the process and being mindful of concerns from all interested parties. Although there may not be a resolution all parties involved may consider favorable to all the issues we face at the Site, we believe the Agency's project team has done an excellent job in balancing the technical aspects of remedy selection with the significant input from the many stakeholders with many different viewpoints and concerns.

The Department sincerely thanks the Board and EPA Region 1 for taking these comments into consideration in the development of the Final Proposed Plan and Record of Decision. We look forward to working cooperatively with you towards our mutual goal of remediating this Site.

Sincerely,

A handwritten signature in black ink, appearing to read 'Leo Hellested', with a long horizontal line extending to the right. The signature is written over the word 'Sincerely,'.

Leo Hellested, Chief
Office of Waste Management
Rhode Island Department of Environmental Management

cc: T. Gray, RIDEM OWM
R. Chateaufneuf, RIDEM OWR
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United States Department of the Interior



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July 26, 2010

Anna Krasko
Remedial Project Manager
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Boston, MA 02109-3912

Dear Ms. Krasko:

Thank you for the opportunity to review the Interim Final Feasibility Study, Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island, as prepared by Battelle Memorial Institute, April 2010, and provide comments to USEPA Region 1 as part of the EPA National Remedy Review Board process.

The Feasibility Study (FS) represents a substantial amount of data collection and synthesis. It presents a variety of options for remediation of contamination in section-specific areas of the site associated with historic releases of dioxins, polychlorinated biphenyls (PCBs) and other contaminants of concern (COC). The following are brief comments on our preferred remedial options for section-specific areas of the site:

Preferred Remedial Option for the Source Area: Alternative 4E: Conduct focused surface soil removal based on conservative dioxin and PCB clean-up goals and upgrade the current soil cap to a standard RCRA cap. This will provide the highest level of human health and ecological protection from contaminated surface soils and minimize potential groundwater and surface water risks to the adjacent Woonasquatucket River. However, we would prefer that Cap Area 1, as depicted in Figure 5-29, be minimized to the greatest extent possible in order to avoid filling of floodplain wetlands. Mitigation for permanent loss of wetland habitat should be conducted following U.S. Army Corps of Engineers (ACOE) guidelines. Off-site disposal of contaminated soils is preferred rather than impacting additional floodplain habitat for the incorporation of a Confined Disposal Facility (CDF).

Preferred Remedial Option for Allendale and Lyman Mill Impoundments: Alternative 7A: Conduct full excavation of sediments based on conservative clean-up goals for dioxin and PCBs. Full excavation will remove the bulk of contaminated sediments and provide the highest level of human health and ecological protection from the elevated levels of dioxin and PCB contamination in the impoundments. Dewatering of the impoundments would be the most effective method for removal of contamination, attaining clean-up goals, and minimizing downstream transport of contamination. We recommend in-situ capping of sediments at depth if clean-up goals cannot be

attained after significant sediment removal has been conducted. Cap material should contain total organic carbon and sediment grain size similar to native sediments to promote recolonization of the benthic macroinvertebrate community and submerged aquatic vegetation. In areas where clean-up goals can be attained, we recommend minimal capping or placement of backfill material in order to increase average impoundment depth and enhance fish habitat.

Stabilization of shorelines and restoration of embankments should be done utilizing bioengineering materials to the greatest extent possible. We recommend avoiding the use of bank or bottom armoring except in erosion prone areas where bioengineering design will not meet ACOE stability specifications. Restoration of woody and herbaceous wetland or terrestrial vegetation and invasive species control should be detailed in a Restoration and Monitoring Plan. We recommend that restoration and monitoring standards parallel those used at the EPA Region 1 GE/Housatonic River Site, Pittsfield, Massachusetts.

Dam/impoundment removal and river restoration would be preferred over impoundment retention if all contamination could be removed from the impoundment basins and floodplain. Natural Resource Trustees (FWS, NOAA), state, and non-governmental organization efforts downstream to restore fish passage along the entire length of the Woonasquatucket River would be complemented by this approach.

Excavated sediments should be disposed of in an upland CDF and not be retained in nearshore CDFs. Nearshore CDFs will encroach on wetland or open water habitat and may be subject to long-term erosion or catastrophic events resulting in remedy failure. As depicted in Figure 5-6, Potential On-Site CDF Areas, we believe that the most preferred location for contaminated sediment disposal would be off of Burr Ave, which is currently an operating concrete plant. A 2009 site visit to this location, with EPA and state officials, documented that this site has high potential for accommodating excavated soils and sediments from the site. Use of this area would prevent potential impacts to quality or developing wildlife habitat that is uncommon in this area of the watershed and featured in the other potential upland CDF areas.

Benthic macro/microfauna and fish are expected to re-colonize the remediated impoundments over a period of several years from upstream and adjacent habitat contributions. These biotic assemblages should be monitored for abundance, diversity, and contaminant levels as the impoundments mature post-remedy.

Preferred Remedial Option for Allendale Floodplain Soils: Alternative 5A: Conduct full excavation of floodplain soils based on conservative clean-up goals for dioxin and PCBs. Dispose of contaminated soils in the same upland CDF used for impoundment sediments, as discussed above. Restore remediated floodplain areas to riparian forested/scrub-shrub habitat, especially immediately downstream of the Source Area. Retain excavation grades, if remedial goals are attained, to promote wetland-emergent vegetation establishment. Include restoration of riparian and terrestrial habitats in a Restoration and Monitoring Plan, as described above.

Preferred Remedial Option for Lyman Mill Stream Reach and Floodplain Soils: Conduct full excavation of all instream and herbaceous emergent marsh areas in excess of conservative dioxin and PCB clean-up goals. Dispose of contaminated sediments in the same upland CDF, as

described above. Restore instream and emergent habitat areas with innovative habitat features to promote biotic diversity and recolonization. Include these areas in a Restoration and Monitoring Plan, as described above.

Preferred Remedial Option for the Oxbow Area: Proposed remedies for the Oxbow Area involve substantial impacts to uncommon riparian habitat for this area of the watershed, as characterized by ACOE. Ecological risks modeled for migratory birds using the Oxbow Area show a relatively low risk from dioxin and PCBs based on lowest observed adverse effect levels. We are concerned that large areas of functional habitat may be impacted for minimal ecological risk reduction. Currently, there are two remedial alternatives, one that proposes targeted removal and enhanced natural recovery (Alternative 3), and a second that proposes partial removal and enhanced natural recovery (Alternative 5). Both alternatives impact the same basic footprint of the Oxbow Area, but Alternative 3 proposes to use a Thin Layer Cap (TLC) in greater portions of the Oxbow, while Alternative 5 uses more excavation in combination with TLC. We recommend that all areas in the Oxbow slated for removal or TLC be better delineated for dioxin and PCB concentrations, as part of a Pre-Design Study, so that remedial impacts can be minimized to the greatest extent possible. This is also pertinent for forested and scrub-shrub areas along Lyman Mill reservoir where remedial action is proposed. We recommend that proposed remedial actions be reconsidered for sensitive habitat areas where they will result in minimal ecological risk reduction. Furthermore, we are not confident that TLC in forested and scrub-shrub habitats can be effectively conducted without serious impacts to the habitat. TLC as proposed will minimally sequester surface soil contamination, has questionable stability during flood events, may degrade existing habitat function for an unknown period of time, and may require substantial habitat removal for application. We consider TLC to be of minimal benefit ecologically, and support targeted excavation of floodplain soils, based on significant ecological risk reduction, unless EPA can demonstrate significant ecological benefits in using TLC and a demonstrated track record of successfully using TLC in similar habitat conditions.

Expedient restoration of riparian habitat post-remedy will be very important in order to restore functions and values to the Oxbow and related areas in the Lyman Mill Reach as soon as possible. We recommend high organic soils for post-excavation replacement, generous stocking densities of well-developed, site-specific species for forested and scrub-shrub areas, along with aggressive invasive species control and monitoring efforts. These efforts should also be detailed in a Restoration and Monitoring Plan, as described above.

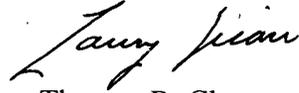
Wetlands that are impacted or lost due to remediation excavation, capping, filling, or disposal activities require mitigation that should be conducted according to ACOE guidance. TLC, if implemented, may lead to reduction of habitat quality which should be monitored over the long-term post-remedy, in conjunction with habitat restoration areas.

Anna Krasko
July 26, 2010

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We look forward to the recommendations of EPA's National Remedy Review Board and further discussions with EPA Region 1 regarding the remediation and restoration of the Centredale Manor site, the Woonasquatucket River, and its floodplain. For further comments or questions, please contact Kenneth Munney of this office at 603-223-2541, extension 19, or kenneth_munney@fws.gov.

Sincerely yours,



Thomas R. Chapman
Supervisor
New England Field Office



Centredale Manor Restoration Project
Superfund Site

Comments of Emhart Industries, Inc. to
Remedy Review Board Concerning EPA's
Remedy Selection Process

Submitted by Sullivan & Worcester, LLC
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Washington, D.C. 20006

July 19, 2010

I. INTRODUCTION

Emhart Industries, Inc. (“Emhart”) – currently the sole potentially responsible party (“PRP”) participating in the investigation and remediation of the Centredale Manor Restoration Project Superfund Site (“Site”) – respectfully submits these comments for consideration by the National Remedy Review Board (“Board”).¹ The comments include Emhart’s recommended remedial approach and rationale for its cleanup recommendations, and a discussion of legal and technical issues that are pertinent to the remedy selection process. Emhart’s recommended approach to remediating the impacted soils and sediments at the Site must be adequately considered in order for EPA to conduct a fair and balanced evaluation of all potential remedial alternatives.

As demonstrated below, EPA’s approach to evaluating the remedial alternatives has resulted in the Agency’s identification in the Interim Final Feasibility Study (“FS”) Report (Apr. 30, 2010) of legally impermissible and technically unsound remedies that are inferred to be EPA’s “preferred” remedies for each of the Site’s designated action areas. As further shown in Emhart’s comments, EPA’s alternatives evaluation process is in violation of CERCLA, and contravene the National Contingency Plan (“NCP”) and applicable Agency guidance. Further, EPA’s flawed and incomplete process has led to the Agency identifying “preferred” remedies for each designated action area that are neither cost-effective nor readily implementable.

Accordingly, Emhart requests that the Board fulfill its role by advising EPA to properly consider the alternatives for each of the designated action areas recommended by Emhart, as provided in the sections below. All of Emhart’s suggested remedial approaches meet the requirements of CERCLA, are more cost-effective and readily implementable than, and are at least as protective of human health and the environment as, the legally impermissible “preferred” remedies identified by EPA in the FS Report.

