EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)

CENTREDALE MANOR RESTORATION PROJECT SUPERFUND SITE (CMRP)

NORTH PROVIDENCE, RHODE ISLAND

SEPTEMBER 2019

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION 1
5 POST OFFICE SQUARE
BOSTON, MA 02109-3912

EXPLANATION OF SIGNIFICANT DIFFERENCES
CENTREDALE MANOR RESTORATION PROJECT SUPERFUND SITE

I. INTRODUCTION

A. SITE NAME & LOCATION

Site Name: Centredale Manor Restoration Project Superfund Site

Site Location: North Providence, Rhode Island, Providence County

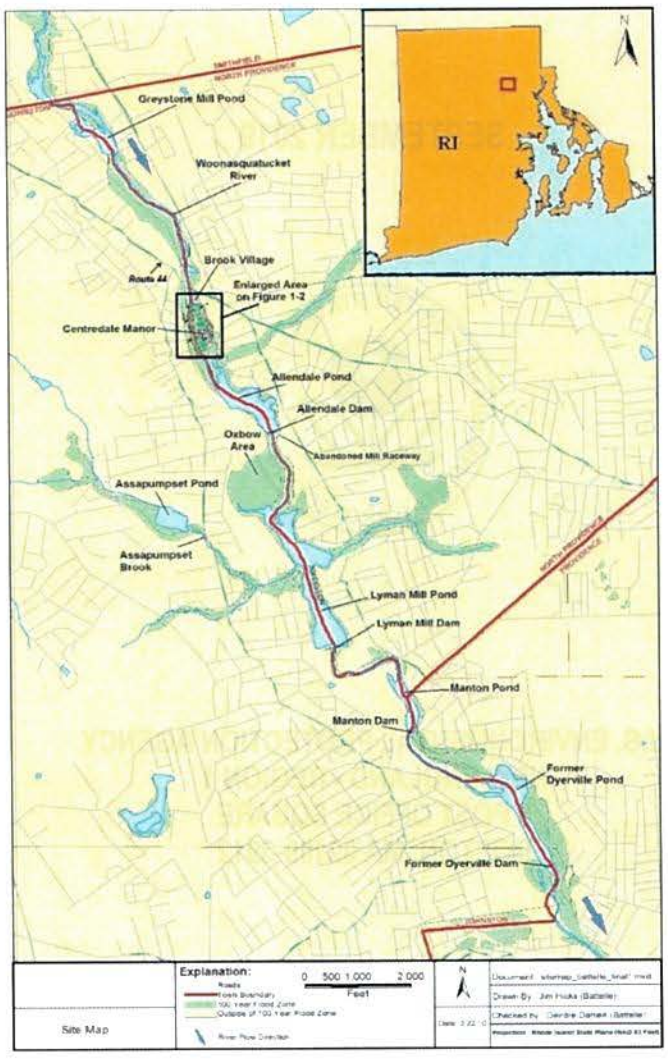

Figure 1. Centredale Manor Restoration Project Superfund Site

B. LEAD & SUPPORT AGENCIES

Lead Agency: United States Environmental Protection Agency (EPA)

- *Contact: Anna Krasko, EPA Remedial Project Manager, (617) 918-1232*

Support Agency: Rhode Island Department of Environmental Management (RIDEM)

- *Contact: Gary Jablonski, RIDEM Project Manager, 401-222-2797 x 7148*

C. LEGAL AUTHORITY FOR ESD

This Explanation of Significant Differences (ESD) is being issued for the Centredale Manor Restoration Project Superfund Site ("Site") to document changes in the remedy as originally set forth in the September 28, 2012 Record of Decision ("2012 ROD") for the Site.

Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Section 9617(c), requires that, if the remedial action being undertaken at a site differs significantly from the Record of Decision for that site, the U.S. Environmental Protection Agency (EPA) shall publish an ESD and the reasons such changes were made. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.435(c)(2)(i), and Office of Solid Waste and Emergency Response (OSWER) Directive 9200.1-23P, indicate that an ESD, rather than a ROD Amendment, is appropriate where the adjustments being made to the ROD are significant, but do not fundamentally alter the remedy with respect to scope, performance, or cost. This ESD documents changes to certain components of the remedy set forth in the 2012 ROD for the Site. EPA has determined that the adjustments to the 2012 ROD provided in this ESD are significant, but do not fundamentally alter the overall remedy with respect to scope, performance or cost. Therefore, this ESD is properly issued.

In accordance with Section 300.825(b) of the NCP, EPA voluntarily chose to hold a public comment period on this draft document from July 18, 2019 to August 16, 2019 to ensure that all interested parties had an opportunity to provide input to EPA before its final decision on this modification to the remedy.

D. SUMMARY OF CIRCUMSTANCES NECESSITATING THIS ESD

1. Endorsement by EPA of the State of Rhode Island's Core Comprehensive State Groundwater Protection Program ("CSGWPP")

At the time of EPA's issuance of the 2012 ROD, the State of Rhode Island did not have an EPA-endorsed Core Comprehensive State Groundwater Protection Program ("CSGWPP"). As a result, consistent with the Preamble to the NCP (55 Fed. Reg. 8666, March 8, 1990, pp. 8732-8735) and the federal classification scheme described in *EPA Guidelines for Ground-Water Classification* (December 1986), EPA determined that the groundwater at the Source Area of the Site was a potential

drinking water source (Class IIB).[1] Accordingly, EPA identified federal drinking water standards as applicable and relevant and appropriate requirements (ARARs) for the Site and included maximum contaminant levels (MCLs) and non-zero maximum contaminant level goals (MCLGs) as cleanup levels for groundwater, as well as associated GA soil cleanup standards in the Source Area for the Site.

At the time of the issuance of the 2012 ROD, EPA noted in the Responsiveness Summary to the 2012 ROD: "EPA is happy to work with Rhode Island should the State express interest in having an approved CSGWPP." In March of 2018, RIDEM applied for and became a CSGWPP-endorsed State. Subsequently, on June 19, 2019, EPA and RIDEM entered into a Memorandum of Understanding (MOU) pursuant to EPA-New England's Groundwater Use and Value Determination Guidance (April 4, 1996), which sets forth a process by which EPA can defer to the state's groundwater classification on a site-specific basis when determining the expected current and future uses of groundwater at the Site. (See *The Role of CSGWPP in EPA Remediation Programs,* April 4, 1997, OSWER Directive 9283.1-09).[2] In accordance with the Rhode Island Groundwater Protection Act of 1985 (RI General Laws 46-13.1), RIDEM has classified all of the state's groundwater resources and established groundwater quality standards for each class for the purposes of determining remediation requirements for groundwater at waste disposal sites within the State of Rhode Island. Under RIDEM's "Groundwater Quality Rules," the State of Rhode Island has designated the groundwater at the Source Area as Class GB, i.e., groundwater which may not be suitable for drinking water use without treatment due to known or presumed degradation. In addition, RIDEM has prepared a Use and Value Determination dated July 8, 2019, designating the groundwater at the Site, and immediately adjacent to it, as Low Use and Value. Accordingly, EPA will defer to RIDEM's GB groundwater classification and the numerical GB groundwater remediation objectives for 17 volatile organic compounds (VOCs) as set forth in RIDEM's "Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases."

This ESD revises Source Area cleanup levels for groundwater and soil and the corresponding remedial alternatives. The cleanup levels for Source Area Groundwater and Source Area Soil will no longer be based on the federal groundwater classification as Class IIB (potential drinking water source) and are revised to be based on Rhode

---

[1] Prior to the issuance of the 2012 ROD, EPA Region 1 initially relied on the RIDEM GB groundwater classification and proposed that groundwater at the Site be classified as Class III (Not a Potential Source of Drinking Water and/or of Limited Beneficial Use). A review by EPA Headquarters, and comments submitted to the Region by the National Remedy Review Board, indicated that the Region's groundwater classification approach was inconsistent with EPA Guidance. Upon further review, Region 1 determined that its initial determination was incorrect and that it should not have looked to the State's classification in making its preliminary determination. Consistent with the NCP, the Region then followed EPA's 1986 Groundwater Protection Strategy and determined that Source Area groundwater was correctly classified as Class IIB (potential drinking water source) in the absence of an EPA-endorsed CSGWPP. See 2012 ROD, Part 3: Responsiveness Summary, p. 87-88.

