FINAL CLOSE OUT REPORT

MERCURY REFINING SUPERFUND SITE
TOWNS OF COLONIE AND GUILDERLAND
ALBANY COUNTY, NEW YORK

Prepared by

U.S. Environmental Protection Agency
Region 2
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I. Introduction

This Final Close-Out Report documents the United States Environmental Protection Agency's (EPA's) completion of all response actions for the Mercury Refining, Inc. Superfund Site (Site) in accordance with EPA's guidance document *Close-Out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-23, June 2022).

All appropriate response actions at the Site have been successfully implemented. Specifically, based upon field observations and the results of five-year reviews EPA determined that the remedy has been constructed in accordance with the 2008 Record of Decision (ROD). The Remedial Action Objectives (RAOs) for soils and sediments were achieved in 2013 as described in the August 2015 Remedial Action Report. Groundwater samples collected and analyzed since 2015 have shown RAOs for groundwater have been achieved.

The Site consists of one operable unit (OU). The OU addresses the Site's soil, sediment, and groundwater remedies. No further CERCLA response actions are anticipated at the Site. Five-year reviews (FYRs) along with groundwater and ecological monitoring will continue at the site since waste material will remain on-site in the in-situ solidification/stabilization (ISS) area and beneath the clay cap.

II. Summary of Site Conditions

Site Location and Description

The Site includes the Mercury Refining Company, Inc. (MERECO) property, located at 26 Railroad Avenue, in an industrial area on the border of the towns of Colonie and Guilderland, Albany County, New York. This approximately 0.68-acre lot was formerly used as a mercury reclamation facility and is still in use by MERECO, though mercury reclamation is no longer conducted by the company. The Site also includes parts of surrounding properties impacted by the mercury reclamation processes previously conducted at the MERECO property and the portion of an Unnamed Tributary to the Patroon Creek located on the south end of the MERECO property. A CSX Railroad right-of-way is also located south of the MERECO property. The corridor is controlled by Amtrak, which is responsible for track maintenance.

The Unnamed Tributary reportedly received contaminated stormwater drainage from the storm sewer system that formerly serviced the MERECO property. The Unnamed Tributary converges with the Patroon Creek approximately 1,600 feet downstream of the MERECO property. Approximately one mile downstream of the MERECO property there is a dam in the Patroon Creek which forms the I-90 Pond. The creek flows over the dam's spillway and enters the Hudson River approximately five miles from the stormwater outfall. Groundwater at the Site flows generally in a southerly direction toward the Unnamed Tributary. The area is serviced by a public water supply system. The MERECO property currently includes one building, a three-story concrete block structure known as the Phase 1 Building, used for MERECO's ongoing precious metals recovery operations. A commercial asphalt roadway and a wide business driveway provide access to the MERECO property. See Figure 1.

Background

The MERECO facility used retorts, specialized ovens to distill and recover mercury, to reclaim mercury from batteries and other mercury-bearing materials such as thermometers, fluorescent bulbs, spill debris, and dental amalgams. Before 1980, various solid waste materials contaminated with mercury from the reclamation processes were dumped over an embankment of the Unnamed Tributary. From 1980 to 1998, waste batteries and other mercury-containing materials were stored in drums on wooden pallets within paved areas of the MERECO property and disposed of off-site.

The results of initial sampling performed by the New York State Department of Environmental Conservation's (NYSDEC) Division of Fish and Wildlife in 1981 and 1982 indicated the presence of PCBs and mercury contamination on the southern edge of the MERECO property and on the embankment to the Unnamed Tributary. Results of further sampling confirmed the presence of these contaminants in soils at the MERECO property and mercury contamination in the Unnamed Tributary sediments. The site was listed as final on the National Priorities List (NPL) on September 30, 1983.

Under a September 1985 Consent Decree with New York State (NYS), MERECO excavated and removed approximately 2,100 cubic yards (yd^3) of mercury-contaminated soil and debris and 300 yd^3 of PCB-contaminated soils from the MERECO and CSX properties. The excavated area was backfilled with clean fill and covered with a single-layer clay cap. In June 1989, MERECO entered into an Administrative Order on Consent (AOC) with NYSDEC which called for the identification and remediation of mercury-contaminated areas, both on and off of the MERECO property, development of a program to evaluate and abate migration of mercury and other contaminants from the facility, including mercury emissions from both permitted (*i.e.*, the retorts) and fugitive air sources, and investigation of the Patroon Creek.

Another AOC was signed by MERECO and NYSDEC in February 1993 which called for the establishment of a schedule for the completion of all remedial activities, a permanent remedy for the abatement of emissions and migration of pollutants, quarterly groundwater monitoring for ten years, remediation/removal of contaminated soils beneath the old Retort Building, long-term monitoring of areas surrounding the Site, and payment for civil penalties and natural resource damages. In February 1994, construction of new retorts inside the Phase 1 Building was completed. The old Retort Building was demolished, and an asphalt and concrete cap was placed over the area. In 1995, a soil investigation beneath the cap found visible free-phase mercury from just below the concrete to approximately 13-18 feet below ground surface (ft bgs).

