

Superfund Records Center
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**SUPERFUND SITE PRELIMINARY CLOSE OUT REPORT
(Non-Time Critical Removal Action and Final Site Action – OU I)**

**Eastland Woolen Mill Superfund Site
Corinna, Maine**

September 2006

EASTLAND WOOLEN MILL PRELIMINARY CLOSEOUT REPORT

I. INTRODUCTION

This Preliminary Close-Out Report documents that EPA has completed construction activities for both the non-time critical removal action (NTCRA) and the final Site action, referred to as Operable Unit I (OU I) at the Eastland Woolen Mill Superfund Site in accordance with the EPA guidance "Close Out Procedures for National Priorities List Sites", OSWER Directive 9320.2-09A-P, January 2000. EPA and the State of Maine conducted a pre-final inspection of the Site on September 19, 2006 and determined that no further response is anticipated and that EPA's contractors have constructed the response actions in accordance with the design plans and specifications which were approved by EPA. No additional construction activities are anticipated at the Site.

II. SUMMARY OF SITE CONDITIONS

a. Site Description:

The Eastland Woolen Mill Superfund Site is located in the Town of Corinna, Penobscot County, Maine, approximately 6 miles north of Newport and 25 miles northwest of Bangor, Maine. Approximately 800 people live within one mile of the Site and 2,500 live within four miles. The Town of Corinna is located within the East Branch of the Sebasticook River (EBSR) watershed, which drains to Sebasticook Lake approximately three miles south of the Town. Topography within the watershed is typified by gently rolling hills to steeply sloping ridges, varying from narrow valleys to fairly expansive low-lying floodplains. Elevations within the immediate vicinity of Corinna range from 200 to 320 feet above mean sea level (msl). The former Eastland Woolen Mill straddled the EBSR and the southern portion of the former Mill Pond.

The future land use assumptions for the 25 acre Site and surrounding areas are based on the Reuse Plan that was developed by the Town of Corinna. The large land area in the center of town, currently occupied by the Site, has been targeted for a mix of commercial, residential and mixed-use development. An expansion of the water supply has been implemented by the local water district to support future growth. The majority of the Site is available for re-use since the current cleanup program only occupies about three of the 25 acres covered by the Site. The available 22 acres are currently being marketed by the Town of Corinna. The back portion of the Site has already been brought into productive re-use. A 20 unit senior housing facility, Corundel Commons, opened on this portion of the Site in February 2006.

b. Site History:

The Site was proposed for inclusion on the NPL on April 23, 1999 (64 Fed. Reg. 19968). It was listed for final inclusion on the NPL on July 22, 1999 (64 Fed. Reg. 39878-39885). The Eastland Woolen Mill operated a textile mill in Corinna, Maine from about 1909 to 1996. Liquid wastes

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were discharged directly into the EBSR until 1972, when the liquid wastes were sent to the local sewage treatment plant. In 1983, local water supplies were found to be contaminated with chlorinated benzene compounds released by the Eastland Woolen Mill. As a result of this contamination, five locations were fitted with carbon filters in 1983. This number increased to ten locations by 1988. In 1995, a water line was installed to serve the properties with contaminated water supplies. From 1984 – 1995, the Eastland Woolen Mill performed a series of environmental assessments. The Eastland Woolen Mill ceased to operate in 1996. All of the equipment and land were either sold at a creditor auction or taken by the Town of Corinna to address tax liability.

After the closure of the Eastland Woolen Mill, the State of Maine performed a response action in 1997 to remove hazardous materials from the former mill buildings. The State of Maine also provided technical and financial support to maintain the Corinna Water District after closure of the mill. In 1998, EPA began investigation activities at the Eastland Woolen Mill. In July 1999, EPA placed the Eastland Woolen Mill site on the National Priorities List and signed an Action Memorandum to begin a Non-Time-Critical Removal Action (NTCRA) to address source materials. From 1999 through 2002, EPA performed the RI/FS for the Eastland Woolen Mill. In September 2002, EPA signed a ROD for OU I of the Eastland Woolen Mill Superfund Site to address contaminant source material remaining after the NTCRA as well as the associated groundwater contamination. The OU I RI/FS also identified and designated sediment and associated floodplain areas of the EBSR as well as the old dump as a second operable unit (OU II) for the Site. EPA signed a No Further Action ROD for the OU II portion of the Site in September 2004.

c. Enforcement History:

Enforcement activities have been limited by the lack of viable potentially responsible parties (PRPs) at the Site. Eastland Woolen Mill ceased to operate in 1996. The family-owned company is now defunct (it ceased operations shortly after completing a reorganization plan pursuant to Chapter 7 of the Bankruptcy Code), and most of its officers are deceased.

