

**FOR INCLUSION IN THE ADMINISTRATIVE RECORD**

Superfund Records Center  
SITE: Centredale  
BREAK: 4.1  
OTHER: 486542

June 21, 2011

**Via Electronic and Regular Mail**

Ms. Eve Vaudo  
Office of Environmental Stewardship

Ms. Anna Krasko  
Project Manager

United States Environmental Protection Agency - New England, Region 1  
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Mail Code OSRR07-1  
Boston, MA 02109-3912

Subject: **Centredale Manor Restoration Project Superfund Site – Stage IA Cultural Resources Survey**

Dear Ms. Vaudo and Ms. Krasko:

We are writing on behalf of Emhart Industries, Inc. ("Emhart") regarding the Stage IA Cultural Resources Survey ("Survey") of the Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island ("Site"), prepared by the U.S. Army Corps of Engineers ("Army Corps"). Emhart appreciates the effort reflected in the Survey, and recognizes that EPA will be sensitive in remedy selection to any potential impacts on historic or archaeological resources. However, we note for the record that the suggestion in the Survey that the Site may encompass undisturbed areas possessing archaeological or historic sensitivity is at odds with the known history of extensive industrial, commercial, and residential development on and in the vicinity of the Site.

As acknowledged in the Survey, "no recorded archaeological sites are present within the Centredale Manor Superfund study area." Survey at 3.0, pg. 17. The Survey suggests, however, that "it is possible that unknown archaeological sites are present in undisturbed locations along the river." *Id.* The Survey emphasizes that it is only within any undisturbed areas that the potential for cultural resources exists: "Undisturbed areas would have a moderate to high potential for the presence of archaeological resources, while wetlands and areas of documented disturbance would correspondingly possess a low archaeological sensitivity." *Id.* at 21.



The Survey asserts, erroneously, that “the river oxbow area (Figure 4) adjacent to the Allendale dam is relatively undisturbed and may possess archaeological sensitivity.” *Id.* at 19. In fact, the Site Administrative Record, including prior reports prepared by the Army Corps and the EPA, amply documents that the Oxbow Area has a century long history of being repeatedly disturbed by industrial activities that have occurred within and proximate to the Oxbow Area. For instance, the Oxbow Area Wetland Delineation Report and Functions and Values Assessment prepared by the Army Corps in October 2008 (“2008 Report”) notes: “The area surrounding the Lyman Mill Pond and the Oxbow Area is very highly developed, and includes residential, commercial, and industrial properties.” 2008 Report at pg. 3. The history of disturbance to the Oxbow Area is described in the 2008 Report in detail, including as follows:

A review of historic United States Geological Survey (USGS) topographic maps and aerial photographs indicate that the Oxbow Area has been altered significantly since the 1890’s. The 1894 USGS 15 minute Providence, RI quadrangle shows the Woonasquatucket River flowing southwest from Allendale Dam and then south/southeast to Lyman Mill Pond (Figure 3). The 1939 USGS 15 minute Providence, RI quadrangle shows an altered configuration of the river channel between Allendale Pond and Lyman Mill Pond (Figure 4). A portion of the original channel was filled and a new channel created which flows south from Allendale to Lyman Mill Pond. The configuration of the main Woonasquatucket channel as shown in the 1939 map is very similar to the current configuration (Figure 2). The northern end of Lyman Mill Pond is shown as open water in the 1894 map. The 1939 map indicates development of some fringing wetland along the old Woonasquatucket channel. A 1939 aerial photograph shows the northern portion of the Oxbow Area to be highly disturbed (Figure 5). Other areas appear to be vegetated, perhaps with shrubs or small trees. The photo clearly shows the relocated river channel, remnants of the original channel (the “Oxbow Remnant”), the apparent excavation of an east west channel which nearly connects the old river channel with the new channel, and the excavation of a ponded area near the Woonasquatucket. The next major alternation occurred sometime after 1962 when approximately 3.5 acres of the northwest corner of Lyman Mill Pond were filled (Figure 6). Aerial photos available from the State of Rhode Island Geographic Information System Database (RIGIS) indicate that much of this area was filled by 1981, but that the filling did not end until sometime between 1997 and 2002. Aerial photographs indicate two other areas near the Oxbow Area were filled between 1962 and 1976. These include an area along the eastern shoreline of Lyman Mill Pond and a forested area located east of the Woonasquatucket and just south of a present day athletic field. From the available imagery it is uncertain whether the area filled south of the athletic field was forested wetland or upland habitat.

*Id.* at 4 (emphasis added). Moreover, it is visually evident from Figure 6 of the 2008 Report that nearly all of the upland portions of the Oxbow Area were significantly disturbed in 1939. Roads and trails and likely gravel pit operations, the evidence for which remains clearly visible today, are shown in this figure.

Moreover, the 2008 Report, in assessing the potential uniqueness/heritage of the Oxbow Area, an attribute which is based on certain special values such as archeological sites that may be a component of the wetland, states that:

The Oxbow Area wetlands and adjacent upland habitat encompass about 40 acres, including 20 acres which are forested. This is the largest patch of habitat remaining along the lower Woonasquatucket River. Although the riparian forest is relatively young (most trees are less than 70 years old) it provides an example of what was very likely the dominant pre-colonial habitat type along the Woonasquatucket River.