[2] The MOU establishes the terms and procedures for implementation of the Groundwater Use and Value Determination Guidance in Rhode Island and the State's performance of site specific use and value groundwater determinations.

Island's Class GB (i.e., groundwater which may not be suitable for drinking water use without treatment due to known or presumed degradation.)

The April 2010 Interim Final Feasibility Study ("2010 FS"), which was later updated, is based on a Class III federal groundwater classification which applies to non-drinking water sources.[3] The detailed evaluation of groundwater alternatives is presented in Section 6.10 of the 2010 FS, and includes Alternative 1 (No Action) and Groundwater Alternative 2e (Excavation/Dewatering), which is the selected groundwater remedy in the 2012 ROD. The 2010 FS describes the steps taken for the development of Remedial Action Objectives (RAOs) and Action Areas (including ARARs, Preliminary Remediation Goals, and Cleanup Goals), and includes a Detailed and Comparative Evaluation of Groundwater Alternatives based on a non-drinking water classification and GB-based leachability soil cleanup levels. In light of the groundwater classification change, these evaluations in the 2010 FS are now applicable to the remedy selected for this Site, as modified by this ESD.

As explained below, the change in groundwater classification does not fundamentally change the remaining work to be done at the Site to address groundwater, which remains long term monitoring and institutional controls ("ICs").

2. Pre-Design Investigation of Potential Buried Waste in the Source Area

A pre-design investigation (PDI) in the Source Area required by the 2012 ROD was performed from 2013 to 2014 by potentially responsible parties (PRPs) who were respondents to an Administrative Settlement Agreement and Order on Consent, CERCLA Docket No. 01-2013-0019, signed by the Director of the Office of Site Remediation and Restoration on August 7, 2013 (the Settlement Agreement).

The primary goal of the PDI was to observe and sample buried material within an approximately 37,000-square-foot area in the southern portion of the Source Area to evaluate whether the material requires offsite disposal and/or treatment. This area was identified in the September 2012 ROD as an area where buried waste materials may contain a number of hazardous substances potentially at high concentrations and could be highly mobile and not reliably contained (Figure 2). To achieve these goals, test pits were excavated and soil and waste material removed from the test pits were observed, photographed, and sampled. The Revised Pre-Design Investigation Final Report was prepared by Woodard & Curran on behalf of the respondents and was submitted to EPA on December 23, 2014. In a Notice of Completion dated March 4, 2015, EPA determined that the respondents fully performed the PDI in accordance with the Settlement Agreement, and that all goals of the Settlement Agreement and the

[3] At the time of the issuance of the 2010 FS, EPA had relied on the RIDEM GB classification and initially proposed that groundwater be classified as Class III. EPA later determined that the groundwater was properly classified as Class IIB, due to the fact that Rhode Island did not have an EPA-endorsed CSGWPP at the time. See fn 1. Following this determination, EPA issued an Addendum to the Interim Final Feasibility Study (FS Addendum) in September 2011 that supported the Source Area Groundwater and Soil remedies selected in the 2012 ROD, which were based on the federal classification.

Statement of Work were satisfied.[4] The PDI demonstrated that no waste material that requires off-Site disposal and/or treatment is present at the Source Area and excavation is therefore not required.

[4] The Revised PDI Final Report and Notice of Completion of Work were added to the revised Administrative Record for the 2012 ROD in March 2015, in accordance with 40 C.F.R. § 300.825(a)(1) (Record requirements after the decision document is signed), which provides that EPA may add documents to the Administrative Record after the ROD has been signed if the documents concern a portion of a response action decision that the ROD does not address or reserves to be decided at a later date.

Figure 2. PDI Investigation Area

3. EPA's Contained-In Waste Determination

As set forth in the 2012 ROD, the soil and sediment at the Site has been characterized as F020 listed hazardous waste which is waste from the production or manufacturing use of trichlorophenol. See ROD, Part 2: The Decision Summary, p. 113. According

to the remedy selected in the 2012 ROD, contaminated soil and sediment that does not exceed the alternative treatment standards of the Resource Conservation and Recovery Act's (RCRA) Land Disposal Restrictions (LDRs) will be disposed of in a confined disposal facility (CDF) that is located outside of the 100-year floodplain and that complies with Subtitle C of RCRA.[5] (Closure in accordance with the hazardous waste regulations was selected because contaminated media, when mixed with listed hazardous waste, is considered to be hazardous waste.)

According to EPA policy ("Management of Remediation Waste Under RCRA," OSWER Directive EPA 530-F-98-026, October 1998), media contaminated with listed hazardous waste is considered to no longer contain hazardous waste if it does not exhibit a characteristic of hazardous waste and does not contain concentrations of hazardous constituents that are above health-based levels. As discussed further below, since issuing the 2012 ROD, EPA has issued a Contained-In Memorandum, in conjunction with RIDEM, that concludes that the contaminated sediment and soil that is to be excavated from the Site does not contain listed hazardous constituents above health-based levels (as long as concentrations are below the LDRs' alternative treatment standards). As a result, as long as such material does not exhibit any hazardous characteristics and does not exceed certain levels of polychlorinated biphenyls (PCBs) (as discussed further in Section III(C) below), it can be disposed of in an existing Subtitle D landfill (assuming certain other conditions are met as explained further below in fn. 12). In comparison to the 2012 ROD, this change does not alter the work to be performed to address contaminated soil and sediment, but does expand the options for disposal of waste such that the construction of a CDF for waste disposal may no longer be necessary.

E. AVAILABILITY OF DOCUMENTS

This ESD and all supporting documentation shall become part of the Administrative Record for the Site. The ESD, supporting documentation for the ESD, and the Administrative Record are available to the public at the following locations and may be reviewed at the times listed:

U.S. Environmental Protection Agency
Records Center
5 Post Office Square, Suite 100
Boston, MA 02109

---

[5] LDRs (40 CFR Part 268) are technology-based treatment standards that must be met before hazardous waste can be placed in a landfill. Numeric treatment standards, known as universal treatment standards ("UTS"), have been assigned to each possible hazardous constituent. Before a hazardous waste can be land disposed, each hazardous constituent in the waste must meet its UTS. Alternative treatment standards have been established for contaminated soil (40 CFR § 268.49). Before contaminated soil can be land disposed, it must be treated to reduce the concentrations of its hazardous constituents by 90 percent. However, the required level of treatment is capped at 10 times the UTS of each hazardous constituent. Therefore, if the concentration of each hazardous constituent in contaminated soil or dewatered sediment does not exceed 10 times its UTS, then the waste does not need to be treated prior to disposal in the upland CDF. Under these regulations, concentrations of 2,3,7,8-TCDD that require incineration are 10 ug/kg and above.

617-918-1440
Monday-Friday: 9:00 am – 5:00 pm
Saturday and Sunday: Closed

North Providence Union Free Library
1810 Mineral Spring Avenue
North Providence, RI 02911
401-353-5600
Monday-Thursday: 10 am – 8:45 pm
Friday-Saturday: 10 am – 5:45 pm
Sunday: Closed

Marian J. Mohr Memorial Library
1 Memorial Ave
Johnston, RI 02919
401-231-4980
Monday-Thursday: 9 am – 8 pm
Friday: 8am to 6pm
Saturday: 9 am – 5 pm after Labor Day through June
Closed: Saturday: July until Labor Day
Sunday: Closed

EPA's website: www.epa.gov/superfund/centredale

II. SUMMARY OF SITE HISTORY, CONTAMINATION AND SELECTED REMEDY

A. SITE HISTORY, CONTAMINATION AND SITE RISKS

The Site encompasses parts of two Rhode Island towns, North Providence and Johnston, and free-flowing reaches and impoundments of the Woonasquatucket River (the "River"). The area of the Site referred to as the Source Area consists of approximately nine acres of land on the eastern shore of the River, just south of Route 44 in a densely-populated area of downtown North Providence, Rhode Island. A chemical manufacturer, Metro-Atlantic, Inc. (initially known as Atlantic Chemical Company), and the New England Container Company, Inc., an incinerator-based drum reconditioning facility, operated at the Source Area for several decades in the mid-20th century. The Brook Village apartments and the Centredale Manor apartments, two subsidized senior citizen high-rises housing about 335 residents, currently occupy the Source Area.