A. History of Cooperation

Since 2000, Emhart has worked with EPA in good faith in an effort to establish a sensible cleanup approach for the Site that is both cost-effective and fully protective of human health and the environment. To that end, between 2000 and 2006, Emhart and a limited number of other PRPs completed three removal actions at the Site, namely: (i) installed Cap No. 2 and implemented flood control measures in the source area; (ii) restored Allendale Dam, and sampled and excavated residential/recreational-use soils and sediments; and (iii) installed Cap No. 3 in the source area.

Since completing the third removal action in 2006, no other PRP except Emhart has cooperated with EPA to further the cleanup at the Site. In 2007 and 2008, Emhart performed a hydrodynamic analysis of remedial alternatives and a comparative ecological risk assessment to assist EPA’s evaluation of various

¹ Emhart previously has filed extensive comments for placement in the Administrative Record concerning the Interim Final Remedial Investigation (“RI”) Report (June 2005), Interim-Final Baseline Human Health Risk Assessment (“BHHRA”) Report (Aug. 2004; revised Nov. 2005), Interim-Final Baseline Ecological Risk Assessment (“BERA”) Report (Sept. 2004), Interim-Final Preliminary Remediation Goals (“PRG”) Report (Nov. 2005), Addendum to the Interim-Final Baseline Human Health Risk Assessment: Oxbow Area (Aug. 2006) (“Oxbow BHHRA”), Addendum to the Interim-Final Baseline Ecological Risk Assessment: Oxbow Area (Aug. 2006) (“Oxbow BERA”), as well as other comments regarding EPA’s conceptual site model for the Site, and aspects of the evaluation of remedial alternatives and the remedy selection process. *See, e.g.*, Emhart’s Comments on the BHHRA, BERA, RI, and PRG Reports (Oct. 19, 2006); Emhart’s Response to Exponent Memorandum Submitted by NECC Customer Group (July 20, 2007); Emhart’s Response to September 20, 2007 Exponent Memorandum Submitted by NECC Customer Group (Apr. 17, 2008).

remedial alternatives, incorporating a nearshore confined disposal facility (“CDF”), as part of the FS process. Moreover, in 2009 and 2010, Emhart performed a time-critical removal action (“TCRA”) in the groundwater action area, which involved excavation and off-site disposal of delineated soils and sediments and the installation of an impermeable cap. Further, in June 2010, Emhart entered into an agreement with EPA to perform a supplemental investigation of the Lyman Mill Reach Stream Sediment and Floodplain Soil (Oxbow) Area.

The purpose of the Oxbow area investigation is to collect additional data that are required by EPA to: 1) properly evaluate the remedial alternatives set forth in EPA’s FS Report; 2) analyze potential risks to human health and the environment; and 3) select the proposed remedial action for the Oxbow area of the Site.

B. Feasibility Study Process

The FS process customarily provides a balanced comparative analysis of alternatives to establish the lawful basis for a remedy-selection decision. However, in this case, EPA unevenly applies the factors in evaluating remedial alternatives resulting in an FS Report that presents a bias toward certain alternatives. Moreover, assumptions made by EPA have resulted in the Agency favoring alternatives that are at odds with this Board’s mandate to recommend cost-effective remedies consistent with the NCP.

The Board review process is intended to “help control remedy costs and promote consistent and cost-effective decisions at Superfund sites.” See Memorandum from S. Luftig re: National Remedy Review Board (Sept. 26, 1996) (“Board Procedures”), at 1. The Board is authorized to make “advisory recommendations,” and EPA regions are expected to give those recommendations “substantial weight.” *Id.* at 2. While the Board’s review is intended to occur early in the remedy selection process (*i.e.*, before a region releases the proposed plan for public comment), *id.* at 4, the procedure is predicated on meaningful PRP involvement. Indeed, the Board Procedures acknowledge the value that PRPs, like Emhart, who are actively involved in site investigations and response actions may provide to the Board’s review. See *id.* at 3-4.

However, as discussed below, Emhart’s significant contribution to the development of viable remedial alternatives was largely ignored by EPA in the FS Report. EPA’s unsupported and untenable conclusions, and uneven application of the requisite factors for analysis in the FS Report have undermined Emhart’s willingness to collaborate with EPA. Consequently, many of EPA’s conclusions must be rejected by the Board. Accordingly, the Board is requested to advise EPA to re-evaluate the remedial alternatives for each designated action area in light of the deficiencies and flaws outlined in Emhart’s comments.

II. **ASSUMPTION THAT ALL IMPACTED MEDIA CONTAIN AN F-LISTED WASTE**

The underlying assumption in the FS that all contaminated media at the Site contain an F-listed waste, generally F020, see FS, at 7-6, is totally unwarranted and has led to EPA’s misapplication of RCRA requirements (ARARs). Furthermore, the assumption is inconsistent with EPA guidance and with EPA’s treatment of contaminated environmental media at the Site during previous removal actions. Applying the F020 waste code to all impacted soil and sediment results in the incorrect use of RCRA ARARs, and the selection of more costly remedial alternatives for all areas of the Site.

It is incorrect to assume that all impacted media at the Site contain an F-listed waste. The presence of contamination in the media cannot be traced back to a release of waste from an original process meeting any listing description. See U.S. EPA, *Management of Remediation Waste Under RCRA* (Oct. 1998), at 5 (“Where a facility owner/operator makes a good faith effort to determine if a material is a listed

hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste”).

Emhart has submitted substantial evidence to EPA that the F020 waste code should not be applied to environmental media at the Site. *See, e.g.*, Letter from L. Ford to C. Garypie (Oct. 10, 2001); Letter from J. Muys to E. Vaudo (Dec. 9, 2002); Letter from J. Muys to E. Vaudo (May 2, 2003); Letter from J. Muys to E. Vaudo (May 9, 2008); Letter from J. Muys and J. Karp to E. Vaudo (Dec. 30, 2008); Letter from J. Muys to E. Vaudo (Mar. 11, 2009). Soil sample results reveal significant concentrations of dioxin, furan and PCB congeners unrelated to either a hexachlorophene (“HCP”) manufacturing operation or the hazardous constituents for which a F020 waste code would apply. Rather, the sampling results more closely resemble a contamination pattern associated with the barrel reconditioning operation that NECC conducted at the Site, which EPA has concluded was a source of dioxin, *see* FS, at 2-1.

EPA has arbitrarily and capriciously applied the F020 waste code over the course of the site remediation. For example, EPA’s contractor, Battelle, disposed of investigation-derived waste as a non-listed waste in implementing a U.S. EPA-approved sampling plan in the area of the former HCP manufacturing facility. *See Battelle, Final Work Plan, Groundwater, Semi-permeable Membrane Device (SPMD) and Sediment Collections* (Apr. 2005), at 5; 6. In addition, when the PRPs excavated soil from residential/recreational-use properties in the floodplain as part of a removal action, EPA approved the PRPs’ request to dispose of the excavated soil without an F020 waste code. *See* Email from E. Vaudo to J. Muys (Dec. 19, 2002). However, EPA required that materials associated with the restoration of Allendale Dam and materials removed from the area beneath and immediately proximate to the former HCP manufacturing building be characterized as F020 waste. Nonetheless, EPA is now, for the first time, taking the position that *all* impacted media must be characterized as containing an F-listed waste.

III. REMEDIAL ALTERNATIVES FOR THE POND SEDIMENTS

A. Emhart’s Recommended Approach

Emhart’s recommended approach for the pond sediments involves the placement of excavated sediments in a nearshore CDF or within isolation caps within the footprints of the ponds. Sediment that is not excavated would be capped *in-situ*. This approach is described in the FS, in general, as Alternatives 8 and 11. This approach is protective of human health and the environment, and is implementable and cost-effective.

B. Alternatives Erroneously Screened Out

Contrary to the NCP, EPA “screens out” the channel-only configuration for Alternative 11. The NCP allows EPA to remove alternatives from consideration at the screening stage if they are not effective, implementable or cost-effective. *See* 40 C.F.R. § 300.430(e)(7). However, none of these factors justify “screening-out” the channel-only configuration for Alternative 11. Rather, EPA unjustifiably screens out this alternative based on improper criteria and in violation of the NCP, stating that that “[l]ocal residents that live along the river *might* express concerns regarding replacing the dams, especially because this would result in a reduction of open water area.” FS, at 5-30 (emphasis added). Moreover, EPA concludes that “[t]he channel only configuration (Figure 5-22), however, is screened out because *it is expected* that there would be considerable public opposition due to the substantive reduction in the water area.” *Id.* (emphasis added).

EPA fails to cite, and Emhart is unaware of, any information in the administrative record to support this conclusion. In fact, when EPA proposed to restore Allendale Dam, the public’s main concern was exactly

the opposite of EPA's unsupported assertion – that their properties would be impaired due to flooding conditions resulting from the re-establishment of the Pond.

Moreover, the NCP specifically states that community acceptance *cannot* be assessed until comments on the proposed plan are received. *See* 40 C.F.R. § 300.430(e)(9)(iii)(I). Further, EPA guidance provides that “information available on the community acceptance criterion may be limited before the public comment period for the Proposed Plan and the RI/FS Report” and EPA “should not speculate on community acceptance of the alternatives.” *See* U.S. EPA, *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents* (July 1999), at 3-9. Notwithstanding the requirements of the NCP and its own guidance, and even though Alternative 11 is an effective, implementable, protective, and cost-effective remedial alternative, EPA screens out the channel-only configuration. EPA's decision is based on sheer conjecture and its speculation regarding “expected” public opinion, far in advance of the required public comment period after which the NCP instructs that EPA shall apply the community acceptance criteria. In fact, EPA acknowledges in the FS Report that it may not circumvent the NCP alternatives evaluation process, even as it does so. *See, e.g.,* FS, at 6-1 (“The assessment of the modifying criteria is generally not completed until after state and public comments on the Proposed Plan are received”).

Then, in an about-face, EPA *does not* apply potential public opposition as a selection criterion to any other alternative, particularly the upland CDF disposal option, to which the Town of Johnston already has expressed opposition.

C. Inappropriate Reliance on Executive Orders

EPA erroneously relies on Executive Order 11988 as a means to effectively eliminate consideration of the nearshore CDF as a viable disposal option. EPA states that since “a portion of the nearshore CDF would require the permanent occupancy and modification of the floodplain,” Executive Order 11988 requires a determination “that there was no other practicable alternative before selecting this option as the preferred remedy.” *See, e.g.,* FS, at 6-17. In fact, the nearshore CDF disposal option will not have any adverse effect on the floodplain, and, therefore, neither the Executive Order nor EPA policy requires that EPA make the stated determination.