The Site is currently owned by numerous entities, including the Town of Corinna and the State of Maine. The State acquired its title through eminent domain and abandonment, and the Town of Corinna acquired its title through tax foreclosure/eminent domain. There is currently one private owner of a portion of the Mill complex who acquired title at a creditor's auction.

EPA is continuing to investigate its enforcement options at the Eastland Woolen Site

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d. Remedial Construction Activities:

Construction for the NTCRA was performed from 1999 through 2005 and consisted of: demolition of the mill complex buildings, construction of a temporary low-temperature thermal desorption soil treatment system; excavation, stockpiling, and on-site thermal treatment of contaminated soils from five areas; river channel diversion and relocation; removal and disposal of debris and hazardous waste; construction of a temporary groundwater extraction and treatment system to control groundwater encountered during excavation activities and subsurface investigations; construction of temporary in-situ chemical oxidation (ISCO) injection wells in three overburden source areas for remedial treatment applications, surveying services, and site restoration.

Construction for the OU I Remedial Action was performed from 2005 through 2006, consisting of public water supply connections, temporary ISCO injection well construction in one bedrock source area, temporary groundwater extraction wells to assist in oxidant control during treatment, overburden and bedrock long-term monitoring well installations, and site restoration.

Construction Contractors

The U.S. Army Corps of Engineers (USACE), through an interagency agreement, provided resident engineering services and construction administration for the NTCRA and Remedial Action.

The USACE contracted with Weston Solutions, Inc. (Weston) of Manchester, New Hampshire to provide the following services: demolition of the mill complex buildings; river channel diversion and relocation; roadway and bridge construction and dam repair; construction of a temporary low-temperature thermal desorption soil treatment system; excavation, underground storage tank removal; stockpiling, and on-site thermal treatment of contaminated soils from five areas; removal and disposal of debris and hazardous waste; construction of a temporary groundwater extraction and treatment system; surveying; and site restoration. Lower-tier subcontractors to Weston included Cianbro Corporation (Cianbro) of Pittsfield, Maine, Charter Environmental of Wilmington, Massachusetts (Charter) to provide general construction services and transport and off-site disposal services, and Severn Trent Laboratories of Framingham, Massachusetts to provide on-site mobile laboratory analytical services

The USACE contracted with Nobis Engineering, Inc. (Nobis) of Concord, New Hampshire to provide the following services: construction of temporary ISCO injection wells in three overburden source areas and one bedrock source area for remedial treatment applications, construction of temporary groundwater extraction wells to assist in oxidant control during treatment, long-term monitoring well installations in overburden and bedrock, surveying services, and site restoration. Lower-tier subcontractors to Nobis included Charter to provide general construction services and transport and off-site disposal services; Clean Harbors of

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Bangor, Maine to provide transport and off-site disposal services; Boart Longyear of North Reading, Massachusetts to provide drilling and well installation services; New Hampshire Boring of Londonderry, New Hampshire to provide drilling and well installation services; Great Works Test Boring, of Rollinsford, New Hampshire to provide drilling and well installation services, Oest Associates of Portland, Maine to provide topographic and location surveying services; and Amro Environmental Laboratories of Merrimack, New Hampshire to provide off-site, fixed laboratory analytical services.

Building Demolition and Relocation

To provide access to contaminated soil and sediment beneath the Mill and residential/commercial buildings that were sources of contamination to local groundwater, building demolitions were performed by Weston, Cianbro, and their subcontractors. The mill buildings were demolished and removed to their foundations by between November 1999 and May 2000. The Pump House demolition was performed in 2001. Five residential/commercial building were also demolished in 2000 in Area 1. In addition the work included the relocation of the Odd Fellows building in October 2000 and the re-location of underground sewer and water utilities from July through October 2000.

River Channel Diversion And Relocation

Between June and August 2001, Weston relocated the EBSR to a new channel, east of the original channel, to enable access to contaminated soil in Area 1 below that old channel and to align the new channel with the new Route 7 bridge. Water began flowing through this new channel on August 17, 2001. Additional river bank grading and planting/restoration activities north of the Route 7 bridge were conducted in September 2003.