Among other operations, Metro-Atlantic manufactured hexachlorophene from 2,4,5-trichlorophenol (TCP) shipped to the Site. Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin [TCDD]) is a contaminant present in 2,4,5-TCP. The manufacturing building where this process took place was located adjacent to the River. Direct discharges into the River, as well as overland and groundwater discharges, took place.

The Site was listed on the National Priorities List (NPL) in 2000. From 1999 to 2005,

while RI investigations were ongoing, EPA conducted several removal actions to reduce the immediate threats to residents on and near the Source Area and along the River and to minimize potential erosion and downstream transport of contaminated soil and sediment. These actions included installation of the interim soil caps in the Source Area, construction of fencing in the Source Area and along Allendale and Lyman Mill Ponds, restoration of the Allendale Dam and Pond, and removal of contaminated soil from residential properties along the River. An additional removal action was conducted from 2009 to 2010 to remove soil and install a RCRA Subtitle C (hazardous waste) cap in the area of the Brook Village parking lot to minimize the movement of contamination through groundwater into the River.

The remedy set forth in the 2012 ROD addresses the following unacceptable risks: exposure to contaminated soil, floodplain soil, surface water, biota and/or sediment that presents an unacceptable risk to human health and/or ecological receptors and/or exceeds ARARs and To Be Considered (TBC) requirements; and potential future exposure to contaminated groundwater that could be used as a drinking water source that presents an unacceptable risk to human health.

The objectives of the remedy (known as Remedial Action Objectives or RAOs), as stated in the 2012 ROD, include:

Source Area Soil and Groundwater

- Prevent incidental ingestion of, and dermal contact with, contaminated soils that may present a risk to human health or otherwise exceed ARARs
- Prevent leaching or migration of contaminants from soil into groundwater
- Prevent migration of contaminants from groundwater that could lead to unacceptable risks to human health, and/or result in surface water contamination and/or exceedances of sediment cleanup levels
- Prevent ingestion of, and dermal contact with, contaminated groundwater
- Comply with federal drinking water standards

Allendale and Lyman Mill Pond and Stream Sediment and Floodplain Soil (including the Oxbow)

- Prevent ingestion of fish and other aquatic organisms, and incidental ingestion of and dermal contact with contaminated sediments, that may present a risk to human health
- Prevent incidental ingestion of, and dermal contact with, contaminated floodplain soils that may present a risk to human health or otherwise exceed ARARs
- Reduce contaminant concentrations in fish and other aquatic organisms so that they no longer present an unacceptable risk to human health
- Prevent unacceptable impacts to ecological receptors from contaminated sediments and floodplain soils
- Prevent migration of contaminated sediments and floodplain soils

- Maximize hazard reduction and minimize remediation related habitat loss for ecological receptors

The scope of the remedy selected in the 2012 ROD includes: (i) conversion of existing surfaces in the Source Area (soil caps, parking lots, paved areas, tailrace, and landscape areas) into a RCRA C cap; (ii) excavation of the majority of contaminated River sediment and floodplain soil in the Allendale and Lyman Mill reaches of the River and placement into an upland CDF, with off-site treatment and/or disposal of dewatered sediment and floodplain soil that exceed the LDRs' alternative treatment standards; (iii) placement of a thin layer cover, as necessary, over remaining contaminated sediment in the River and remaining contamination in the Oxbow wetland; (iv) placement, monitoring and enforcement of ICs to prevent exposure and preserve the integrity of components of the remedy; (v) long-term monitoring, including surface water and groundwater monitoring and monitoring downstream of Lyman Mill Dam, and maintenance to protect the integrity of the RCRA C cap, upland CDF, Allendale and Lyman Mill dams and thin-layer wetland cover; and (vi) mitigation of wetlands and floodplains.[6] The remedy also includes precautionary interim measures on portions of residential properties that are vulnerable to flooding and recontamination from the River, including the construction of fencing and placement of covers, which were completed by RIDEM and EPA from 2013 to 2014.

EPA has been involved in litigation related to this Site with a number of the PRPs since 2011. In September 2015, the U.S. District Court of Rhode Island (the "Court") issued a decision holding Emhart Industries, Inc. and Black and Decker Inc. (successors of Metro-Atlantic and collectively referred to as "Emhart") jointly and severally liable under CERCLA for the contamination at the Site. In August 2017, the Court issued another opinion, finding that EPA followed CERCLA and the NCP in selecting the remedy in the 2012 ROD and upholding the remedy in large part with the exception of three decisions that the Court found were arbitrary, capricious, or otherwise not in accordance with law and must be subsequently addressed before moving forward with the remedy. EPA filed a Motion for Reconsideration of the decision and also appealed the decision to the First Circuit Court of Appeals. While these filings were pending, EPA and Emhart reached a settlement, pursuant to which Emhart agreed to perform the remedy set forth in the 2012 ROD. The settlement, which was embodied in a Consent Decree, was approved and entered by the Court on April 8, 2019.[7] Subsequently, pursuant to one of the terms of the CD, the Court formally vacated its previous opinion on the remedy.

---

[6] The 2012 ROD addresses five geographic action areas of the Site. Since issuance of the ROD, EPA has converted the action areas into geographically-based operable units (OU) for tracking purposes. The four operable units include: (i) OU1 – the Source Area (which includes underlying groundwater); (ii) OU2 – Allendale Pond Sediments and Floodplain Soil; (iii) OU3 – Lyman Mill Pond Stream Sediment and Floodplain Soil and the Oxbow; and (iv) OU4 – Lyman Mill Pond Sediments and Floodplain Soil.

[7] On May 31, 2019, three parties in the litigation filed notices of appeal.

B. SUMMARY OF THE COMPONENTS OF THE REMEDY SUBJECT TO THE ESD

The following is a summary of the 2012 ROD components impacted by this ESD. All other components of the remedy in the 2012 ROD remain unchanged.

1. Summary of the Groundwater Component of the Remedy

Construction of the Excavation/Dewatering groundwater alternative (Alternative 2e) selected as the Groundwater remedy in the 2012 ROD was largely completed by the PRPs from 2009 to 2010 as a removal action (see above). The remedy included: (i) installation of a sheet pile wall in the River along the excavation area; (ii) dewatering of approximately 80,000 gallons; (iii) excavation of 1,725 cubic yards of contaminated soil from a 0.13-acre area underneath the Brook Village parking lot; (iv) shipment of the soil off-site for treatment; (v) installation of a 2.5-foot RCRA Subtitle C cap over the backfilled area; and (vi) installation of two new monitoring wells near the edge of the excavated/capped area at the groundwater discharge points to the River. This alternative also required achievement of ARARs based on federal drinking water standards at the point of compliance (the edge of the Source Area Soil RCRA C Cap). The ARARs were based on EPA's determination that the groundwater at the Source Area was a potential drinking water source (Class IIB) consistent with the NCP and based upon EPA's federal classification scheme described in *EPA Guidelines for Ground-Water Classification* (December 1986).

Remaining components of the groundwater remedy include: ICs to prevent use and exposure to groundwater underneath the Source Area Soil cap; periodic monitoring of existing and new groundwater monitoring wells and surface water; installation of additional monitoring wells; maintenance of existing and new monitoring wells; and review of the Source Area conditions and risks at five-year intervals.

In addition, the components of the selected remedy that address soil, floodplain soil, groundwater and sediment should result in attainment of ambient water quality criteria in surface water.

2. Summary of the Source Area Soil Component of the Remedy

The selected remedy for Source Area Soil (Alternative 4e) includes excavation and off-site disposal of buried waste material, as necessary, and upgrades to existing interim caps, paved surfaces, and landscaped areas to meet RCRA C (hazardous waste) requirements, which EPA determined were relevant and appropriate to the disposal of the Source Area soil in place, consistent with guidance for caps over unlined hazardous waste landfills.[8] The selected alternative also required an additional PDI to determine if any buried waste material, hazardous debris and associated contaminated soil would need to be excavated and treated offsite at a permitted incinerator facility. As discussed further below, a PDI performed post-ROD determined that no excavation of buried waste material is needed. Remaining components of the Source Area Soil remedy

[8] See Revised Alternative Cap Design Guidance Proposed for Unlined, Hazardous Waste Landfills in the EPA Region 1 (February 5, 2001).

include installation of the RCRA C cap, long-term monitoring, and ICs.