Executive Order 11988 states that “[i]f an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives *to avoid adverse effects* and incompatible development in the floodplains.” Executive Order 11988, § 2(a)(2) (emphasis added). EPA policy emphasizes “[i]f there is no floodplain/wetlands impact identified, the action may proceed without further consideration of the remaining procedures set forth below.” *See* U.S. EPA, *Statement of Procedures on Floodplain Management and Wetlands Protection* (Jan. 5, 1979), § 6(a)(1).

Hydrodynamic modeling performed by Anchor QEA, LLC (“QEA”), an EPA-approved contractor, has demonstrated that the remedial alternatives that use a nearshore CDF would “result in predicted flood inundation that has no appreciable effect beyond that for existing conditions for the areas adjacent to Allendale and Lyman Mill Ponds, even for 100-year flood events.” *See* QEA, *Hydrodynamic Analysis of Remedial Alternatives* (Nov. 16, 2007), at ES-2. Moreover, the results of the hydrodynamic modeling analysis demonstrate that the nearshore CDF alternatives “would have a negligible effect on flood stage height and floodplain inundation during high-flow events (100-year flood) in the region downstream of Manton Dam,” and, further, that such alternatives can be engineered to minimize erosion. *See id.* at ES-2 to ES-3. Therefore, fully consistent with the Executive Order and EPA's Statement of Procedures, given that no impact has been identified for the floodplain, the nearshore CDF Alternatives 7b, 8b, and 10b, as well as Alternative 11, should be considered viable alternatives. Yet, EPA continues to support the

upland CDF disposal option, even though it is more costly than other equally protective alternatives and its implementability is highly questionable.

D. Limitations of an Upland CDF

The implementability of the upland CDF as a disposal option is highly questionable. The volume of sediment that ultimately will be removed from the ponds, the River, the floodplain, and the Oxbow area will not be known until the remedy is complete. This is very problematic because volume is an overriding consideration in designing a CDF of sufficient capacity, and the “excavate and test” iterative approach to sediment removal proposed in the FS, *see, e.g.*, FS, at 5-36, does not allow for an accurate estimate of the volume of sediment to be removed.

To accurately estimate the volume of sediment to be removed, a sound excavation approach must be developed that is based on the known areal extent and depth of sediment to be removed. Given that under EPA’s approach there will be insufficient knowledge of the sediment volume requiring removal, the capacity of the upland CDF cannot be accurately designed.

If the upland CDF is not sized properly, its capacity likely will be insufficient, in which case some of the excavated soil and sediment will require off-site treatment or disposal. As a result, an accurate cost for the upland CDF alternative is undeterminable using the iterative excavation approach outlined in the FS because the volume of sediment that may exceed the CDF capacity is unknown and cannot be accurately estimated. *See* Letter from D. Scotti to A. Krasko (May 16, 2008).

Moreover, EPA glosses over the fact that EPA does not currently control the properties needed to construct the upland CDF. These properties must be acquired by purchase or condemnation to effectuate the proposed remedy, and EPA has not demonstrated that acquisition of the properties realistically can be achieved.

The PRPs who may be required by EPA to perform an upland CDF remedy have no independent authority to compel the site owners to sell their land. *See, e.g., United States v. Hardage*, 58 F.3d 569 (10th Cir. 1995). EPA has authority to seek court-ordered access to a site to effectuate a response action only if (1) EPA’s right of entry has been obstructed; (2) EPA has a reasonable basis to believe that there may be a release or threat of release of a hazardous substance, pollutant, or contaminant; (3) EPA has sought consent to entry; and (4) the demand for entry is not arbitrary, capricious, an abuse of discretion, or otherwise illegal. *See, e.g., United States v. W.R. Grace & Co.*, 134 F. Supp. 2d 1182, 1185-86 (D. Mont. 2001) While EPA also may obtain property by condemnation under CERCLA § 104(j) if it is needed to conduct a remedial action,” demanding possession of a site without adequate justification, however, may be deemed arbitrary and capricious. *See id.* at 1189 (“If...the EPA sought access to an ‘innocent’ [*i.e.*, uncontaminated] tract of land in order to dump hazardous waste on it, its demand for entry might be considered arbitrary and capricious. If other alternatives for disposal were plainly superior to the EPA’s proposed actions, then its demand for entry might be an abuse of discretion.”). A court may very well reject an access demand by EPA based on a finding that the Agency’s demand for entry to properties adjacent to the Site for placement of an upland CDF is arbitrary and capricious, and an abuse of EPA’s discretion. Also, as noted above, the Town of Johnston already has stated to EPA its opposition to an upland CDF.

Further, EPA does not factor the cost of acquiring the properties into the cost estimate for the upland CDF disposal option, despite EPA policy that the cost of purchasing land is to be included in capital costs for purposes of the detailed analysis of alternatives. *See* U.S. EPA, *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final* (Oct. 1988), at 6-11; *see also* 40 C.F.R. § 300.430(e)(9)(iii)(G). Also, no account is taken in EPA’s cost analysis that if one or more of the

properties identified for the upland CDF are not available, the disposal costs for that remedial alternative will skyrocket.

Finally, EPA assumes, but does not substantiate, that it will be able to obtain a land disposal restriction (“LDR”) treatability variance to place dioxin-contaminated soils and sediments in an upland CDF. *See, e.g.*, FS, at 7-6. Even assuming, *arguendo*, that a treatability variance is necessary, the FS Report does not contain the information required by EPA guidance to document the Agency’s intent to comply with the LDRs through a treatability variance. *See* U.S. EPA, *Superfund LDR Guide #6A (2nd Edition), Obtaining a Soil and Debris Treatability Variance for Remedial Actions* (Sept. 1990), at 4. Once again, EPA’s failure to follow the procedural requirements applicable to the preparation of the FS has led it to give preference to a particular remedial alternative without a sufficient basis to properly and fully evaluate its effectiveness, implementability, and cost.

In contrast, the nearshore CDF disposal option is technically feasible and readily implementable. It also is equally protective of human health and the environment, and is not burdened by the need to acquire multiple properties whose availability is unknown. The estimated remedial costs for excavation with on-site containment in a nearshore CDF are approximately \$9 million less than the estimated costs for an upland CDF, the real costs for which are unknown. Nevertheless, EPA promotes the upland CDF disposal option despite its uncertain implementability and potentially exorbitant costs, in lieu of the exceedingly more implementable and cost-effective nearshore CDF option.

IV. REMEDIAL ALTERNATIVES FOR THE GROUNDWATER ACTION AREA

As previously understood by EPA, it should not be considering alternatives for the groundwater action area because a fully protective remedy already has been performed. The NCP requires EPA to develop the no-action alternative, “which may be no further action if some removal or remedial action has already occurred at the site.” 40 C.F.R. § 300.430(e)(6). In this case, EPA ignores the impact of, and gives no consideration to the TCRA that Emhart conducted in the groundwater action area in 2009 and 2010. Post-TCRA sampling data confirm that the TCRA meets the performance standards set by EPA in the Work Plan, and, thus, by EPA’s own admission, is protective of human health and the environment. *See* Loureiro Engineering Associates, Inc., *Addendum No. 1, Completion of Work Report, Time-Critical Removal Action* (Apr. 2010). Moreover, EPA does not adequately describe the groundwater action area because it fails to address the changes to site conditions (*i.e.*, the excavation and off-site disposal of contaminated soils and sediments) that have occurred in that area. *See, e.g.*, FS, at 2-14. Instead, EPA relies on the site description contained in the RI, with no acknowledgement of the activities that have occurred at the Site over the last five years.

Because EPA does not mention the TCRA or consider the effect it had on EPA’s investigation of site conditions in the groundwater action area, it finds that the no-action alternative is not protective and does not comply with ARARs. *See* FS, at 6-94. In fact, when EPA and Emhart entered into the Administrative Settlement Agreement and Order on Consent for Removal Action (“Order”) for the TCRA, EPA anticipated selecting the no-action alternative for groundwater, stating: “EPA believes that, subject to post-implementation monitoring, the removal action will mitigate a potential risk to public health, welfare or the environment posed by this area of the Site.” *See* Administrative Settlement Agreement and Order on Consent for Removal Action, CERCLA Docket No. 01-2009-0086 (Aug. 11, 2009), at 9. If EPA had taken the TCRA and the post-TCRA sampling results into account, it would have concluded that no further action is necessary in this area, consistent with the NCP and with the Order.

Moreover, EPA continues to mistakenly assume that dioxin is transported via groundwater to the River. As explained in submissions dated June 8, August 15, and October 15, 2007, Emhart has shown that sampling results from the area surrounding the former HCP building do not demonstrate facilitated

transport of dioxin in groundwater. *See also* LEA, *Shallow Groundwater Data Report* (Sept. 12, 2008), at 8-1 to 8-3. Despite these submissions, and, as discussed above, notwithstanding the fact that a TCRA has been completed successfully in the groundwater action area, EPA states in the FS that “[t]he elevated concentrations of 2,3,7,8-TCDD in adjacent river sediment may reflect legacy contamination from historic site activities, continuing contributions from contaminated groundwater, or a combination of the two.” FS, at 2-19. The data simply do not confirm facilitated transport of dioxin prior to completing the TCRA, and post-TCRA groundwater monitoring definitively shows that there is no facilitated transport after completing the TCRA. *See Addendum No. 1, Completion of Work Report, Time-Critical Removal Action*. Therefore, EPA is compelled to select the no-action alternative for the groundwater action area.

V. REMEDIAL ALTERNATIVES FOR SOURCE AREA SOILS

A. Emhart’s Recommended Approach

Emhart’s recommended approach to addressing impacted source area soils is to monitor and maintain existing surfaces. This approach is described as Alternative 2 in the FS. EPA erroneously screens out this alternative on the basis it does not comply with ARARs. *See* FS, at 5-55. Apparently, this approach is screened out because the alternative does not satisfy RCRA Subtitle C closure requirements. However, the impacted media are not waste and, therefore, are not subject to RCRA Subtitle C closure requirements. Impacted media only become waste when, and if, they are managed. Capping the impacted media *in-situ*, as was done at the Site, is not considered management. Thus, EPA’s application of RCRA Subtitle C closure requirements to screen out Alternative 2 in the FS is violative of CERCLA, and inconsistent with the NCP and EPA guidance.