Roadway and Bridge Construction and Dam Repair

To allow access to the contaminated soil and by-pass traffic during excavation activities, a temporary realigned Route 7 and bridge was constructed by Cianbro between October 2000 and August 2001 to allow abandonment and demolition of the old Route 7 and bridge to access contaminated soil underlying Area 1. Cianbro was also responsible for the installation of erosion controls, storm drains, curbs and sidewalks, pavement markings, and landscaping. This phase of work included the construction of a new Route 7 bridge to cross the relocated river channel. The new road alignment and bridge was surveyed by the MEDOT. Upon completion, MEDOT accepted responsibility for these features and completed the work to provide for the permanent road alignment in that location.

Between June and August 2002, the new Route 42/Palmyra Spur Road was constructed by Frank L. Woodworth (subcontractor to Weston). This work included the construction of a roadway that extends from the intersection of Palmyra Road and St. Albans Road (Route 43) to the new Route

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7.

To replace the railroad bridge demolished during the excavation activities, a new recreational bridge was constructed by York Bridge (subcontractor to Weston) between October and November 2001 to span the relocated river channel south of the realigned Route 7 bridge to provide recreational use of the rail trail.

Due to the lowering of water in Mill pond as part of the river relocation activities, seepage through the east side of the Corundel Dam's earthen/rock filled embankment worsened and required repair. This work was performed by Weston between October and November 2001.

Underground Storage Tank Removal

Underground storage tanks (USTs) that were formally associated with the Mill to store chemicals and fuel were decontaminated and removed from the Site by Weston during 2000 and 2001. All UST removals were performed in accordance with MEDEP protocols. UST removals included: two 10,000 gallon No. 6 fuel oil USTs in Area 4 – Building 9 (removed October 2000); one 30,000 gallon No. 6 fuel oil UST in Area 4 (removed December 2000); a portion of one 30,000 gallon UST in Area 4 – Pump House (removed July to September 2001); one UST located below the former Chemical Storage Building and presumed to have contained either dye aid or ammonia (removed in October 2001); one 900 gallon No. 2 fuel oil UST located in Lot 118 (removed in 2001).

Contaminated Soil Excavation, Stockpiling, and On-Site Thermal Treatment

During 2000 and 2001, Weston excavated and stockpiled approximately 50,000 cubic yards of chlorinated benzene contaminated soils from Areas 1 and 4 (30,000 gallon UST Area, UST Area, and Building 9) and 25,000 cubic yards of soil from Areas 2 and 3. A total of approximately 75,000 cubic yards of chlorinated-benzene contaminated soils were excavated.

Following excavation, the contaminated soil was screened to remove oversize material and temporarily stockpiled at the site in lined containment structures. The oversize material was crushed and washed by Charter and recycled on-site as backfill or drainage material. Soil screening to remove oversized material was performed between July and December 2001.

Between October 2001 and December 2002, pilot and performance testing of on-site low-temperature thermal desorption soil treatment (LTTT) systems was performed. The results of these pilot tests indicated that LTTT could meet established treatment goals and the treated soil would be suitable for use as backfill in the excavated areas. Weston conducted engineering and procurement of the LTTT system between March and April 2002 and construction of the system began in May 2002. The system consisted of eight treatment bins, a hot air injection system, process emission extraction and treatment system, control and monitoring equipment, and a

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condensate and surface water collection system. Full-scale on-site treatment of contaminated soil began in May 2003 and was completed in October 2003. During pilot-testing and full-scale treatment, approximately 89,000 tons of contaminated soil was treated by LTTT.

Construction of the Temporary Groundwater Extraction and Treatment System

To support the NTCRA excavation, thermal treatment activities, and ISCO treatment program, a temporary groundwater extraction and treatment system was constructed to aid in control of groundwater infiltration and migration. One bedrock well and four overburden wells were connected to the temporary treatment system between August and September 2001. This system remained operational until November 2004 to provide hydraulic control over the groundwater plume during the initial phase of the NTCRA. Since the excavation activities were completed, the temporary groundwater extraction and treatment system has been operated as necessary to support the NTCRA ISCO program. Four additional temporary overburden/shallow bedrock extraction wells were installed in September 2004 and July 2006 to support Area 1 ISCO pre-design studies and ISCO treatment. The temporary groundwater extraction and treatment system is completed and no further construction is necessary. The system will be de-commissioned after the completion of the ISCO program in 2008/2009.