The remedy also includes additional studies and investigations such as an evaluation of changes in the drainage that directs stormwater flow onto the tailrace (Cap #3), an evaluation of the rip rap along the edges of the RCRA cap/bank of the River, and additional soil sampling. As part of the remedy implementation, underground utilities are to be placed into trenches with only clean soil to allow for future maintenance requirements. Compensatory mitigation for wetland and floodplain losses and invasive species monitoring and management will also be required. Because the contamination will remain on site, ICs will be required to prevent contact with contaminated Source Area soil.

The primary expected outcome of the Source Area Soil remedy selected in the 2012 ROD is that this area will be remediated so that unacceptable risks from contamination in the soil will be addressed; RIDEM direct exposure criteria and leachability criteria will be met; TSCA requirements for PCBs will be achieved; and RCRA requirements for hazardous waste will be met.

3. Selected Disposal Option for Contaminated Soil and Sediment

The remedy selected in the 2012 ROD includes an upland (outside of the 100-year floodplain) CDF, designed and constructed in accordance with RCRA Subtitle C requirements, and determined not to result in an unreasonable risk of injury to human health or the environment pursuant to Section 761.61(c) of the Toxic Substances Control Act (TSCA).[9] The 2012 ROD contemplates that soil and dewatered sediment that meets the LDRs' alternative treatment standards for contaminated soil will be disposed of in the upland CDF. The materials that exceed the alternative treatment standards (an estimated 10% of contaminated soil and sediment at the Site) will be shipped off-site for treatment/disposal to a licensed hazardous waste facility.

The soil and sediment at the Site has been characterized as F020 listed hazardous waste, which is waste from the production or manufacturing use of trichlorophenol. (Metro-Atlantic used trichlorophenol in its manufacturing of hexachlorophene on-site and those operations resulted in discharges of dioxin-containing waste into the soil and sediment.) It was estimated that approximately 155,800 cubic yards of sediment will be excavated and dewatered and approximately 35,100 cubic yards of soil will be excavated from various areas at the site, with approximately 10 percent exceeding LDR standards and requiring off-site treatment/disposal.

III. DESCRIPTION OF SIGNIFICANT DIFFERENCES

This ESD is being issued to explain the following modifications to the remedy that was set forth in the 2012 ROD for the Site: deference to the state's groundwater

[9] This risk-based finding made by EPA pursuant to Section 761.61(c) of TSCA can be found on page 5 of Part 1 of the 2012 ROD.

classification following EPA's March 19, 2018 endorsement of Rhode Island's CSGWPP and resulting changes to the Source Area Groundwater and Source Area Soil remedial components; modifications to the Source Area Soil remedial component based on the results of a PDI; and an expansion of the disposal options.

A. SOURCE AREA GROUNDWATER

The change from the federal groundwater classification of Class IIB to Rhode Island's GB groundwater classification, following EPA's endorsement of Rhode Island's CSGWPP, does not fundamentally change the Source Area Groundwater remedy, as the remaining components of the selected remedy, long-term monitoring and ICs, are still required. However, the change in groundwater classification does prompt some changes to the Source Area Groundwater remedy, as described further below.[10]

The footprint of the Source Area groundwater cleanup area will be reduced from 8 acres to the 0.13 acres where the removal action in 2009/2010 took place. ARARs for the Source Area groundwater will be revised to no longer include MCLs and non-zero MCLGs.

Long term monitoring is still required, but the component of the remedy which included the installation of an estimated three additional deep monitoring wells is no longer needed. Rather, long-term monitoring will now include existing shallow monitoring wells and other wells or monitoring means to evaluate the groundwater-surface water interface for dioxin and other contaminants to evaluate the continued effectiveness of the 2009/2010 groundwater removal action and to determine whether contaminated groundwater is leaving the Source Area and impacting the surface water. ICs to prevent exposure from the use of groundwater are still required following this change. These ICs will likely be in the form of a land use restriction.

The primary expected outcome of this selected remedy for Groundwater, as modified by this ESD, remains that contamination will no longer migrate from the Source Area (due to the installation of the cap) and ICs will prevent installation of drinking water wells and dermal contact with contaminated groundwater. However, although groundwater will still be monitored at the edge of the cap to be installed in the Source Area (which remains the point of compliance), it will no longer be required to meet federal MCLs and non-zero MCLGs. Rather, monitoring will be performed to ensure that contaminated groundwater does not impact surface water or lead to exceedances of ambient water quality criteria. The proposed modifications to the Groundwater component of the remedy described in this ESD will still be protective of both human health and the environment.

Below is amended 2012 ROD Table L-4, reflecting revised cleanup levels for groundwater based on the change in groundwater classification in the Source Area.

---

[10] Further discussion about the effect of the CSGWPP endorsement on the treatment of the groundwater classification decision can be found in the Responsiveness Summary, Part 3 of the 2012 ROD, pp 86-88.

Table L-4. Cleanup Levels for Groundwater

Contaminant	Cleanup Level[1]	Basis	Explanation
Dioxin (pg/L)			
2,3,7,8-TCDD	1,800	HH Risk with site-specific bioaccumulation factors taken into consideration	Groundwater/ Surface Water Mixing Model[2]
Volatile organic compounds (mg/L)			
Dibromochloropropane (DBCP)	0.002	ARAR	RIDEM GB groundwater objective
Tetrachloroethene (PCE)	0.15	ARAR	RIDEM GB groundwater objective
Trichloroethene (TCE)	0.54	ARAR	RIDEM GB groundwater objective
Vinyl Chloride[a]	0.002	ARAR	RIDEM GB groundwater objective

Notes:

1. Cleanup levels are based on these contaminants detected in groundwater within the Source Area at concentrations in excess of ARARs (RIDEM GB groundwater objectives). Cleanup levels were not developed for undetected contaminants where the laboratory detection limits were in excess of ARARs. Additional sampling will be performed during the design phase to verify background conditions and the statistical comparisons, and verify undetected contaminants using analytical methods capable of measuring concentrations at levels below the ARARs. These data will be evaluated to assess impacts, if any, to the cleanup levels. However, all numeric criteria for all contaminants listed in regulations identified as ARARs are also considered cleanup levels and must be met regardless of whether or not they are identified above as cleanup levels except where background is an issue.
2. RIDEM GB groundwater objectives are promulgated for VOCs only; however, dioxin was identified as a contaminant in groundwater at the Source Area. Therefore, cleanup levels were developed using a groundwater/surface water mixing model to prevent migration of contaminants (dioxin) in groundwater discharging to the Woonasquatucket River that would result in surface water concentrations in excess of ARARs (RIDEM and federal ambient water quality criteria for dioxin modified based on site-specific bioaccumulation factors).

a. RIDEM Remediation Regulations were amended in November 2011. A cleanup level for vinyl chloride was not proposed in the 2010 Feasibility Study (which was based on the RIDEM Remediation Regulations as amended in February 2004) because GB groundwater criteria were not promulgated for this contaminant. GB groundwater criteria are promulgated for vinyl chloride in the November 2011 amended regulations.

Key: ARAR - Applicable or Relevant and Appropriate Requirement; DBCP – dibromochloropropane; mg/L – milligrams per liter; PCE – tetrachloroethylene; pg/L – picograms per liter; and TCE – trichloroethylene.

B. SOURCE AREA SOIL

1. Source Area Soil Cleanup Levels

The change in groundwater classification prompts a revision of ARARs for Source Area Soil based on the GB classification. Specifically, Source Area Soil cleanup levels are revised to include contaminants in excess of the State GB leachability criteria (instead of the State GA leachability criteria). Source Area Soil will still be remediated so that unacceptable risks from contamination will be addressed, including attainment of RIDEM direct residential exposure criteria; TSCA requirements for PCBs; and RCRA requirements for hazardous waste. However, RIDEM GB leachability criteria will be used instead of RIDEM GA leachability criteria.