B. Erroneous Application of RCRA Closure Requirements

EPA guidance provides that contaminated environmental media are not hazardous waste and are not subject to regulation under RCRA unless they “contain” hazardous waste. *See Management of Remediation Waste Under RCRA*, at 9. Contaminated media contain hazardous waste: “(1) when they exhibit a characteristic of hazardous waste; or, (2) when they are contaminated with concentrations of hazardous constituents from listed hazardous waste that are above health-based levels.” *Id.*

In addition to incorrectly concluding that all contaminated media at the Site contain an F-listed waste, as discussed in Section II, above, EPA also concludes that the RCRA cap alternative for source area soils is the only alternative that would comply with all ARARs, including RCRA closure requirements. EPA not only makes an unsupportable assumption that the source area soils are a hazardous waste, it also incorrectly assumes that RCRA closure requirements are applicable.

RCRA requirements are only applicable if the response activity “constitutes treatment, storage, or disposal” of a hazardous waste. *See* U.S. EPA, *CERCLA Compliance with Other Laws Manual, RCRA ARARs: Focus on Closure Requirements* (Oct. 1989), at 3. Even assuming, *arguendo*, that the contaminated media at the Site contain a hazardous waste, which it does not, disposal does not occur when wastes are consolidated within the same area of contamination or unit, treated *in situ*, or capped or left in place. *See id.* The source area soils have been capped in place; therefore, RCRA closure requirements are not applicable.

EPA’s misapplication of the ARARs results in the screening out of the most practicable alternative for the source area soils – monitoring and maintaining the existing surfaces. *See* FS, at 5-54 to 5-55. The existing caps are protective of human health and the environment, and RCRA caps would be no more protective than the existing caps. *See* Letter from J. Loureiro and J. Muys to A. Krasko (June 8, 2007). Moreover, although not mentioned in Section 2.3.5 of the FS Report, the highest recorded flood event on

the River occurred on March 30, 2010, which resulted in record high flows (>1750 CFS). Even with these historically high flows, no damage was noted to the present soil caps. *See* Letter from EPA (May 7, 2010), at 2 (“The flooding caused no significant structural damage to the caps or armoring.”).

C. The FS Does Not Incorporate Current Site Data

The cleanup area defined in the FS for the source area soils does not comport with the data and the cleanup goal for this area due to EPA’s failure to acknowledge the TCRA that was performed in the groundwater action area and the changed conditions at the Site. The cleanup area for the source area soils, as depicted on Figure 3-5, is based on the current residential PRG for dioxin, 1 ug/kg. *See* FS, at 3-16. However, as shown in Figure 2-12, the concentration of dioxin in surface soils collected from beneath the parking lots south of Brook Village is less than the cleanup goal for this area. Indeed, even the locations west of the Brook Village parking lot, near the bank of the River, do not currently contain dioxin in excess of the cleanup goal because these soils were removed during the TCRA. Consequently, the cleanup area for the Source Area soils should not include the Brook Village parking lots as depicted in the FS. Even if EPA can support its assumption that RCRA is applicable to the source area soils, it must update the cleanup areas to comport with the current conditions at the Site.

D. Relocating the Residents Is Impractical

There is no consideration given to relocating the residents of Brook Village and Centredale Manor, which would be required to implement Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment (Alternative 3), and Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment (Alternative 4) for the source area soil. This would be a formidable, if not impossible, task given the sensitive population residing at the Site. During the implementation of either of these two alternatives, the existing surfaces would be removed to the apartment buildings. The impacted soils and sediments would be exposed and would present significant risks to human health. Access to the buildings would be prohibited. The human health risks associated with the short-term effectiveness of Alternatives 3 and 4 would make the implementability of either of these alternatives highly questionable. Moreover, the evaluation of Alternatives 3 and 4 does not consider the costs resulting from the relocation of the residents. Accordingly, as discussed above, EPA must evaluate Alternative 2, Monitor and Maintain Existing Surfaces, which is a more appropriate remedial alternative for the source area soils.

VI. REMEDIAL ALTERNATIVES FOR DOWNSTREAM AREAS AND THE OXBOW AREA

Emhart questions, as should the Board, any alternative evaluated for the 40-acre Oxbow area that has been characterized based upon the results of only seven soil samples. Therefore, any remedial consideration or decision with respect to the Oxbow area is premature.

Nonetheless, EPA has considered the need for remediation in the Oxbow area, largely driven by concerns regarding ecological risks. However, EPA lacks adequate information to determine whether a risk to ecological receptors exists. In the Oxbow BERA, EPA evaluated four terrestrial ecological receptors: earthworms, woodcock, short-tailed shrews, and raccoons, and concludes that there is “substantial risk of harm” for the woodcock and the short-tailed shrew. To arrive at these conclusions, EPA relies upon simplistic, intrinsically conservative food chain modeling to estimate chemical intake rates and body residue levels for each of the receptors. The only Oxbow-specific data used in the model are the chemical concentrations for the few sediment/soil samples collected. In the site-wide BERA, EPA computes the hazard indices for the floodplain soil in the upstream area of Greystone Mill Pond. *See* BERA, Ex. L.

The Hazard Quotients (“HQs”) that EPA computed for Oxbow and the background area, Greystone Mill Pond, are both in excess of 1.0. The HQs for the American woodcock are practically indistinguishable between the background area (HQ=41) and the Oxbow area (HQ=45). The HQs for the shrew are both well above 1.0 for both areas (HQ=128 background, HQ=264 Oxbow). Because of the threshold method used to compute a hazard and the uncertainty inherent in food chain modeling, it is difficult to determine whether there is any real difference for the shrew between the Oxbow and Greystone Mill Pond HQs. In fact, it is not known whether either location (background or Oxbow area) actually poses any significant risk to these receptors. The assessment for the earthworms illuminates this point. Although the HQs for the earthworm exceeded even the highest HQ for the shrew, EPA determined that the earthworm community is not likely at significant risk based on the results of a community assessment conducted as part of the site-wide BERA. That community assessment concluded that no adverse effects were evident in the floodplain soils adjacent to Allendale and Lyman Mill Ponds when compared to upstream locations, based on a comparison of relative abundance, species diversity, and the overlap of shared fauna, even though the HQs computed for the earthworms in the same floodplains ranged as high as 4,400. In short, the site-specific data, which are far more indicative of the actual conditions on the Site, showed that there were no significant risks to the earthworm community, even when the HQs were as high as 4,400. No such site-specific data collection efforts have been conducted in the Oxbow area to further refine the risk assessment of short-tailed shrews or American woodcock.

To address the absence of adequate data to evaluate remedial alternatives for the Oxbow area, Emhart has voluntarily entered into an agreement with EPA to further investigate this area of the Site. The investigational results will be used to assess the nature of the remedial approach, if any, required to be determined for this area. Without these results, the applicability of any remedial alternative presented in the FS Report is unsubstantiated.

VII. CONCLUSION

In summary, during the FS process EPA has circumvented key legal requirements in violation of CERCLA, and has ignored crucial technical facts and evaluation processes contrary to the NCP, rendering the resulting alternatives analysis and EPA’s “preferred” remedial alternatives unreliable and, consequently, unsupportable by the Board for numerous reasons, including the following:

- EPA arbitrarily concludes that all impacted media at the Site contain an F-listed waste;
- EPA fails to acknowledge the TCRA, and its mitigation of the need for further remediation of the groundwater action area;
- EPA makes improper assumptions regarding community opposition to the most cost-effective remedial alternatives for the Ponds and the River sediment (while ignoring the high probability of community opposition to the alternative that EPA champions);
- EPA misconstrues RCRA and misapplies the ARARs, leading to improper and unsupported conclusions regarding the scope of necessary excavation and capping;
- EPA make improper use of Executive Order 11988 when evaluating the implementability of the nearshore CDF, and ignores the hydrodynamic modeling demonstrating that the nearshore CDF would result in no appreciable flood inundation effects on the system; and
- EPA unrealistically assesses the ease with which an upland CDF could be sited.

Based on its foregoing listed errors, EPA is poised to select remedial alternatives for the designated action areas at the Site that are infeasible to implement and/or unreasonably and unnecessarily costly, contrary to CERCLA, the NCP, and EPA's own guidance, even though effective, implementable, cost-effective and equally protective alternatives are available. The unfortunate impact of EPA's fundamentally flawed process of evaluating remedial alternatives for the Site is that Emhart and other PRPs are unlikely to voluntarily participate in implementing the selected remedies.

Accordingly, Emhart respectfully urges the Board to recommend that EPA conduct a further analysis of the remedial alternatives, including the following, all of which have been improperly screened out: 1) dam removal that would restore the River to its pre-impoundment condition, together with a nearshore CDF; 2) monitored natural attenuation for the Oxbow area; 3) monitoring and maintenance of the existing surfaces for the source area soil; and 4) no further action for the groundwater action area. Moreover, the Remedy Review Board is requested to advise EPA to properly apply CERCLA, the NCP, and EPA guidance, and to fully consider the extensive administrative record in its evaluation of the remedial alternatives for the Site.

TOWN OF
NORTH PROVIDENCE



STATE OF
RHODE ISLAND

North Providence
Environmental Commission

Tree Board
Conservation Commission
Environmental Commission
Beautification Commission

July, 19, 2010

Ms. Anna Krasko
EPA - New England
5 Post Office Square, Suite 100
Mail code OSRR07-1
Boston, MA 02109-3912

Dear Ms. Krasko,

Thank you for the opportunity to provide comment on the proposed Centerdale Manor Superfund remediation project. The North Providence Environmental Commission (NPEC) is a volunteer group in the Town of North Providence that works on issues of open space, community environmental improvement, beautification, tree planting and maintenance, etc.

We are aware that the Woonasquatucket River Watershed Council (WRWC) is providing detailed comment/input on the proposed remediation project. The NPEC has worked closely with the WRWC on several projects and we rely on them to provide technical comments regarding this matter and we support their efforts and actions. That said, there are several potential elements to the EPA remediation project that we feel are important to mention.

We believe that at the end of the remediation project that the existing pond and wetland system should be restored to their current conditions. By this statement, we mean that the alternatives involving the containment of the dioxin contaminated sediment in the near shore confined disposal facilities or under isolation caps be eliminated. Furthermore we believe that the present size of the ponds, the flood plains and the wetlands be maintained and that the dams at Lyman Mill Pond and Allendale Mill Pond be preserved. Recent flooding has affected residents of our Town, and the unfortunate loss of much green space in North Providence over the last few decades makes (uncontaminated) flood plains and wetlands even more crucial both for our Town and for Narragansett Bay (a crucial resource that the entire state relies upon economically and recreationally.)