Removal and Disposal of Debris and Hazardous Waste

Asbestos containing materials (ACM) were removed from the Site, thoroughly wetted, double bagged, sealed and properly labeled. Containerized ACM was disposed of in-state by Waste Management Disposal Services of Norridgewock, Maine. ACM included 30,000 square feet of roofing, transite, insulation and tiles and 16,500 linear feet of piping and roofing.

Hazardous materials were transported for off-site disposal between 1999 and 2004. The majority of the hazardous waste was removed during the building demolition phase. Approximately 7,000 tons of contaminated soil did not meet the Soil Treatment Goals and was transported off-site by Charter for further treatment and disposal by GSI Environmental, Inc..

Bedrock Pre-Design Studies and Investigations

A series of additional studies and investigations were performed between 2003 and 2005 to develop the design for the NTCRA ISCO program and the in-situ treatment portion of the Site Action. The information from the studies was also used to develop the Remedial Design that was approved in August 2005 and to develop the implementation work plans for the OU I Remedial Action and included the following activities:

Fifteen bedrock boreholes were drilled in Area 1 during June and July 2004. Bedrock fractures were characterized by borehole geophysics, and water samples were collected by packer methods. Shallow fracture DNAPL distribution and rock matrix properties were assessed by

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methanol extracted rock samples (MERC). These well locations provide characterization data for the Area 1 bedrock groundwater and contribute to the overall understanding of the bedrock fracture system and its behavior under pumping conditions. A multi-well hydraulic control pump test was conducted in September and October 2004 utilizing ten pumping wells (EW-2, EW-3, EW-4, EW-5, EW-6, EW-7, BM-31, BM-35, BM-36, and BM-04). During the test, individual well flow rates were gradually increased or decreased depending on individual well responses.

Following the hydraulic control pump test, a conservative interwell tracer test (CITT) was designed and performed during October 2004 under forced gradient conditions to demonstrate that measurable flow paths exist within the aquifer. A partitioning tracer test (PITT) was also performed in conjunction with the CITT to assess the volume of DNAPL contacted within the swept aquifer volume. Electrical resistivity tomography (ERT) and induced polarization tomography (IPT) was conducted prior to and in conjunction with the CITT to identify preferential pathways and potential DNAPL in the bedrock.

During November and December 2004, three off-site bedrock boreholes were installed on the property Map 18 Lot 93 and a groundwater pumping test was completed using these boreholes to refine estimates of aquifer transmissivity and anisotropy at locations east of the EBSR to be used in groundwater flow and contaminant transport numerical model simulations

Construction of Temporary In-Situ Chemical Oxidation Injection Wells

Three areas of contaminated soil could not be excavated during the NTCRA due to the depth of the contamination and proximity to Route 7. One area was located within Area 1 and the other two within the Area 4 UST Area and Building 14. These remaining contaminated soils are located in the saturated zone between depths of six to 40 feet below ground surface (bgs). Soil contamination in the UST Area attributable to the Site is assumed to extend a limited distance beneath Route 7.

The final phase of the NTCRA targeted the reduction of contamination in these source areas using an ISCO program. In June and July 2004, 23 ISCO injector wells were installed in Area 1 to depths ranging from 35 to 40 feet bgs. Following injector installations, a field-scale pilot study was performed in November 2004 to evaluate the effectiveness of two potential oxidant technologies, Fenton's reagent and iron-catalyzed sodium persulfate (ICP). The results of this pilot study indicated that ICP achieved superior subsurface distribution relative to Fenton's reagent due to its longer reaction half-life. Post-pilot study soil sampling suggested that a 48% total mass reduction attributable to ICP was achieved over the pilot study area. Based upon these results, ICP was selected as the oxidant for full-scale treatment application for the NTCRA and Remedial Action ISCO programs.

In spring 2005, full scale NTCRA ISCO began, and 20 injector wells were installed in the UST Area and the former Building 14 Area to depths ranging from 15 to 30 feet bgs to treat the

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remaining contaminated soil below the water table. ISCO treatment consisted of two full-scale injections of ICP, followed by confirmatory soil borings and groundwater sampling. These injections were performed in July and October/November 2005. A total of 13,319 gallons of persulfate solution and 13,514 gallons of chelated iron solution were delivered to the UST and Building 14 areas. Confirmatory soil borings and groundwater sampling indicated an approximate 90% reduction of dissolved phase contamination and an approximate 71% reduction in sorbed phase soil contamination following the initial ISCO program. The OUI Remedial Action will include long-term monitoring of the UST and former Building 14 areas to confirm whether groundwater restoration is achieved.