The modifications to Source Area Soil cleanup levels do not otherwise change the Source Area Soil remedy selected in the 2012 ROD, including the RCRA C hazardous waste cap. The selected Source Area Soil remedy will still achieve RAOs, including the prevention of direct human exposure by incidental ingestion of and dermal contact with Source Area Soil that contain contaminants in excess of Source Area Soil cleanup levels as revised by this ESD, and the remedy will still be protective of both human health and the environment.

Below is amended 2012 ROD Table L-2, which reflects the changes to Source Area Soil cleanup levels based on the change in groundwater classification in the Source Area.

Table L-2. Cleanup Levels for Source Area Soil Contact for a Resident

Contaminant	Cleanup Level[1]	Basis	Explanation
Dioxin (ng/kg)			
2,3,7,8-TCDD[2]	17	HH Risk with Site background taken into consideration	This level equals to residual HI of less than 1 and cancer risk of 5E-06.
Pesticides/PCBs (mg/kg)			
Total Aroclors (total PCB)	1	TBC[a]	EPA's recommended residential level for PCB
Aldrin[3]	0.035	HH Risk	Resident, direct contact with soil
Dieldrin	0.04	ARAR	RIDEM residential direct exposure criteria
Heptachlor[3]	0.13	HH Risk	Resident, direct contact with soil
Technical Chlordane	0.5	ARAR	RIDEM residential direct exposure criteria
Semi-volatile Organic Compounds (mg/kg)			
4-chloroaniline[3]	2.0	HH Risk	Resident, direct contact with soil
Benzo(a)anthracene	0.9	ARAR	RIDEM residential direct exposure criteria
Benzo(a)pyrene	0.4	ARAR	RIDEM residential direct exposure criteria
Benzo(b)fluoranthene	0.9	ARAR	RIDEM residential direct exposure criteria
Benzo(g,h,i)perylene	0.8	ARAR	RIDEM residential direct exposure criteria
Benzo(k)fluoranthene	0.9	ARAR	RIDEM residential direct exposure criteria
Biphenyl, 1,1-	0.8	ARAR	RIDEM residential direct exposure criteria
Bis(2-ethylhexyl)phthalate	46	ARAR	RIDEM residential direct exposure criteria
Chrysene	0.4	ARAR	RIDEM residential direct exposure

Contaminant	Cleanup Level[1]	Basis	Explanation
			criteria
Dibenzo(a,h)anthracene	0.4	ARAR	RIDEM residential direct exposure criteria
Fluoranthene	20	ARAR	RIDEM residential direct exposure criteria
Indeno(1,2,3-cd)pyrene	0.9	ARAR	RIDEM residential direct exposure criteria
Naphthalene	54	ARAR	RIDEM residential direct exposure criteria
Pentachlorophenol	5.3	ARAR	RIDEM residential direct exposure criteria
Pyrene	13	ARAR	RIDEM residential direct exposure criteria
Metals (mg/kg)			
Antimony	10	ARAR	RIDEM residential direct exposure criteria
Arsenic	7	ARAR	RIDEM residential direct exposure criteria
Beryllium	1.5[b]	ARAR	RIDEM residential direct exposure criteria
Cadmium	39	ARAR	RIDEM residential direct exposure criteria
Lead	150	ARAR	RIDEM residential direct exposure criteria
Manganese	390	ARAR	RIDEM residential direct exposure criteria
Thallium	5.5	ARAR	RIDEM residential direct exposure criteria
Volatile organic compounds (mg/kg)			
Benzene	2.5	ARAR	RIDEM residential direct exposure criteria
Chlorobenzene	100	ARAR	RIDEM GB leachability criteria
Dichloroethane (1,2-)	0.9	ARAR	RIDEM residential direct exposure criteria
Dichloroethene (cis-1,2-)	60	ARAR	RIDEM GB leachability criteria
Ethyl benzene	62	ARAR	RIDEM GB leachability criteria
Tetrachloroethene (PCE)	4.2	ARAR	RIDEM GB leachability criteria
Toluene	54	ARAR	RIDEM GB leachability criteria
Trichlorobenzene (1,2,3-)[3]	63	HH RISK	Resident, direct contact with soil
Trichlorobenzene (1,2,4-)[3]	20	HH RISK	Resident, direct contact with soil
Trichloroethene (TCE)	13	ARAR	RIDEM residential direct exposure criteria
Vinyl chloride	0.02	ARAR	RIDEM residential direct exposure criteria
Xylenes (Total)	110	ARAR	RIDEM residential direct exposure criteria

Notes:

1. Cleanup levels are based on these contaminants detected in vadose zone samples at concentrations in excess of ARARs (RIDEM residential direct exposure and GB leachability criteria), at concentrations in excess of EPA's recommended residential level for PCB, or risk-based PRGs (developed for the most sensitive receptor and/or

exposure pathway) where ARARs are not available.

2. The cleanup goal selection process for soil, considering risk-based values, ARARs, TBCs, and background concentrations, was conducted for the Source Area. Using Site-specific values, the 2,3,7,8-TCDD PRG at 17 ng/kg is selected because it results in an acceptable HI of less than 1, an acceptable cancer risk of 5E-6, and meets RIDEM regulations. For Dioxin TEQ, human health risk-based non-cancer PRG of 50 ng/kg for HI of 1 would result in cancer risk of 1.4E-5 for resident, direct contact. When considering the cumulative cancer health effects from other contaminants at the Source Area, the cumulative cancer risk would exceed RIDEM's risk requirement of 10^{-5}. Therefore, the cleanup level for dioxin at the Source Area is 17 ng/kg, primarily 2,3,7,8-TCDD.
3. Contaminant is included because it was identified in the Source Area Risk Assessment. Levels for these contaminants either did not exceed ARAR or no ARAR exist.

a. Use of TBC (EPA's recommended residential PRG for PCB of 1 mg/kg) as a cleanup level for total Aroclors (total PCB) is a site-specific decision. All numeric criteria for all contaminants listed in regulations identified as ARARs are also considered cleanup levels and must be met regardless of whether or not they are identified above as cleanup levels except where background is an issue.
b. RIDEM Remediation Regulations were amended in November 2011. The cleanup level proposed for beryllium in the 2010 Feasibility Study (which was based on the RIDEM Remediation Regulations as amended in February 2004) has been updated to comply with the November 2011 amended regulations.

Key: ARAR - Applicable or Relevant and Appropriate Requirement; EPA – United States Environmental Protection Agency;
PCB - polychlorinated biphenyl; PRG – Preliminary Remediation Goal, RIDEM – Rhode Island Department of Environmental Management; TBC - to be considered; TEQ - toxic equivalency; mg/kg - milligram per kilogram; and ng/kg - nanograms per kilogram

2. Source Area Soil Buried Waste Material

The 2013/2014 PDI demonstrated that the excavation of buried waste material for offsite disposal/treatment originally contemplated in the 2012 ROD is not necessary as documented in the EPA's approval letter of the PDI report, dated January 21, 2015. As part of the PDI, PRPs performed a Principal Threat Waste (PTW) Evaluation. The evaluation concluded that there was no evidence of lagoons, tanks, drums, Non-Aqueous Phase Liquid (NAPL), or mobile liquid present within the PDI Area. Waste material that was observed in the test pits was not uniformly correlated with metallic debris or drum fragments. Concentrations of certain constituents detected during the PDI, such as dioxin, were higher than historically observed at the Site; however, this difference is likely attributable to the fact that the PDI sampling program was biased towards material that was more likely to be heavily impacted. Based on the results of the PDI, PTW that requires off-Site disposal and treatment is not present at the Source Area and excavation is therefore not required. The proposed modifications to the Source Area component of the remedy described in this ESD will still be protective of both human health and the environment.