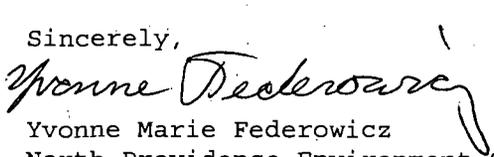
We would also strongly prefer that any upland containment site chosen, not destroy existing wooded space, but rather be sited upon former industrial areas nearby. North Providence has the least amount of Open Space of any town in Rhode Island (according to RI Monthly Magazine) and our Commission has worked very hard to preserve the last few green areas left. We value these upland wooded spaces not only for their contribution to water quality and flood alleviation, but also for reduction of summer temperatures, recreational opportunities, habitat, air quality improvement, and psychological benefits to residents in urban areas. Upland areas with oak trees offer the additional benefit of forest largely immune to the potential threat of the Asian Longhorn Beetle, a devastating insect that could largely destroy Rhode Island's maple forests if containment efforts in nearby Worcester, MA are not successful.

We are also very concerned about the degree of reliance that the remedy could have on institutional controls. We encourage EPA to consider future monitoring and maintenance costs associated these types of remedies and invest more in the initial phase of the cleanup and thus minimizing the need monitoring and maintenance.

Our small towns may lack the institutional memory to maintain awareness of the potential hazards should the containment structures develop problems. Additionally, in the event of more frequent and worsening flooding events as mentioned in the WRWC letter of July 16th, cleanups from floods will stress our communities greatly and the addition of dioxin contamination to a flooding event's aftermath would be a terrible impact upon future residents.

It is our hope to see the river's current natural environment be enhanced by the EPA led cleanup effort and that a remediation strategy be developed that is sound and secure for generations into the future.

Sincerely,



Yvonne Marie Federowicz
North Providence Environment Commission
2000 Smith Street
North Providence, RI 02911



Barry Schiller



PLANNING & ECONOMIC DEVELOPMENT
TOWN OF JOHNSTON

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JOSEPH M. POLISENA, MAYOR

July 19, 2010

Anna Krasko
EPA-New England
5 Post Office Square, Suite 100
Mail Code OSRR07-1
Boston, MA 02109-3912

Re: Centredale Manor Superfund Site, North Providence, Rhode Island

Dear Ms. Krasko:

The Town of Johnston is pleased to provide comment on the above referenced superfund project. We have reviewed the May 2010 Centredale Manor Restoration Project Summary and Ms. Lorraine Caruso, PE, Town Engineer, attended the June 15, 2010 open house to discuss the EPA project.

We are appreciative of the EPA's efforts to restore the river to a fishable/swimmable condition and to improve the river and shoreline in Johnston for passive and active restoration, habitat, and flood storage. The Woonasquatucket bike path has reopened a portion of the river bank in the project area to public use. We wish to continue public access to the river as it becomes an attractive amenity.

We have reviewed the options under consideration:

1. Take no action;
2. Monitor natural recovery;
3. Capping sediment and soil in place with an isolation cap or a thin cover to enhance natural recovery;
4. Excavate and dispose of impacted sediment and soil using the following disposal approaches:
 - a. Consolidate and cap contamination within river along the riverbank;
 - b. Consolidate and cap contamination in upland area next to river;
 - c. Ship contamination off-site to permitted facility; and
 - d. Thermal treatment of contaminated sediment using a temporary facility;
5. A combination of options 3 and 4.

I am reiterating Mayor Polisen's prior position in adamant opposition to disposal of contaminated sediment within the Town's limits. This would apply to options 4a and 4b as well as 5. For too long the Town of Johnston has borne a disproportionate burden in the disposal of solid and hazardous waste within the state. Although the Town is not in a position to participate in a joint project, if there is a way to mitigate upland disposal (outside the 100-year flood zone), with construction of a public access/park between the disposal site and the river, we may be open to discussion.

We are, however, concerned about the long term maintenance of consolidation and capping, especially for disposal within the river along the bank but also for upland disposal as well. Any

strategy that essentially reduces the flood storage capacity of the riverway could adversely affect property owners and municipal operations such as the Johnston Department of Public Works which is located directly adjacent to the river above the Lyman Dam. We are also concerned about any strategy which would channelize the river, thereby removing habitat and increasing water velocity and scour potential.

We note that remediation of the Woonasquatucket River is concurrent with the Town of Johnston Comprehensive Community Plan:

GOAL NC-6: Preserve and protect the Town's wetland systems in harmony with State laws and regulations.

Policy NCR – 6b - Actively support and participate in the efforts of local entities such as the Woonasquatucket River Watershed Council...

Policy NCR – 6n - Continue to promote a cooperative effort between Johnston and the adjacent Towns for the shared responsibility for maintaining and improving the water quality of the Woonasquatucket River.

GOAL RC-8: Work with the various groups representing the Woonasquatucket Reservoir Watershed ...to establish a system of greenways throughout the Town.

Policy RC-8a - Investigate and develop a system of greenways throughout the Town by using the participation and professional expertise and resources of representatives from the Woonasquatucket Reservoir Watershed

We support the Woonasquatucket River Watershed Council's vigilance for this project and appreciate the efforts of the Town of North Providence in this regard. *We are looking to a positive outcome for sediment remediation on the river that will preserve this waterway not just for natural habitat but for future residents.*

We look forward to continuing our positive relationship with the EPA and the Woonasquatucket River Watershed Council on this project. Please feel free to contact me or Lorraine Caruso, PE, Town Engineer, with any questions.

Sincerely,



Pamela M. Sherrill, AICP, LEED AP
Town Planner

CC: Joseph M. Polisena, Mayor
Makrum H. Megalli, Director, Department of Public Works
Lorraine Caruso, PE, Town Engineer
Alicia J. Lehrer, Executive Director, Woonasquatucket River Watershed Council



**WOONASQUATUCKET RIVER
WATERSHED COUNCIL**

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President
Smithfield

Bruce G. Hooke
Vice President/
Secretary
Providence

Carol Drowne
Treasurer
Providence

Joe Baer
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**Donald P.
Gagnon**
North Smithfield

Eugenia Marks
Providence

Roy Najecki
Glocester

Paul McElroy
North Providence

Alicia J. Lehrer
Executive Director

Lisa Aurecchia
Program Director

Amanda Blevins
Assistant
Program Director

Friday, July 16, 2010

Anna Krasko
EPA-New England
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Krasko.anna@epa.gov

Re: Centredale Manor Superfund Site
Comments for the Remedy Review Board

Dear Ms. Krasko:

The Woonasquatucket River Watershed Council is please to have the opportunity to provide the attached comments for consideration by the EPA's Remedy Review Board. We look forward to working with you and others at the EPA on the restoration of the Woonasquatucket River.

Sincerely,

Alicia J. Lehrer
Executive Director

Woonasquatucket River Watershed Council
Comments to the National Remedy Review Board

July 2010

Opening Statement

The mission of the Woonasquatucket River Watershed Council (WRWC) is to encourage, support and promote the restoration and preservation of the Woonasquatucket River Watershed as an environmental, recreational, cultural, and economic asset of the State of Rhode Island. Our goal is to see the river returned to a fishable/swimmable condition. This goal is consistent with that of the local community whose use of the river has been limited since the discovery of the dioxin contamination.

We greatly appreciate this opportunity to provide input to the United State Environmental Protection Agency (USEPA) regarding the selection of a remedy for the Centredale Manor Restoration Project. While some of the comments expressed herein are critical of certain aspects of USEPA's work or position, it should be clear that we appreciate the efforts of USEPA to clean up the river.

We adamantly oppose any proposed remedial action which includes a reduction to the size (area or volume) of the Allendale and Lyman Mill Ponds. We are accordingly also opposed to the replacement of the Allendale and Lyman Mill Pond dams with weirs constructed at lower elevations than the current dam spillways. We have concluded that any such proposal would negatively impact many of the positive attributes of the river and eliminate or greatly reduce the impact of the improvements that investments of Federal, State, local and personal resources have yielded along the river.

Equally, we have concluded that the dioxin contaminated soil and sediment that is above the USEPA's remediation objective must be removed completely from the river and wetlands. We therefore oppose partial excavation and isolation capping due to the disproportionately high potential for failure and the long-term difficulty and costs of effective institutional controls and costly repairs. We advocate for a remedy which either reduces the toxicity of the dioxin-impacted sediment, such as thermal treatment or one which encapsulates the impacted sediment in as sound a manner as possible, such as off-site disposal or encapsulation in upland CDFs outside the floodplain of the river.

WRWC Background and Progress

Our organization has been a leader in improving the Woonasquatucket River for more than 16 years. Our interest began as the Woonasquatucket River Greenway Project in 1993. The primary area of concern at that time was the neighborhood of Olneyville, the most impoverished and underserved neighborhood in Providence. The Woonasquatucket River was viewed as one of Olneyville's few assets and the WRWC founders were determined to restore the river and adjacent, abandoned industrial lands as a catalyst for positive change in Olneyville and other neighborhoods along the river.

Over the next few years the Woonasquatucket River Greenway Project worked with the community and developed specific goals for the project and worked to build partnerships with the neighborhood communities, environmental organizations, City, State and Federal officials and agencies. In 1998, the Woonasquatucket River was designated as one of fourteen American Heritage Rivers. This Federal designation honored the historic, cultural, economic and environmental significance of the river. The river was chosen in part because of the significant role it played in the Industrial Revolution. The Woonasquatucket was the first river to be dammed by mill-owners to insure a steady supply of water year-round for their mills. Presently, the Woonasquatucket River Greenway Project is a component of the more expansively focused WRWC which was formed shortly after the American Heritage River designation.

The WRWC is composed of residents, representatives of local and state government, and local non-profits, and works to improve the environmental, recreational and economic assets of the Woonasquatucket watershed. WRWC works with the Rhode Island Department of Environmental Management (RI DEM) and other state and federal agencies to design and implement projects in the watershed. The following organizations have believed in and supported our efforts: the Lila Wallace-Reader's Digest Fund, Merck Family Fund, Prince Charitable Trust, Jesse B. Cox Charitable Trust, Mary Dexter Chafee Fund, The Rhode Island Foundation, Citizens Bank of Rhode Island, Streuver Brothers Eccles and Rouse, the U.S. Environmental Protection Agency, the U.S. Department of Transportation, the RI Department of Transportation, the Coastal Resources Management Council, the Narragansett Bay Commission, the RIDEM, the National Park Service, the City of Providence, the USDA Natural Resources Conservation Service, USDA Forest Service, the US Fish and Wildlife Service and the National Oceanic and Atmospheric Administration.

In 2010, significant changes can be seen along the Woonasquatucket River: a 5.7-mile bike path can be followed from Waterplace Park, passing along our restored parks, remediated brownfield projects and the Buttonhole Golf Course (a 9 hole non-profit community golf course) and into Johnston. Fifteen acres of contaminated land and 37 acres of abandoned public lands have been restored and contribute to the vitality of the neighborhoods through environmental, recreational and youth job training programs. In addition, the USEPA selected the Woonasquatucket River Greenway Project and the State of Rhode Island as a Brownfields Showcase Community. Improvements to the ecosystem include remediation of hazardous materials contamination at Brownfield sites, restoration of riparian buffers and wetlands, and restoration and utilization of fish passages in the lower Woonasquatucket River. The improvement of the river is also something that has impacted the quality of life of the local residents who abut the river and can now enjoy their river bank property as the waterway is an amenity. We look forward to the day when the Superfund cleanup is completed and we can more actively pursue additional improvements along the river.