In August 2005, one full-scale round of ISCO treatment was applied to the remaining soil contamination in Area 1. ICP was delivered to the subsurface via 11 ISCO injector wells. Approximately 19,256 gallons of persulfate and 19,423 gallons of chelated iron solution were delivered to the treatment area. Confirmatory groundwater sampling performed following full-scale ISCO application indicated a reduction of dissolved phase contamination by approximately 63%.

In June and July 2006, four shallow bedrock injector wells were installed in Area 1 to provide ISCO treatment of shallow bedrock contamination. As part of the Remedial Action, additional full-scale ISCO injections are planned for the Area 1 overburden and bedrock.

At the end of the ISCO program, all wells not included in the long-term monitoring program or bio-stimulant injection program will be de-commissioned. No additional injector wells are planned for the ISCO.

Surveying Services

Periodic topographic mapping of the site was performed between 2000 and 2004 by Weston. Additional as-built monitoring well and treatment well surveys were conducted by OEST Associates, Inc in July 2004. Subsequently, location surveys were performed on several occasions to determine the horizontal coordinates and/or vertical elevations of monitoring and treatment wells that were installed at different times. An as-built survey of the restored Site, redevelopment, and abutting property boundaries was completed by Webber Surveying, Inc. in November 2005.

Construction of Long-Term Monitoring Wells

In support of the Site Long-Term Monitoring Plan, 11 overburden and 4 bedrock monitoring wells were installed at, or in the vicinity of the Site from June through July 2006. The new overburden wells were installed utilizing case and wash or rotasonic drilling techniques. The monitoring wells were developed using a combination of overpumping, manual surging, and bailing. Well Construction and development was performed in accordance with the Site Long-

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Term Monitoring Plan dated April 14, 2006 and the USACE Engineer Manual No. EM-1110-1-4000, Monitoring Well Design, Installation, and Documentation at Hazardous, Toxic, or Radioactive Waste Sites, November 1998.

Public Water Supply Connections

In support of the Institutional Control Zone, construction of public water supply connection to three residences (Map 18 Lot 52, Map 18 Lot 43, and Map 18 Lot 39) was performed between September and November 2005 by Paradis (subcontractor to CENAE). The Institutional Controls are being developed. EPA and Maine DEP are working together to implement the institutional controls. The expectation is that restrictive covenants will be used to prevent future groundwater use. The Town of Corinna would also institute an ordinance to prohibit groundwater use in the Institutional Control Zone.

Construction Chronology

A summary of construction chronology is presented below. The Action Memorandum was signed in July 1999. On-site NTCRA activities commenced in 1999 and were concluded on December 23, 2005. During this period, construction activities occurred within separate work areas over different periods or as new developments at the site resulted in the expansion of ongoing activities. NTCRA work areas are described as: Area 1 (the region underlying mill Buildings 1, 1A, and 3), Area 2 (the river segment down river from the mill to the abandoned railroad trestle), Area 2a (the river segment under the abandoned railroad trestle and overlapping Area 2 and Area 3), Area 3 (the river segment for a distance several hundred feet beyond the railroad trestle), and Area 4 (including Lot 88, Building 9, UST Area, and other miscellaneous areas).

NTCRA Chronology

December 1999 to May 2000	Demolition and removal of the mill buildings
July 2000	Area 4 - Building 4 soil excavation and backfill
July to October 2000	Sewer and water utility relocation
July to October 2000	Area 3 soil excavation and backfill
August to October 2000	Area 2 and Area 2.a soil excavation and backfill
October 2000	Relocation of ODD Fellows Hall