C. DISPOSAL OPTION

As discussed above, the 2012 ROD selected a RCRA C compliant upland CDF (onsite or offsite) as the disposal option for the majority of contaminated soil and sediment excavated from the Site. Following the issuance of the 2012 ROD, EPA issued in February 2013 an Interim Final Technical Memo, Record of Decision (ROD) Support For Assessment Of Confined Disposal Facility (CDF), which identified about 130 potential locations for an upland CDF in the State of Rhode Island, including

brownfields and existing landfill closure sites.[11]

This ESD documents a change to the remedy selected in the 2012 ROD that expands the potential disposal options, following further evaluation and a determination by EPA regarding the contaminated sediment and soil to be excavated at the Site. As discussed above and in the 2012 ROD, the soil and sediment at the Site have been characterized as F020 listed hazardous waste. Environmental media (i.e., soil and sediment) that contain listed hazardous waste are considered hazardous waste. Pursuant to EPA's "Contained-In" policy for contaminated media, set forth in "Management of Remediation Waste Under RCRA," OSWER Directive EPA530-F-98-026, dated October 1998, EPA generally considers contaminated environmental media to contain hazardous waste when: (1) they exhibit a characteristic of hazardous waste; or (2) they are contaminated with concentrations of hazardous constituents from listed hazardous waste (e.g., F020) that are above health-based levels. The Contained-In policy further states that contaminated media that do not (or no longer) contain hazardous waste, based on this risk-based analysis, are generally not subject to RCRA Subtitle C (hazardous waste) requirements.

On February 4, 2019, in consultation with RIDEM, EPA issued a Contained-In Memorandum addressing soils and sediments to be excavated from the Site ("Contained-In Memorandum") in accordance with EPA's Contained-In policy. The focus of the evaluation documented in the Contained-In Memorandum was EPA's assessment of the potential risks for a landfill worker involved in the handling of the excavated soils/sediments from the Site. Based on risk assessment calculations conducted for this evaluation, EPA determined that the levels of contamination in the material to be removed from the Site (not including certain highly contaminated materials as described in the paragraph below) should not endanger the health of individuals either employed to transport the material itself, or to individuals employed by a receiving facility that disposes of the material in accordance with RCRA Subtitle D regulations (provided that all applicable laws governing worker protection and safety and good housekeeping practices are followed).[12]

The Contained-In Memorandum focuses on the disposal of environmental media exceeding ROD cleanup levels, but not exceeding the LDRs' alternative treatment standards or 50 mg/kg of PCBs. The Contained-In Memorandum, thus, does not affect the classification of, or selected disposal option (off-site incineration) for, any excavated soils or sediments that exceed 10 ug/kg (the alternative treatment standard for dioxin), which still are considered to contain F020 waste to be treated/disposed in accordance with the LDRs. The Contained-In Memorandum also does not affect the disposal of excavated soils or sediments that exceed 50 mg/kg of PCBs which must be

[11] The February 2013 Interim Final Technical Memo was added to the revised Administrative Record for the 2012 ROD in March 2015, in accordance with 40 C.F.R. § 300.825(a)(1) (Record requirements after the decision document is signed).

[12] This determination assumes that any disposal facility accepting this material will conform to modern industrial waste landfill design standards, and that the material will be disposed of in a cell equipped with a bottom liner and ultimately capped with an impermeable cap. Any such facility must also be in compliance with applicable federal and state requirements, per the Off-Site Rule, 40 CFR 300.440.

disposed of at a permitted hazardous waste landfill or TSCA-compliant PCB disposal facility in compliance with Section 761.61(a)(5)(i)(B)(2)(iii) of TSCA. Furthermore, as mentioned above, any soil or sediment that exhibits any characteristic of hazardous waste (i.e., corrosivity, ignitability, toxicity or reactivity) would likewise remain subject to the LDR disposal restrictions. Based on existing data in the Administrative Record, EPA does not expect that there would be any exceedances of regulatory levels for the hazardous waste characteristics. However, additional samples will be collected during Remedial Design and analyzed via the Toxicity Characteristic Leaching Procedure to confirm that the soil or sediment does not exhibit any of the hazardous waste characteristics.

Consistent with the Contained-In Memorandum, any contaminated sediment and/or soil that is determined to not contain hazardous waste, is not limited to disposal in an upland RCRA-C compliant CDF. Rather, such material may alternatively be disposed of in an appropriate existing landfill subject to RCRA Subtitle D regulations. A new risk-based finding pursuant to Section 761.61(c) of TSCA is not required for this new disposal alternative. TSCA regulations at 40 C.F.R. § 761.61(a)(5)(i)(B)(2)(ii) allow for disposal of soil and dewatered sediment at a State licensed RCRA Subtitle D facility provided that the PCB concentrations are less than 50 mg/kg (see subsection (a)(5)(v)(A)(1)).[13] Data in the Administrative Record show that no floodplain soil or sediment containing PCB concentrations greater than or equal to 50 mg/kg has been identified outside the Source Area at this time. Further sampling of sediment and floodplain soil to be excavated from the Site and disposed of off-site will be performed during the Remedial Design for purposes of disposal and data will be collected sufficient to delineate any areas of floodplain soil and/or sediment that contain greater than or equal to 50 mg/kg of PCBs. If identified, such floodplain soil and/or sediment will be disposed of in compliance with Section 761.61(a)(5)(i)(B)(2)(iii) of TSCA. The proposed modifications to the Disposal Option component of the remedy described in this ESD will still be protective of both human health and the environment.[14]

D. COSTS

1. Groundwater Component of the Remedy. Based on this ESD, the operation and maintenance costs for the Groundwater remedy component are expected to decrease from approximately $900,000 to $300,000 due to the smaller cleanup area and lower construction and monitoring costs.

2. Source Area Soil Component of the Remedy. The PDI evaluation required by the 2012 ROD resulted in the elimination of the need to excavate and incinerate (off-site) 8,900 tons of waste from the Source Area, leading to a possible reduction of the

[13] TSCA regulations at 40 C.F.R. § 761.61(a)(5)(i)(B)(2)(ii) and (a)(5)(v)(A)(1) are new ARARs for the Allendale and Lyman Mill Sediment Remedy, the Allendale Floodplain Soil Remedy, and the Lyman Mill Stream Sediment and Floodplain Soil Remedy.

[14] This ESD does not affect the Section 761.61(c) finding in the 2012 ROD which remains in place for disposal in an upland CDF.

Source Area Soil remedy costs from $21.7 million to approximately $14 million.

3. Disposal Options for Sediment and Floodplain Soil Components of the Remedy. The 2012 ROD estimates the costs of the Allendale and Lyman Mill Sediment and Floodplain Soil (including the Oxbow) components of the remedy to be a total of approximately $79 million (which includes the purchase of land, and the construction of, and disposal in, an upland CDF). Disposal using an existing RCRA Subtitle D facility instead of a newly constructed upland CDF would obviate the need to purchase land for the upland CDF and would eliminate the costs to construct, maintain and monitor the CDF. Although the actual costs cannot be estimated until the disposal facility and volume of material is known, it is expected that this modification will result in decreased costs for these components of the remedy.

Given that the remedy in the 2012 ROD is estimated to cost approximately $100 million, these potential changes in the estimated costs of these components do not lead to a fundamental change in the remedy.

IV. SUPPORTING AGENCY COMMENTS

RIDEM applied for and became a CSGWPP-endorsed State on March 19, 2018 and has participated with the EPA in reviewing the modifications to the groundwater remedy and cleanup levels described herein. In addition, RIDEM personnel participated in the field oversight of the Source Area PDI and reviewed and concurred with the December 2014 PDI Report. RIDEM also consulted with EPA and reviewed the February 4, 2019 Contained-In Memorandum for soils and sediments from the Site and agreed with its findings. RIDEM has reviewed this ESD and provided its letter of support (see Attachment 2).

V. STATUTORY DETERMINATIONS

EPA believes that the modified remedy as stated in this ESD remains protective of human health and the environment, complies with all Federal and State requirements that are applicable or relevant and appropriate to this remedial action, meets the remedial action objectives specified in the 2012 ROD, and is cost-effective.

VI. PUBLIC PARTICIPATION COMPLIANCE

In accordance with Section 300.825(b) of the National Contingency Plan, EPA voluntarily chose to allow a 30-day public comment period from July 18, 2019 to August 16, 2019, prior to the finalization and signing of this ESD. The comment period was designed to allow consideration of any possible concerns from the public, local municipalities and/or the PRPs. Notice of availability for review of the draft ESD and

Administrative Record was published in the Johnston Sun Rise newspaper on July 18, 2019, and in the Valley Breeze newspaper on July 23, 2019, encouraging the public to submit comments on the draft ESD. EPA placed copies of the Notice and the draft ESD and Administrative Record on the EPA Centredale Manor Superfund Site web page. EPA also made the draft ESD and Administrative Record available for public review at the locations and times listed in Section I(E) above. EPA received one comment from the Woonasquatucket River Watershed Council Centredale Manor Technical Advisory Group. EPA's response to the comment received is included in Attachment 3.