The sediment contamination has forced the WRWC to cease development of or simply put on hold a number of projects for the river and the fish, wildlife, and the people that use it. For example the Woonasquatucket River was selected to be the pilot for the development of a Statewide Freshwater

Wetland Restoration Strategy, and also was the first watershed to be the beneficiary of an extensive study of opportunities for wetland and riparian buffer restoration. However to date twenty five potential riparian/wetland buffer restoration projects have been put on hold and perhaps eliminated. We are optimistic that once the Superfund remediation is completed that the WRWC will be in a position to continue our restoration and improvement work. However we have been making progress in many areas. For example, with grants from several agencies, two fish ladders have been installed and two breached dams have been removed. These actions have enabled passage for diadromous fish (eels and herring). During the 2010 herring migration 41 volunteers documented 25,000 fish using the ladder at the first dam along the river. The Woonasquatucket River is an important link in the restoration of herring along the east coast of the United States and improvements to water quality and habitat restoration throughout the watershed will improve the success of this effort.

Comments

We have attempted to organize our comments consistent with the USEPA Superfund nine criteria for selecting a site remedy. After our review of the Superfund criteria, we provide additional comments that are specifically related to some of the remedial alternatives that were retained for detailed analysis in the Feasibility Study (FS).

Threshold Criteria

Protection of Human Health and the Environment

It is our observation that only the complete excavation and secure disposal of the contaminated soil and sediment that is above the remediation objectives will effectively protect human health and the environment.

We are concerned that concentrations of dioxin above the remediation criteria exist downstream of the Lyman Mill Dam and that exposures to this contamination will persist for an extended period of time. While we are comfortable with separating the Site and taking an "Operable Unit" approach to remediation, if that is what USEPA intends, we are concerned that contamination in this portion of the river may never be addressed and that USEPA is effectively relying on sedimentation in the river to dilute this contamination down to an acceptable level. This approach will lead to prolonging the period of signs and warnings regarding the contamination and perhaps lead to additional exposures as it is likely that without further assessment and remediation conditions, local residents will interpret remedial construction activities in only one portion of the river as a sign that untouched areas are safe.

The oxbow portion of the study area has not received adequate investigation leading to potential human and ecological exposures. The oxbow area and Lyman Mill Pond are approximately the same size. To date while USEPA has concluded that the areas are similarly impacted 121 sediment samples have been collected from Lyman Mill Pond and only eight from the oxbow area. Currently the drier portions of the oxbow are used as track for dirt bikes and other off road vehicles. No signs warning trespassers of the contamination exist and the area is only partially fenced.

Compliance with Regulations

Several of the contemplated remedies call for the removal of impacted sediment from various areas. The WRWC recognizes that sediment excavation is necessary. We request that the USEPA use or require all precautions to avoid a release of impacted sediments downstream areas of the river.

Balancing Criteria

Long Term Effectiveness and Permanence

The alternatives which rely on near shore CDFs and the isolation capping of the river bottom fail to consider fully the long term maintenance and integrity of the proposed remedies and the costs associated with mitigation and with potential failures. The use of containment and administrative controls to facilitate a site remedy may in some cases be a "necessary evil" for some of the options that are often available to address sites contaminated by hazardous materials. However we are familiar with the US General Accounting Office's January 2005 Report to Congressional Requesters: *Hazardous Waste Sites Improved Effectiveness of Controls at Sites Could Better Protect the Public*. This report brings up many of our significant concerns relative to this type of remediation strategy, including long term monitoring and maintenance.

We know that the USEPA has made improvements regarding the use of administrative controls on Superfund cleanups however we still have concerns. We are concerned that use of near shore CDFs will place dense volumes of heavily contaminated sediment proximate to the river which would act as a transport system should a near shore CDF fail thus heightening the potential ramifications of a failure in comparison to an upland location. Our concerns are compounded by the fact that this remediation will take place in a passively used recreation area, making the odds that a failure will be discovered quickly very low. Administrative controls and caps are best used in circumstances where if they fail, the impacts will be minimal and that if failure occurs, it is likely that it will be discovered quickly by users of the property. In some of the remedies being described by the USEPA in the FS (isolation capping and near shore CDFs) it is possible that a failure could go undetected for a significant period of time.

Regarding the monitoring and ability to maintain the site remedies, over the past two years, we as a nation have seen what we thought were truly strong corporations go bankrupt while we have seen the State of Rhode Island constantly struggle with its finances. We do not see the logic in selecting a remedy that will clearly require significant monitoring and maintenance and yet not have a definitive means of ensuring that all monitoring, maintenance and most importantly repairs are addressed and provided with adequate long term funding. Indeed, at times, even when funding is available for designated personnel, the state cannot hire people due to systemic budget issues such as hiring freezes.

In 2008 a study was completed in conjunction with the development of Ocean Special Area Management Plan by the Rhode Island Coastal Resources Management Council. That study found that between 1905 and 2006 there has been a 32% increase in precipitation in Rhode Island. The information provided in the FS leads us to conclude that this matter has not been considered during the

remedy screening process. That conclusion along with the recent flood events in 2005 and 2010 make us very concerned that the currently used definition of the 100 year flood plain may be an underestimate. Underestimating the 100 year flood plain elevation could increase the chances that the near shore CDFs could fail and exacerbate down stream flood impacts as a result of displaced flood plain capacity. Furthermore should precipitation continue to increase, the chances of failure also increase, while the chances that a viable potentially responsible party (PRP) will be available to address the potential failure in all likelihood decreases.

Reduction of Toxicity, Mobility and/or Volume

Most of the proposed site remedies do not reduce the toxicity or the volume of the contamination. This lack of permanence is of great concern to the WRWC as the CDF and the isolation capping alternatives may not be able to maintain their integrity in perpetuity leading to the possibility that at some point in the future there will be a failure and that dioxin contaminated sediment will be re-released into the environment. Based on this concern, we strongly urge the USEPA that if either of the CDF alternatives are used that the sediment be physically stabilized in some manner prior to placement in the CDF.

Also regarding the potential mobility of the contaminated sediment we recommend that the structural integrity of the Lyman Mill Pond dam be evaluated prior to finalizing a decision to rely upon it as part of a potential site remedy. If the dam is found to be in less than sound condition, we recommend its repair or replacement.

Short Term Effectiveness

No comments

Implementability

Several of the proposed remediation strategies do not appear to take into account the fact that the property proposed for the location of the CDFs is not owned by the USEPA, the RIDEM, nor the PRP group, and we recommend that the USEPA conduct additional study of the potential locations of the upland CDFs. The FS appears to assume that the affected property owners and the other nearby or abutting property owners are willing to have the CDFs on or near their property. To the best of our knowledge, these property owners are either innocent down-gradient receptors of contamination or in other instances simply abut an impacted area. This remediation approach not only fails to provide relief to these property owners, but potentially makes them bear the burden of becoming a disposal facility. We are concerned that the rights of private property owners have been ignored. The cooperation of these property owners is a key element to the schedule and success of the site remedy.

We are also concerned as to how or whether the USEPA can effectively enforce the necessary administrative controls associated with many of the remediation alternatives.

Cost

We recognize that the potential costs of remediating this site are high. We recommend a higher investment in initial costs and management of contaminated material in a less vulnerable setting so that long term costs will be less. We realize that EPA is limited to projecting costs for 30 years, and in many other cases this may be sufficient. In the case of dioxin, which does not break down easily or quickly, the cost estimates in the FS for the CDF and capping alternatives appear to be exceedingly low. It is important to keep in mind that the CDF-based approaches create the need to contain the dioxin-impacted sediment for a period far in excess of 30 years and require perpetual monitoring and maintenance of these structures. We are concerned that monitoring and maintenance is an extremely important aspect of several of the remediation alternatives (the CDFs, the isolation capping and the source area capping) and that the costs and regulatory vehicle for ensuring the completion of this work are not clearly explained.

Modifying Criteria

State Acceptance

It is our opinion that the remediation alternatives which involve near shore CDFs and isolation capping of impacted river channel sediment in place are in direct conflict with the State's Rules and Regulations governing the enforcement of the Freshwater Wetlands Act, as amended, which were identified as an Applicable or Relevant and Appropriate Requirement, by the RIDEM. These alternatives will eliminate or greatly reduce the size of the Allendale and Lyman Mill ponds and areas of riverbank wetlands and also reduce the flood capacity of the river. If it is necessary to evaluate these options further, we suggest that prior to giving these alternatives any consideration, that the options for mitigation be discussed in parallel with these remediation alternatives. Based on our extensive knowledge of the river, there do not appear to be easy opportunities to provide adequate and appropriate mitigation.

In addition, we are concerned that natural resources and aquatic communities would be altered by the change from lentic to lotic water regimes if the associated dams were removed and not replaced and at the same time vast amounts of habitat, in an area where habitat is scarce, would be destroyed. We take our position regarding the preservation of the dam system with the understanding that the use of fish ladders to facilitate the return of herring to the river is not an optimal strategy, but which has been successful to date. We have concluded that it is important to be realistic regarding the return of herring to the river because much of their habitat has been eliminated as the watershed has been developed. In our view we see it as more appropriate to advocate for the species that are using the habitat created by the dams.

Community Acceptance

We are greatly concerned that the USEPA decision regarding the remedy for Allendale and Lyman Mill Ponds, their associated reaches and the Oxbow Area could permanently restrict the WRWC's ability to meet our goals and the goals of our community. Community members have expressed great interest in being able to use the river and its surroundings for recreational activities. These goals are consistent

with those developed under the Federal Clean Water Act, whereby the RIDEM has established the regulatory goal for the Woonasquatucket River is to be fishable/swimmable by 2020.

The remediation alternatives include approaches which would sacrifice the local environment in our opinion to an unacceptable level in order clean up the dioxin. The near shore CDFs, replacement of the dams with weirs, the loss of the current pond system, the reduction in the depth of the ponds, the placement of the CDFs in natural upland areas are all significant environmental impacts that may not be necessary. This point should be considered not only from the view of what is best for the species inhabiting these areas but also from the larger perspective of what such as decision about the environment would mean to the youths of these areas who currently view the ponds as the only natural environment in their neighborhood. Destroying these environmental resources in the name of "cleanup" and leaving these neighborhoods with characterless highly engineered structures sends the wrong message.