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October 2000	Area 4 – Lot 88 soil excavation and backfill
October to November 2000 and June 2001	Area 4 – Building 9 UST removal, soil excavation and backfill
October 2000 to August 2001	Construction of temporary by-pass for Route 7, including bridge for Route 7
November to December 2000 and June to July 2001	Area 4 – 30,000 gallon UST removal, soil excavation and backfill
June to August 2001	River diversion
July to September 2001	Area 4 – Pump House soil excavation and backfill
July to December 2001	Contaminated soil screening and oversize material washing
August 2001	Area 1 – Building 1A soil excavation and backfill
August to December 2001	Area 1 soil excavation and backfill
August to December 2001	Construction of NTCRA groundwater extraction and treatment system
September to October 2001	Restoration of Mill Pond
October 2001	Area 1 Chemical Storage Building UST removal
October to November 2001	Corundel Dam repair
May to December 2002	Low-temperature thermal desorption (LTTT) system pilot study and performance testing
June to August 2002	Route 42/Palmyra Spur Road construction
May to October 2003	LTTT full-scale soil treatment, backfill, and off-site transport
August 2004	Building 14 Soil Excavation
2004	Weston Site Restoration
June to July 2004	Area 1 construction of temporary overburden and bedrock ISCO

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	injection wells and bedrock boreholes
November 2004	Area 1 overburden ISCO pilot study and performance testing
May to June 2005	Area 4 – Building 14 and UST Area construction of temporary overburden ISCO injection wells
July to November 2005	Area 4 – Building 14 and UST Area full-scale overburden ISCO treatments
September 2005	Area 1 full-scale overburden ISCO treatments
December 2005	NTCRA field activities complete

Remedial Action Chronology

September to October 2005	Construction of public water supply connections
May to September 2006	Area 4 well decommissioning and site restoration (Building 14 and the UST Area)
June to July 2006	Construction of long-term monitoring wells in overburden and bedrock
June to July 2006	Construction of temporary bedrock boreholes and groundwater extraction wells for ISCO application
June to September 2006	Bedrock ISCO bench studies and performance testing
September 2006	Lot 88 well decommissioning site restoration
September 2006	OU I Construction activities complete
September to November 2006	Area 1 ongoing full-scale ISCO treatment of overburden and bedrock

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III. DEMONSTRATION OF QUALITY ASSURANCE AND QUALITY CONTROL

All work performed at the Site was consistent with the Action Memorandum, OU I ROD, and the final design the NTCRA and OU I. EPA, on its own, and through the U.S. Army Corps of Engineers performed oversight of the NTCRA and OU I construction activities in addition to the quality control and quality assurance activities performed by the contractor.

All sampling was implemented using EPA, ASTM, or other standard practices. All construction quality and performance data was reviewed by EPA as part of the oversight of the construction activities. The data pertaining to the limits of excavation and the treatment of soil along with the performance data from the in-situ oxidation program was used to document the achievement of the design requirements for these components of the work. Ambient air sampling was performed to confirm compliance with the Maine Ambient Air Standards and EPA risk based standards during the excavation and ex-situ treatment activities.

All construction quality control and quality assurance information is available at the EPA Region I Records Center in Boston, MA. The QA/QC program utilized throughout the construction program was sufficiently rigorous and was adequately complied with to enable EPA and the State to determine that the results reported are accurate to the degree needed to assure satisfactory execution of the NTCRA consistent with the Action Memorandum and the OU I ROD and the accepted design for OU I.

EPA and Maine DEP performed a final inspection on September 19, 2006. Both EPA and Maine DEP concluded that construction activities were complete. No punch list items were identified.

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IV. ACTIVITIES AND SCHEDULE FOR SITE COMPLETION

The following activities will be completed according to the schedule in Table I below:

TABLE I TASK	ESTIMATED COMPLETION	RESPONSIBLE ORGANIZATION
Operation and Functional Determination	September 2007	EPA and Maine DEP
Institutional Controls	2007	EPA and Maine DEP
De-commission ISCO wells and temporary groundwater extraction and treatment system	2008/2009	EPA
Long-term Response Action Activities (monitoring and periodic injections)	2017	EPA responsible for 10 years after Operational and Functional Determination, unless groundwater restoration is achieved
Five Year Review	September 2011	EPA
Long-Term Monitoring Completion	September 2087	EPA for years 1-10 (2007 – 2017) and State of Maine, thereafter
Interim RA Report	September 2007	EPA
Final RA Report	September 2087	EPA
Final Inspection	September 2087	EPA
Final Close Out Report/Approval	September 2087	EPA

All preliminary completion requirements for the Site have been met as specified in Close Out Procedures for National Priorities List Sites,” OSWER Directive 9320.2-09A-P, January 2000. Specifically, all construction activities identified in the NTCRA and OU I ROD have been successfully implemented and a final inspection by EPA and the State has been conducted. The NTCRA and OU I construction activities have been completed.