2008 Report at pg. 29 (emphasis added). Thus, the Army Corps recognizes that even the forested wetland of Oxbow Area has been disturbed and deforested within approximately the past 70 years, which may correspond to the road and gravel activities within the Oxbow Area identified above .

The March 2007 Army Corps report authored by Maureen K. Corcoran, entitled “Geomorphic Identification and Verification of Recent Sedimentation Patterns in the Woonasquatucket River, North Providence, Rhode Island” (“2007 Report”), also describes the extensive anthropogenic influences on the Site, illustrating the extensive disturbances to the area resulting from centuries of industrial activity throughout the vicinity of the Site. In the 2007 Report, for example, it is stated that on the east bank of the Woonasquatucket River within the South Allendale Mill Reach the “...embankment is apparently the result of activity from dumping the spoils after the river was dredged because the cobblesize rocks found in the embankment are also found in the river channel bed.” 2007 Report at pg. 39. The 2007 Report states further that, on the west bank of the Woonasquatucket River within the South Allendale Mill Reach, “[a] utility pole is located close to the abandoned meander and serves as additional evidence that this area has been disturbed.” 2007 Report at pg. 40.

The May 2008 EPA report of the Aerial Historical Photographic Analysis, Land Use/Land Cover Analysis, and Wetland/Drainage Analysis of Centredale Manor Restoration Project Study Area (“EPA Report”) discusses “...portions of the wetlands, on the west shore of Lyman Mill Pond, that were filled as a result of man-made activities.” EPA Report at pg. iii. As set forth in the EPA Report, “[b]etween 1951 and 2006 the establishment of commercial junkyard operations, the expansion of quarry excavations, and the construction of additional residences accounted for the largest changes in the land use/land cover. By 2006 quarry excavations and commercial junkyard operations had replaced large sections of the undeveloped mixed forest land observed in 1951.” EPA Report at pg. iv.

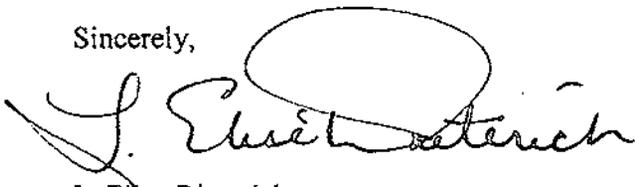
The Survey states: “[M]ost of the soil areas of the Centredale Superfund project are composed of water and urban land components, with the exception of the oxbow and the Lymanville Mill area which includes various forms of sandy loam. Consequently, archaeological testing in undisturbed areas should be focused in these identified locations with well drained soils on a relatively slight slope.” Survey at 4.0, pg. 19. Elsewhere, the Survey makes clear that the Lymanville Mill area, comprised of filled wetlands, a man-made dam and the associated pond, is not among the areas thought to be undisturbed. (“Although most of the study area has exhibited some form of development or disturbance from previous industrial

construction and more recent land modifications, some locations such as the river oxbow area (Figure 4) bordering Allendale Dam appear to be relatively undisturbed.” Survey at 3.0, pg. 17.) Moreover, as set forth in the 2008 Report, 2007 Report, and EPA Report, the Administrative Record reflects that it also is highly unlikely that there are undisturbed, non-wetland areas within the Oxbow Area. As Figure 8 of the 2008 Report illustrates, very little of the Oxbow Area is non-wetland. Also, as the 2008 Report notes “[s]oils in forested areas were difficult to interpret because of past history of disturbance, shallow topsoil underlain by coarse sand, gravel and stone, staining by seepage of iron rich water from adjacent hillsides, alluvial deposits from the Woonasquatucket River and a storm drain system which discharges into the northwest corner of site.” 2008 Report at pg. 10. Thus, undisturbed “well drained soils on a relatively slight slope” that could contain archeological resources have not been shown to exist at the Site.

Indeed, the Survey does not identify with any geographic specificity where, if at all, undisturbed areas are thought to exist, stating only that “some locations such as the river oxbow area (Figure 4) bordering Allendale Dam appear to be relatively undisturbed.” Survey at 3.0, pg. 17. As discussed above, this observation is unsupported and at odds with the Site Administrative Record. Absent the identification of a precise location determined to be undisturbed, this assertion in the Survey is mere speculation.

Given the historic industrial, commercial, and residential development on and in the vicinity of the Site, the extent of any possibly undisturbed areas is necessarily very small. That said, we fully anticipate that any cultural resources potentially present in any undisturbed areas would, of course, be given due consideration by EPA. In lieu of further study, the potential disturbance of presently unknown cultural resources (and the need and cost to conduct a Stage IB Survey) should be factored into the remedy selection. Possible cultural resource impacts can be avoided simply by rejecting any remedial alternative that would require excavation within the Oxbow Area.

Sincerely,



L. Elise Dieterich  
Jeffrey M. Karp

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