Furthermore, partial excavation and isolation capping would require costly institutional controls and greater restrictions on the use of the ponds; while increasing the potential for post-remediation releases of contamination. Given the inherent difficulties associated with monitoring institutional controls under Superfund, the risks that these alternatives pose to the local community are significant.

Response to Alternatives Retained for Detailed Analysis

Completeness of the Remediation Efforts

We recommend complete removal of the contaminated sediment and soil to meet the USEPA's remediation objectives. We are against alternatives which involve isolation capping as we feel the risks of downstream contamination and of human and ecological exposures are too great.

USEPA must take a more active role in the area downstream of Lyman Mill Dam. Contamination above the remediation objectives exists in these areas and at the present it appears that the USEPA's only idea is to hope that the sedimentation rate dilutes the contamination. We feel that the users of the downstream portion of the river should also have the benefit of the river being fishable and swimmable.

Source Area

We recommend that the existing capped areas be upgraded to "RCRA caps", including the tail race area which has eroded

We recommend the removal of soils to address the groundwater contamination as we are concerned that the in situ treatment process will be difficult to implement successfully, with as this area is filled land and the subsurface conditions are likely to be highly variable. We suspect that this situation will make it difficult to predict the necessary volume of treatment solution and the most effective location of the injection points. This matter is made more complex by the proximity of the river to the area of

groundwater contamination. We are concerned that the treatment solution could end up in the river or could push the contaminated groundwater into the river.

Sediment Restoration in Allendale Pond and Reach and Lyman Mill Pond and Reach

We advocate retention of both mill ponds and their associated dams in their present configurations. The mill ponds are integral contributing historic elements of this American Heritage River. The possible construction of armored river banks and CDFs have the potential to not only eliminate historic elements of the river, but replace these elements with "improvements" that are entirely inconsistent with the history of the river.

CDF Placement

We are against the use of near shore CDFs. The river is a dynamic system that will not naturally remain in place; it should be allowed to constantly change its channel. The near shore CDF alternatives will armor the riverbank and reduce the natural aspect of the river. Furthermore this idea places the contaminated sediment in a location where it would be dispersed rapidly should failure occur. In addition, near shore CDF placement along the river reduces or eliminates the possibility of in-reach mitigation for loss of wetland functions.

We suggest that the USEPA re-visit the selection process for the upland CDFs and consider locating the upland CDFs in areas where either contamination is present or where the structure will present the least impact to the environment such as an existing industrial property. We are interested in the idea that an upland CDF could actually become an improvement to a property if upland CDF construction was completed in coordination with another project that could use the substantial structural foundation that a CDF would provide.

The Oxbow

We recommend that additional sediment sampling be conducted in the Oxbow area prior to a decision being made regarding the remediation of this area.

We do not understand the logic of the potential use of a three inch cap in the Oxbow. It appears that this approach would have a detrimental impact to the wetland that would be similar to full excavation, and yet the three inch "cap" leaves much contamination in place prolonging exposures and risking downstream migration of contamination as well as potentially allowing re-release of contaminants due to tree die off and uprooting from tip overs.

It is worth noting that the community's open space plans for the Oxbow were interrupted by the discovery of contamination. An open space grant was awarded to the Town of Johnston to advance the purchase of the Oxbow. The funds eventually had to be returned to the State, due to concerns of contamination. We envision the restored, 22-acre oxbow area serving as a unique educational,

recreational, and natural resource. Restoration of the oxbow area is truly an exceptional opportunity when one considers the dense urban population surrounding it.

We are concerned that uncontaminated natural upland areas of the Oxbow have been proposed as the site of a CDF, thus eliminating more of the area's natural environment.

Our knowledge of current activity in the oxbow area indicates the use of off-road vehicles (ORVs) through the area. This observation raises several concerns. First it is likely that on going human exposures to contamination are occurring (this area is not fenced nor signed as being contaminated). Secondly, should this area be selected for an upland CDF location, it is likely that the integrity of CDF would be difficult to maintain and that restoration efforts for the Oxbow (post remediation) would be challenging as the local ORV users would likely view the cleared or capped Oxbow as a suitable area to drive upon.

Loss of Wetlands and Floodplain Capacity

We advocate that USEPA to select a remedy which does not create a permanent loss of wetlands nor flood capacity. The opportunities for effective mitigation efforts in the study area are minimal.

Monitoring and Maintenance

We are concerned that monitoring and maintenance is likely to be an extremely important aspect of the selected remediation alternative and that the costs and regulatory vehicle for ensuring the completion of this work are not clearly explained.

Closing Statement

To summarize it is well known that the contamination has greatly inhibited the WRWC and the community's vision for the river and its environs. We are concerned that many of the potential site remedies will eliminate many of these goals and opportunities in perpetuity and leave the community with the need to restrict uses of the river, and provide careful instruction to participants in river-based activities.

Our goal is to see the ponds retained in their current area and depth, and total excavation of dioxin contaminated sediment and soils that are above the USEPA remediation objective.

Thank you for the opportunity to provide these comments. We will continue to work with the USEPA, RIDEM and the communities of the watershed to provide a fishable and swimmable river.

BROWN UNIVERSITY
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July 16, 2010

Anna Krasko
EPA-New England
5 Post Office Square, Suite 100
Mail Code OSRR07-1
Boston, MA 02109-3912

Dear Ms. Krasko:

As Director of the Community Outreach Core of the Brown University Superfund Research Program, I write in support of the Woonasquatucket River Watershed Council's comments to you on the remediation of the Centredale Manor site. The Woonasquatucket River Watershed Council has been one of our community partners since our inception, and we have worked a lot with them to help provide the most protective and equitable remediation approach.

In particular, I agree with the Woonasquatucket River Watershed Council's opposition to any reduction in the size of the Allendale and Lyman Mill Ponds or the replacement of those dams with weirs constructed at lower elevations than the current dam spillways. Such removal or replacement would diminish the environmental amenities created by the river and by the longtime work of the Woonasquatucket River Watershed Council in improving those amenities for the towns and cities in the watershed.

Second, I agree with the Woonasquatucket River Watershed Council position that the dioxin-contaminated soil and sediment that is above the USEPA's remediation objective needs to be removed completely from the river and wetlands. As the Woonasquatucket River Watershed Council notes, partial excavation and isolation capping would be unsatisfactory since it might fail at some point in the future. This can be accomplished either through thermal treatment or full encapsulation of impacted sediment in proper containment facilities outside the floodplain of the river.

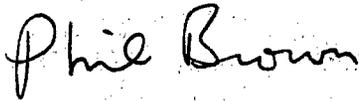
Third, I agree with the Woonasquatucket River Watershed Council that the Oxbow Area needs further sampling, since the proposed cap would not contain contaminated sediment.

I believe the level of detailed explanation in the Woonasquatucket River Watershed Council's comments to EPA is the result of a long process of community input and expert consultation. They are the main organization that has a full perspective on the remediation, precisely because

they have the long history of concerted effort in reclaiming the Woonasquatucket River and in protecting human health for those who live near it and who use it. I and my team have read extensively the relevant materials, and have met often with the Woonasquatucket River Watershed Council. As a result, we agree with the Council's clear positions on the safest cleanup possible.

We will be glad to work with EPA in whatever fashion will be helpful, to pursue a safe and equitable removal of dioxin contamination from this Superfund site, while maximizing community benefit of the River and its environs.

Sincerely,

A handwritten signature in black ink that reads "Phil Brown". The signature is written in a cursive, slightly slanted style.

Phil Brown, Ph.D.
Professor of Sociology and Environmental Studies
Director, Community Outreach Core, Superfund Research Program



Re: Centerdale Manor from Mayor David Cicilline
Alix Ogden to: Anna Krasko
Cc: "O'Connor, Timothy", "Alicia J. Lehrer"

07/16/2010 03:39 PM

July 16, 2010

Via email

Dear Ms. Krasko,

Thank you for the opportunity to provide comment on the proposed Centerdale Manor remediation project. As you are aware, the Woonasquatucket River flows into Providence and the presence of this river in our city provides both recreational and environmental benefits to everyone who lives, works, and visits Providence. It is critically important that the presence of dioxin in our watershed communities be addressed and I thank the EPA for their efforts in moving forward in the Centerdale Manor area.

The Woonasquatucket River Watershed Council (WRWC) is providing specific comment on the proposed EPA project. The City of Providence works closely with the WRWC to expand our reisdnets access to the river, to enhance the recreational activities by developing a bike path and improving parks along the river, and to protect the river. Our collaboration with the WRWC has greatly enhanced our efforts to involve our neighborhoods in these initiatives and created a sense of community stewardship over both these improvements and the river itself.

I appreciate the Environmental Protection Agency's (EPA) efforts to address the presence of dioxin in the area of the Centerdale Manor because, as Mayor of Providence, I am concerned about the health of the entire watershed and the river as it flows into Providence and out to the Bay. I encourage the EPA to implement the remediation measures that have the greatest degree of certainty in restoring the health of the watershed. I have concerns about the current proposal for a few reasons. First, I am concerned that the project area is limited and the work will not address in a comprehensive manner the dioxin problems throughout the watershed and river. Second, the remediation method does not remove the dioxin from the watershed completely. Finally, the method will alter significantly important features of the watershed itself specifically, the Allendale and Lyman Mill Ponds and Oxbow area, and I am concerned for the impact on the community for the loss of these ponds as well as the unknown impact that these changes to the watershed will have upon the health of the watershed overall.

The restoration and reclamation of natural areas from environmental damage is of the utmost importance, particularly in our urban aras where our residents may have very limited access to nature. I appreciate the EPA's efforts and thank you for consideration of our concerns.

Sincerely,

David N. Cicilline, Mayor

TOWN OF
NORTH PROVIDENCE



STATE OF
RHODE ISLAND

CHARLES LOMBARDI
Mayor

OFFICE OF THE MAYOR
2000 Smith Street
North Providence, RI 02911
Phone 232-0900
Fax 232-3434

July 15, 2010

Ms. Anna Krasko
EPA – New England
5 Post Office Square, Suite 100
Mail code OSRR07-1
Boston, MA 02109-3912

Dear Ms. Krasko:

The Town of North Providence is a 5.6 square mile community that is situated northwest of Providence, Rhode Island. We are the 8th most populated municipality having nearly 34,000 residents yet we continue to maintain our small town atmosphere with a suburban flair. The Town of North Providence highly values our 1.5 miles of shoreline along the Woonasquatucket River that includes the Allendale and Lyman Mill Ponds. We cherish our limited natural resources.