The long-term response action will be performed by EPA for 10 years. EPA will perform periodic injections of in-situ reagents and biostimulants. The long-term response action will run until 2017 when the State of Maine will take control of the remedial action.

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The final ROD for the Site has been completed. The OU I ROD Amendment completed in September 2006 documented that the long-term groundwater extraction and treatment and enhanced flushing with surfactants/co-solvents is not required. Therefore, no additional construction activities are expected at this time.

V. Cost

EPA provided the USACE with \$46,023,534 in funding for the NTCRA. Of that \$43,246,550 was expended for the soil excavation and treatment program and \$2,776,984 for NTCRA ISCO. The Remedial Action ISCO is expected to cost \$3.8 million.

VI. FIVE YEAR REVIEW

The final ROD for the Eastland Woolen Mill Superfund Site was signed post-SARA and the statute requires a five year review if waste will remain on-site. EPA will perform a statutory five year reviews at this Site. The first five year review will be completed by September 2011. EPA and the State will determine and document site completion in accordance with "Close Out Procedures for National Priorities List Sites," OSWER Directive 9320.2-09A-P, January 2000.

A bibliography of all reports relevant to the preliminary completion of this Site under the Superfund program is attached. These documents are available for review by calling the Region I Records Center at (617) 918-1453.

Approved by:

Susan Studlien

Susan Studlien, Director
Office of Site Remediation and Restoration
EPA New England

09/28/06

Date

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Bibliography

- Nobis Engineering, Inc. (2003). Institutional Control Zone Refinement Approach and Task Plan; Operable Unit 1 GW-4 Remedial Action, Eastland Woolen Mill Superfund Site, Corinna, Maine.
- Nobis Engineering, Inc. (2004a). Final Conservative Interwell Tracer Test Design ; Operable Unit 1 GW-4 Remedial Action, Eastland Woolen Mill Superfund Site, Corinna, Maine.
- Nobis Engineering, Inc. (2004b). Phase II Task Plan Rev. 01; Operable Unit 1 GW-4 Remedial Action, Eastland Woolen Mill Superfund Site, Corinna, Maine.
- Nobis Engineering, Inc. (2005a). Conceptual Model Update; Eastland Woolen Mill Superfund Site, Operable Unit 1 GW-4 Remedial Action, Corinna, Maine.
- Nobis Engineering, Inc. (2005b). Remedial Design; Operable Unit 1, Eastland Woolen Mill Superfund Site, Corinna, Maine, August 2005.
- Nobis Engineering, Inc. (2005c). Phase I Task Plan Rev. 02a; Operable Unit 1 GW-4 Remedial Action, Eastland Woolen Mill Superfund Site, Corinna, Maine.
- Nobis Engineering, Inc. (2005d). Area Wide Groundwater Sampling Technical Memorandum; Eastland Woolen Mill Superfund Site, GW-4 Remedial Action, Corinna, Maine, March 2005.
- Nobis Engineering, Inc. (2005e). Institutional Control Zone Groundwater Modeling Report; Eastland Woolen Mill Superfund Site, GW-4 Remedial Action, Corinna, Maine, 2005.
- Nobis Engineering, Inc. 2005 Phase I and Phase II ISCO Remedial Performance Assessment, May 2006
- Roy F. Weston, (Weston) (2001). Final Completion Report Areas 2,3,4-Lot 88 and 4-Building 4 Soil Remediation Non-time Critical Removal Action, Eastland Woolen Mill Superfund Site, Corinna, Maine, June 2001.
- Roy F. Weston, (Weston) (2002 in press). Final Completion Report Areas 1 and 4 Soil Remediation Non-time Critical Removal Action, Eastland Woolen Mill Superfund Site, Corinna, Maine, June 2001.
- USEPA (2002). EPA Superfund Record of Decision: Eastland Woolen Mill Superfund Site, EPA ID: MED980915474, OU 01, Corinna, Maine, September 19, 2002, 91 pages.
- USEPA (2004) EPA Superfund Record of Decision: Eastland Woolen Mill Superfund Site. OU II, September 2004
- USEPA, EPA Superfund Record of Decision Amendment for OU I: Eastland Woolen Mill, OU I, September 2006