In accordance with Section 117(d) of CERCLA and Section 300.825(a) of the NCP, this ESD and supporting documentation shall become part of the Administrative Record for the Site.

VII. DECLARATION

For the foregoing reasons, by my signature below, I approve the issuance of this 2019 Explanation of Significant Differences for the Centredale Manor Restoration Project Superfund Site located in North Providence, Rhode Island and the changes and conclusions stated therein.

9-25-19

Andrew Wheeler
Administrator
United States Environmental Protection Agency

Date

Attachment 1 Administrative Record Index
Attachment 2 RIDEM Letter of Support
Attachment 3 Responsiveness Summary

ATTACHMENT 1

ADMINISTRATIVE RECORD INDEX

Centredale Manor Restoration Project
NPL Site Administrative Record
Explanation of Significant Differences (ESD)

Index

ESD Dated September 2019
Released: September 2019

Prepared by
EPA New England
Superfund & Emergency Management Division

Introduction to the Collection

This is the administrative record for the Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island, Explanation of Significant Differences (ESD), released September 2019. The file contains site-specific documents and a list of guidance documents used by EPA staff in selecting a response action at the site.

This Administrative Record replaces the Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island, Draft Explanation of Significant Differences (ESD) for Public Comment, released July 2019. This Administrative Record incorporates, by reference, the Administrative Record for the Removal Action Administrative Record dated May 1999, the Removal Action Addendum Administrative Record dated September 1999, the Engineering Evaluation Cost Analysis (EE/CA) Approval Memorandum Administrative Record dated February 2000, the Non-Time Critical Removal Action Administrative Record dated January 2001, the Removal Action Addendum Two Administrative Record dated September 2003, the Removal Action Addendum Administrative Record dated June 2005, the Removal Action Addendum Three Administrative Record dated October 2006, the Removal Action Addendum Four Administrative Record dated July 2009, the Record of Decision issued by EPA on September 28, 2012 (ROD), the Unilateral Administrative Order (UAO) for Remedial Design/Remedial Action (RD/RA) dated June 2014, the Unilateral Administrative Order (UAO) for Remedial Design/Remedial Action (RD/RA) dated June 2014 – updated November 2014, and the Record of Decision issued by EPA on September 28, 2012 (ROD) - updated March 2015. Documents listed as bibliographic sources in individual reports might not be listed separately in the index.

The administrative record file is available for review at:

Online: https://go.usa.gov/xymrn

Additional information about the site is also available at www.epa.gov/superfund/centredale

EPA New England
SEMS Records and Information Center
5 Post Office Square, Suite 100 (02-3)
Boston, MA 02109-3912
(by appointment)
617-918-1440 (phone)
617-918-0440 (fax)

North Providence Union Free Library
1810 Mineral Springs Avenue
North Providence RI 02911
401-353-5600 (phone)
401-353-1794 (fax)
http://www.nplib.com/

Marian J. Mohr Memorial Library
1 Memorial Avenue
Johnston, RI 02919
401-231-4980 (phone)
http://mohrlibrary.org/

An administrative record is required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).

Questions about this administrative record file should be directed to the EPA New England site manager, Anna Krasko (617) 918-1232, Krasko.Anna@epa.gov

AR 66018 Explanation of Significant Differences (ESD) September 2019

Document ID	Title	Document Date	Page Count	Author	Addressee	Resource Type	Program Information	Access Control	Region	URL
639786	EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)	9/25/2019	33	R01: (US EPA REGION 1)		RPT / Report	053-REMEDIAL/0531-Remedy Characterization/05.04-RECORD OF DECISION (ROD)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/639786
639785	RESPONSIVENESS SUMMARY, EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)	9/25/2019	1	R01: (US EPA REGION 1)		RPT / Report	053-REMEDIAL/0531-Remedy Characterization/05.03-RESPONSIVENESS SUMMARIES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/639785
637996	LETTER REGARDING STATE CONCURRENCE WITH EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)	8/22/2019	1	R01: Destefano, Matthew D (RI DEPT OF ENVIRONMENTAL MANAGEMENT)	R01: Olson, Bryan (US EPA REGION 1)	LTR / Letter	053-REMEDIAL/0531-Remedy Characterization/05.04-RECORD OF DECISION (ROD)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/637996
637951	EMAIL REGARDING PUBLIC COMMENT ON THE DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)	8/15/2019	1	R01: Lehrer, Alicia J (WOONASQUATUCKET RIVER WATERSHED COUNCIL)	R01: Krasko, Anna (US EPA REGION 1)	EML / Email	053-REMEDIAL/0531-Remedy Characterization/05.03-RESPONSIVENESS SUMMARIES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/637951
635796	NEWS ARTICLE: EPA PROPOSES CHANGES TO CLEANUP OF CENTREDALE MANOR SUPERFUND SITE	7/23/2019	2	R01: (VALLEY BREEZE)		PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/635796
637900	PUBLIC NOTICE AS APPEARING IN VALLEY BREEZE: THE US EPA ISSUES A DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD) CENTREDALE MANOR RESTORATION PROJECT SUPERFUND SITE, NORTH PROVIDENCE AND JOHNSTON, RI	7/23/2019	1	R01: (US EPA REGION 1), R01: (VALLEY BREEZE)		PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/637900
637912	PUBLIC NOTICE AS APPEARING IN JOHNSTON SUNRISE: THE US EPA ISSUES A DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD) CENTREDALE MANOR RESTORATION PROJECT SUPERFUND SITE, NORTH PROVIDENCE AND JOHNSTON, RI	7/18/2019	1	R01: (US EPA REGION 1), R01: (JOHNSTON SUNRISE)		PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/637912
635781	PRESS RELEASE: EPA PROPOSES MODIFICATIONS TO CENTREDALE MANOR RESTORATION PROJECT SUPERFUND SITE REMEDY IN NORTH PROVIDENCE AND JOHNSTON, RI	7/17/2019	3	R01: (US EPA REGION 1)		PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/635781
635773	DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD) FOR PUBLIC COMMENT	7/16/2019	23	R01: (US EPA REGION 1)		RPT / Report	053 - REMEDIAL / 0531 - Remedy Characterization / 05.04 - RECORD OF DECISION (ROD)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/635773
635772	LETTER REGARDING GROUNDWATER USE AND VALUE DETERMINATION	7/8/2019	7	R01: Coit, Janet (RI DEPT OF ENVIRONMENTAL MGMT)	R01: Olson, Bryan (US EPA REGION 1)	LTR / Letter	053 - REMEDIAL / 0531 - Remedy Characterization / 16.01 - CORRESPONDENCE (NATURAL RESOURCE TRUSTEE)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/635772
635757	MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN THE US EPA AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RI DEM) CONCERNING IMPLEMENTATION OF THE GROUNDWATER USE AND VALUE DETERMINATION GUIDANCE (1996 GUIDANCE ATTACHED)	6/19/2019	33	R01: Olson, Bryan (US EPA REGION 1), R01: Coit, Janet (RI DEPT OF ENVIRONMENTAL MGMT)		AGMT / Agreement	053-REMEDIAL/0531-Remedy Characterization/16.02-IAGS/MOUS (NATURAL RESOURCE TRUSTEE)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/635757
632522	MEMO REGARDING CONTAINED-IN DETERMINATION FOR SOILS AND SEDIMENTS	2/4/2019	5	R01: Cianciarulo, Robert G (US EPA REGION 1)	R01: Olson, Bryan (US EPA REGION 1)	MEMO / Memorandum	052-ENFORCEMENT/0522-Negotiations/10.01-CORRESPONDENCE (ENFORCEMENT/NEGOTIATION)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/632522
632523	MEMO REGARDING SUMMARY OF RISK CALCULATIONS FOR A LANDFILL WORKER (REVISED)	1/31/2019	161	R01: Murphy, Michael, J (WOOD), R01: Parkin Kullman, Jane, A	R01: Krasko, Anna (US EPA REGION 1)	MEMO / Memorandum	053-REMEDIAL/0531-Remedy Characterization/03.10-ENDANGERMENT/BASELINE RISK ASSESSMENTS	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/632523
100002472	LETTER ENDORSING RHODE ISLAND CORE COMPREHENSIVE STATE GROUND WATER PROTECTION PROGRAM (CSGWPP)	3/19/2018	1	R01: Dunn, Alexandra (US EPA REGION 1)		LTR / Letter	053-REMEDIAL/0531-Remedy Characterization/03.01-CORRESPONDENCE (RI)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/100002472
100002464	RI DEM SUBMISSION LETTER REQUESTING APPROVAL OF THE STATE OF RHODE ISLAND COMPREHENSIVE STATE GROUNDWATER PROTECTION PROGRAM (CSGWPP)	3/15/2018	1	R01: Grey, Terrence (RI DEPT OF ENVIRONMENTAL MANAGEMENT)	R01: Dunn, Alexandra (US EPA REGION 1)	MEMO / Memorandum	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/100002464
100002465	COMPREHENSIVE STATE GROUNDWATER PROTECTION PROGRAM (CSGWPP)	3/14/2018	30	R01: (RHODE ISLAND STATE OF), R01: (RI DEPT OF ENVIRONMENTAL MANAGEMENT), R01: (PROVIDENCE PLANTATIONS)		AGMT / Agreement	056-SITE SUPPORT/0563-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/100002465
572987	LETTER REGARDING PRE-DESIGN INVESTIGATION (PDI) CERTIFICATE OF COMPLETION OF WORK UNDER DOCKET NO. 01 2013-0019	3/4/2015	2	R01: Krasko, Anna (US EPA REGION 1)	R01: Nangeroni, Peter E (WOODARD & CURRAN)	LTR / Letter	052-ENFORCEMENT/0522-Negotiations, 052-ENFORCEMENT/0522-Negotiations/10.01-CORRESPONDENCE (ENFORCEMENT/NEGOTIATION)	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/572987
572958	REVISED DRAFT PRE-DESIGN INVESTIGATION (PDI) FINAL REPORT (01/21/2015 APPROVAL LETTER AND RESPONSE TO COMMENTS COVER LETTER ATTACHED)	12/23/2014	6935	R01: (WOODARD & CURRAN)	R01: (NECC CUSTOMER GROUP)	RPT / Report	053-REMEDIAL/0532-Remedial Design/06.04-REMEDIAL DESIGN REPORTS	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/572958
549007	PRESS RELEASE: EPA OVERSEES SAMPLING EFFORT AT CENTREDALE MANOR PROPERTY	10/28/2013	2	R01: (US EPA REGION 1)		PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.03-NEWS CLIPPINGS/PRESS RELEASES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/549007
549006	FACT SHEET: SITE UPDATE	10/1/2013	2	R01: (US EPA REGION 1)		PUB / Publication	051-COMMUNITY INVOLVEMENT/0511-Community Involvement Activities/13.05-FACT SHEETS/INFORMATION UPDATES	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/549006
540381	ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT (AOC) - SOURCE AREA SOIL PRE-DESIGN INVESTIGATION, CERCLA DOCKET NO.01-2013-0019	8/8/2013	40	R01: (US EPA REGION 1)		LGL / Legal Instrument	052-ENFORCEMENT/0522-Negotiations/10.07-EPA ADMINISTRATIVE ORDERS	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/540381