In 1991 the Allendale dam breached, resulting in the loss of an important natural and recreational amenity for residents of North Providence and all of Rhode Island. Strong local efforts were pursued to replace the dam and restore the ponds. We were in planning discussions with the Army Corps of Engineers, having secured dam rebuilding funding through the office of Senator John Chaffee, when the discovery of dioxins put our efforts on hold.

The reconstruction of the dam did not bring back the Allendale Pond as we had planned. The resources we had valued, Allendale and Lyman Mill Ponds, were fenced in and the contamination remained. Our businesses and residents have experienced the loss of the use of the ponds, the stigma of the dioxin contamination, and the resulting impact on property values in our community.

Since the dioxin discovery in 1996, representatives from the Town of North Providence have actively participated in public and private discussions with EPA-New England, representatives of the PRP's and other stakeholders regarding the temporary actions taken to restrict access and minimize exposure, especially at Centredale Manor and Brook Village, and the long term options for cleaning up the contaminated soil and the ponds of the Woonasquatucket River. We appreciate the significant amount of research and evaluation that has led to the variety of remediation objectives outlined in the feasibility

study. We are aware of the costs of the options and their potential impact on our town and residents, and the serious nature of the contamination.

From the beginning of these discussions, we have been consistent in expressing our strong position that the dioxin-contaminated sediment that is above the remediation objectives is removed and the ponds be retained. We believe that this is the only remedy that will effectively eliminate the risks of dioxins to our community and our downstream neighbors. It is also important that EPA recognize the recent flooding in our communities and ensures that remediation plans do not exacerbate this problem.

In terms of the contamination at the source area, we are very concerned about the health and safety of our senior citizens residing at this site. The best alternative we believe is to excavate as much of the contaminated soil as possible and establish an RCRA Cap. This should include a strong component to monitor and maintain the protective solutions. We are not convinced that the proposal for chemical oxidation of the area groundwater will be effective, and thus are once again convinced that excavation, dewatering and disposal will be most protective of human health and the environment.

Our goal is consistent with that of the State of Rhode Island – to have the Woonasquatucket River and Allendale and Lyman Mill Ponds be fishable and swimmable.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Lombardi". The signature is written in a cursive style with a large initial "C" and a long horizontal stroke extending to the right.

Charles Lombardi

Mayor

Northern RI Conservation District

17 Smith Avenue

Greenville, RI 02828

401-949-1480 phone; fax 401-949-4436

www.nricd.org

July 12, 2010

Anna Krasko
EPA-New England
5 Post Office Square, Suite 100
Mail Code OSRR07-1
Boston, MA 02109-3912

Dear Ms. Krasko,

It has been a while since we worked together on the issues facing the Woonasquatucket River Watershed. I am writing to share my concerns, and those of the Northern RI Conservation District (NRICD), regarding the remediation of the superfund site within this watershed.

The NRICD is a subdivision of the state conservation committee and a quasi public organization established under state law in 1943. Providence County is the geographic area we are responsible for. NRICD is focused on protecting natural resources from agricultural impacts, increased development and urban sprawl through educating the public and providing technical assistance. We work in partnership with private land owners, farmers, municipalities, state and federal agencies, as well as non-governmental agencies. NRICD is not a regulatory or enforcement agency, but rather provides assistance to those who desire to work as a team to face issues – watershed by watershed.

In 1996, the NRICD invited several stake holders of the Woonasquatucket River Watershed together to begin a discussion about how we could coordinate the efforts that were already being made toward a vision of a fishable and swimmable Woonasquatucket River. This initial phase led to the forming of the Woonasquatucket River Watershed Coalition – later to become the Woonasquatucket River Watershed Council (WRWC). The US EPA provided four grants to the NRICD over the time period from 1999 – 2003 to work with a steering committee to develop an outreach strategy to the community, eventually developing the *Do's and Don'ts for the Woonasquatucket River* and upon experience in implementing it over several years, a grant was provided to develop the *Tool Kit for Urban Rivers* which has been distributed throughout the US and abroad. The WRWC has a strong and capable leadership council and staff. Soon after its formation, the NRICD remained involved through the presence of one of our board members on their council, but essentially looked to them to take the lead on emerging issues on the river and to continue implementation of the Do's and Don'ts Program. NRICD remains in partnership

with the WRWC. This watershed encompasses a large portion of our area of concern within Providence County and we have a long history and deep rooted investment regarding the issue of remediation at the superfund site, as well as the restoration of the river as a whole.

I understand that there are several alternatives that the US EPA is considering toward the remediation of the superfund site. This may include elimination of one or more dams and changing the current ponding footprint. People who reside along the waterfront of these ponds would be devastated to have this type of landscape impact.

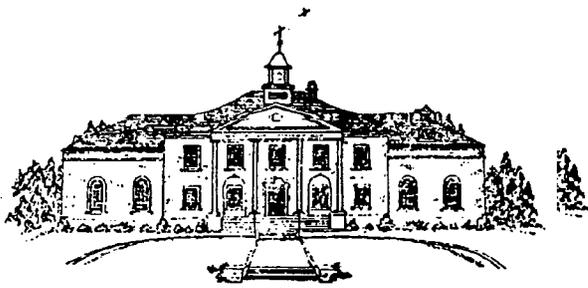
I personally grew up along the banks of the Woonasquatucket River in Providence and realize the importance this urban river plays in the lives of population it flows past, providing many with their only contact with a water resource for recreation and connecting with nature. My brothers, friends and I ate fish, frog legs, swam and played in the river as children. We were not aware of the presence of dioxins, pcb's and mercury. Had we been, I don't think from a child's stand point, we would have stayed away. Where else would we cool off, learn about wildlife, and connect with our natural surroundings? This is why I think it is so important to complete excavation of the contaminated sediment and soils – minimizing the chances of extreme weather events causing re-releases of dioxins into the environment. Continued dioxin release will impact human health, fish and wildlife. People connect with this river. They are not going to stay away, so we need to make it as safe an environment as possible – and I believe removal of contaminated soil is the safest alternative for the communities which we at NRICD serve.

I look forward to the further remediation of this area.

Sincerely,



Gina DeMarco, District Manager
Northern RI Conservation District



Town of Smithfield

64 FARNUM PIKE
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TELEPHONE (401) 233-1010 FAX (401) 233-1080

Anna Krasko
EPA-New England
5 Post Office Square, Suite 100
Mail Code OSRR07-1
Boston, MA 02109-3912

Dear Ms. Krasko,

We are writing this letter to support the maximum cleanup of the Centredale Manor Superfund site. Allow us to explain the experience of our adjoining community and what we see for the lower river.

Smithfield is to the north of Johnston and North Providence just 1 mile up river from the site. The headwaters of the Woonasquatucket are in North Smithfield to our north and in Gloucester to our west, with some source waters located in higher elevations in Smithfield. Although only 18 miles long, the Woonasquatucket was drastically changed by the impact of the Industrial Revolution, similar to the neighboring, but much longer Blackstone. The result was that in Smithfield we have over 30 dams and over 800 acres of ponds largely created by the Woonasquatucket Water Authority. While no mills remain in operation, the ponds do remain and are considered the "jewels" of our town.

In the past 40 years we have worked to clean up the impact of the past and more recent unplanned use and growth. In the late 70's we finally passed a Sewer Bond and hired 6 contractors to quickly provide sewerage to nearly all the developed areas. In the mid 80's we passed a Soil Erosion Ordinance and hired our first Town Engineer. Now with only 22,000 residents in 27 square miles we have two engineers and a full time secretary with the Town Engineer designated as our Environmental Officer. We have a strong Conservation Commission and a Land Trust that has spent over 5 million in land preservation.

Smithfield has 11 Superfund sites, 6 in the Woonasquatucket which covers 85% of the town. The most significant site is the Davis Liquid Waste Site where chemicals were dumped and then covered by millions of tires. We still have people active in our community who stood in the roadway to try to block the trucks. The EPA stepped in and brought a water line to address contaminated wells. It treated 78,000 tons of contaminated soil with two incinerators on site and removed another 20,000 tons and 6.4 million tires. The EPA is presently proposing a long term ground water cleanup that will cost 113 million and may take 60 to 80 years.

The results of all this have been worth it to Smithfield and the Woonasquatucket. The residents have two town operated swimming beaches. RIDEM stocks two sections of the Woonasquatucket and a pond with trout in the spring. Much of the 800 acres of ponds are in active recreation use and other large parts are pristine natural habitats.

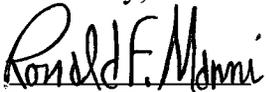
Unfortunately Smithfield has the last swimmable and fishable section of the river. Our town has been very supportive of the Woonasquatucket River Watershed Council and has benefited by its association. We have had 3 wetland and riparian buffer restorations in our community including one used as a teaching facility at our senior and middle schools. The WRWC sponsors canoe and kayak tours on the river way bringing residents from all over the state to enjoy our clean northern reaches of the river.

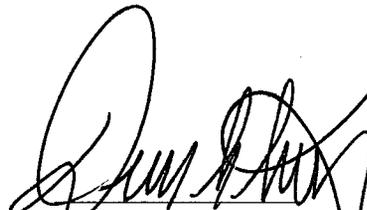
We cannot let the full cleanup end here. Communities so close can have what we have. The WRWC and the lower communities have put so much effort into uncovering the river and making it a meaningful part of the life of local residents. As I said we are a short river, 6 communities in 18 miles from the source to Water Place Park in Providence. This is the kind of location to demonstrate what can be achieved in restoring a waterway.

The failure to fully remove the contamination at this site will put a permanent brake in the restoration of the Woonasquatucket to a fishable and swimmable river. To be sure, the lower river will take tremendous long term efforts for restoration, but these efforts are moving along. A sizable population of new citizens lives in the lower river which is one of the poorest areas of Providence. The WRWC been a leader in showing them the value of the river and has engaged the local residents in its restoration. Led by the WRWC there are restored parks that include neighborhood raised bed gardens. New housing viewing our parks is affordable housing. Young River Rangers not only maintain areas but are given leadership training to inspire others. A bike path also has a bike shop to teach repairs. Artists in the old mills work with the community in publicizing the river and events. Hundreds of residents come to river cleanups. The city and many foundations and outside volunteer groups have supported these activities. The community looks with pride at our new fish ladders and an improved environment. We are on the move.

We cannot be certain that the river will be fully restored, but the failure to restore this toxic site will mean that the river cannot be fully restored. We ask for your commitment of full restoration to give us a full opportunity to complete the job. We want to fully complete the job. Don't end our hopes here. It is in your hands. Do not let the dream of a fishable, swimmable Woonasquatucket die.

Sincerely,


Ronald F. Manni
Town Council President


Dennis G. Finlay
Town Manager


Donald Burns
Chairperson,
Conservation Commission