633120	A SUMMARY OF RHODE ISLAND GROUNDWATER CLASSIFICATION AND GROUNDWATER STANDARDS	9/1/2009	3	R01: (RI DEPT OF ENVIRONMENTAL MANAGEMENT)		RPT / Report	058-SITE SUPPORT/0583-State/Tribal Involvement/09.10-STATE TECHNICAL AND HISTORICAL RECORDS	UCTL(Uncontrolled)	1	https://semspub.epa.gov/src/document/01/633120
175380	MEMO: THE ROLE OF CSGWPPS IN EPA REMEDIATION PROGRAMS--OSWER 9283.1-09	4/4/1997	13			MEMO / Memorandum	058-PROGRAM SUPPORT/0583-Regulatory Development/B8.1-Regulations, Standards & Guidelines	UCTL(Uncontrolled)	11	https://semspub.epa.gov/src/document/11/175380

ATTACHMENT 2

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT LETTER OF SUPPORT

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

August 22, 2019

Bryan O. Olson, Director
U.S. EPA, Region 1
Office of Site Remediation and Restoration
5 Post Office Square, Suite 100 (OSR 07-5)
Boston, MA 02109-3912

RE: Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island

Dear Mr. Olson:

The Office of Waste Management has conducted a review of the Explanation of Significant Differences (ESD), dated July 2019, for the Centredale Manor Restoration Project Superfund Site in North Providence, Rhode Island. The ESD documents certain changes to the remedy previously set forth in the 2012 Record of Decision (ROD). The Department of Environmental Management (the Department) has worked with EPA from the earliest investigatory phases to this important milestone over the past two decades. These changes include, the Environmental Protection Agency's (EPA) endorsement of the Departments Core Comprehensive State Groundwater Protection Program, the finding that no waste material requiring off-site disposal and/or treatment and excavation is present at the Source Area as demonstrated in the completed pre-design investigation (PDI), and finally, EPA has issued a Contained-In Memorandum.

Based on our review of this ESD, we would like to offer our concurrence with this decision. This concurrence is based on all aspects of the ESD being implemented in a timely manner during the remedy design, construction and implementation.

We look forward to continuing our cooperative efforts in remediating this site and bringing back the opportunity for more recreational uses of this river resource for all Rhode Islanders.

If you have any questions, please feel free to contact me at (401) 222-2797, extension 7141.

Sincerely,

Matthew DeStefano, Deputy Administrator
Office of Waste Management

cc: Terry Gray, RIDEM/Directors Office
Susan Forcier, RIDEM/Office of Legal Services
Leo Hellested, RIDEM/Office of Waste Management
Gary Jablonski, RIDEM/Office of Waste Management
Eve Vaudo, USEPA
Anna Krasko, USEPA

ATTACHMENT 3

RESPONSIVENESS SUMMARY

ATTACHMENT 3 - RESPONSIVENESS SUMMARY

EXPLANATION OF SIGNIFICANT DIFFERENCES

CENTREDALE MANOR RESTORATION PROJECT SUPERFUND SITE

September 2019

The U.S. Environmental Protection Agency (EPA) released a draft Explanation of Significant Differences (ESD) and associated Administrative Record (AR) on July 17, 2019. The draft ESD and AR were posted on EPA's Centredale Manor Restoration Project Superfund Site web page and made available at the following locations: North Providence Union Free Library in North Providence, Rhode Island; Marian J. Mohr Memorial Library in Johnston, Rhode Island; and U.S. EPA Records Center in Boston, Massachusetts. In addition, notice of the availability of the draft ESD and AR was published in the Johnston Sun Rise newspaper on July 18, 2019, and in the Valley Breeze newspaper on July 23, 2019. EPA published a Press Release on July 17, 2019, announcing the availability of the ESD and AR, as well as the start of a 30-day public comment period which concluded on August 16, 2019.

The purpose of this Responsiveness Summary is to document EPA's response to the one comment received during the public comment period. A copy of the comment is included in the Administrative Record available online at www.epa.gov/region1/superfund/sites/centredale. The Administrative Record Index is included with the ESD.

Comment from the Woonasquatucket River Watershed Council Centredale Manor Technical Advisory Group:

Please clarify whether or not USEPA expects that the changes in ROD Table L-2 (Cleanup Levels for Source Area Soil Contact for a Resident) will impact the area coverage of the Source Area cap.

EPA Response:

The changes in the ROD Table L-2 (Cleanup Levels for Source Area Soil Contact for a Resident) will not impact the area coverage of the Source Area cap. Some areas of the peninsula may be excavated and either consolidated within the Source Area or shipped off-site, as originally contemplated in the 2012 Record of Decision. However, the entire Source Area cap will still satisfy the Resource Conservation and Recovery Act (RCRA) hazardous waste closure requirements.