In December 1996, MERECO received a Hazardous Waste Corrective Action Management Permit, pursuant to the Resource Conservation and Recovery Act (RCRA) from NYSDEC for controlling the generation and storage of waste at the MERECO property and for completing the investigation and remediation of contamination at the property and surrounding areas. In November 1999, after unsuccessful efforts to have MERECO fully comply with the terms of its RCRA permit, NYSDEC requested that EPA take over as lead agency for the Site under CERCLA.

A remedial investigation/feasibility study (RI/FS) was conducted by EPA between September 2000 and February 2003 which revealed the presence of mercury contamination in surface and subsurface soils, groundwater, creek sediments, fish tissue and catch basins. Methyl mercury contamination was also observed in stream and pond sediments and surface water. The human health risk assessment (HHRA) determined that carcinogenic risks and noncarcinogenic hazards for exposures at the Site exceeded the EPA's target Hazard Index of 1 and EPA's target cancer risk range of 10^{-4} to 10^{-6} for recreational use of the creek/pond and for residential use of the groundwater from exposure to mercury. Potential future cancer risks to workers on the MERECO property and bordering the MERECO property were within the 10^{-4} to 10^{-6} range. Risks to other receptors were below the EPA threshold levels of concern. Results of the Screening Level Ecological Risk Assessment indicated the potential for risk to ecological receptors, including aquatic invertebrates, freshwater fish, amphibians, insectivorous birds, and piscivorous birds and mammals from exposure to mercury in surface water, sediment, and soil.

Remedy Selection

EPA issued a Record of Decision on September 20, 2008, to address mercury contamination in soils and sediments. The ROD had the following remedial action objectives (RAOs):

- Prevent or minimize potential future human exposures including ingestion and dermal contact with mercury-contaminated soils in excess of 5.7 parts per million (ppm), which is based on NYS's Soil Cleanup Objectives at 6 NYCRR Part 375 for industrial use;
- Prevent or minimize potential ingestion of mercury-contaminated groundwater and minimize mercury contamination in soils as a source of groundwater contamination at the facility. The cleanup level will be applied to the subsurface in the aquifer where the groundwater has a dissolved mercury concentration which exceeds the New York State Ambient Water Quality Standard (NYSAWQS) of 0.7 parts per billion (ppb); and
- Remediate mercury-contaminated sediments in the Unnamed Tributary to levels that are protective of the biota such that the most significant impacts are eliminated.

Table 1: Site Cleanup Goals

Contaminant	Media	Cleanup Goal	Source
Mercury	Soil	5.7 ppm	6 NYCRR Part 375
Mercury	Groundwater	0.7 ppb	NYSAWQS
Mercury	Sediment	1.3 ppm	NYSDEC Technical Guidance for Screening Contaminated Sediment, 1994

EPA selected a cleanup level of 5.7 ppm of mercury for soils on industrial use property based on New York State's Soil Cleanup Objectives at 6 NYCRR Part 375. The ARAR for groundwater was based on the NYSAWQS, which is a chemical specific ARAR for groundwater in the saturated soils. The cleanup level for groundwater was also used to target deeper soils at the Site below the water table. The cleanup level for sediments was selected from the NYSDEC's Technical Guidance for Screening Contaminated Sediment. The primary sediments cleanup level

is 1.3 ppm, which is the severe effect level ("SEL"). According to this guidance, sediments which are above this concentration are likely to result in significant harm to benthic aquatic life and should be remediated. With the exception of the sediments at the MERECO stormwater outfall, where EPA found mercury in the sediments at 38 ppm, the RI did not detect mercury above a concentration of 1.2 ppm in the sediments of the Patroon Creek, the Unnamed Tributary or the biological active surface layer of sediments of the 1-90 Pond. Tissue samples from fish which were caught downstream of the Site at the Unnamed Tributary had a concentration of 0.22 ppm of mercury, which slightly exceeded the tissue threshold effect concentration 0.2 ppm for fish. Tissue concentrations above this threshold may result in sub-lethal, adverse affects to fish populations. No other tissue sample from fish caught upstream or further downstream of the Site exceeded the threshold. Because the highest detected concentration of mercury in the sediments at the Site was close to the SEL with no severe effect observed in fish, EPA believed that the SEL was an appropriate cleanup level for the Site.

In order to achieve the RAOs for the contaminated groundwater, soils, and sediments, EPA selected the following remedy:

- Excavation and off-site disposal of surface soils and subsurface soils above the water table from the MERECO property and adjoining properties which exceed the cleanup level for mercury in soil of 5.7 ppm for industrial property usage. These soils also include the soils associated with the stormwater sewer/catch basin systems;
- ISS involving mixing or injection of treatment agents at the MERECO and Allied properties to immobilize contaminants in surface soils, subsurface soils, and soils below the water table where the groundwater has a dissolved mercury concentration which exceeds the cleanup level of 0.7 ppb for mercury in groundwater;
- Implementation of institutional controls (ICs) in the form of environmental easements/restrictive covenants to restrict future development/use of the Site. Specifically, environmental easements/restrictive covenants will be filed in the property records of Albany County. The easements/covenants will at a minimum: (a) limit the Site to industrial uses; (b) preserve the integrity of the existing clay cap on the southern portion of the Mercury Refining Property; (c) preserve the integrity of the solidified/stabilized mass; (d) prevent the excavation of soils which lay beneath the Phase 1 Building, which housed Mercury Refining's operations, and the Container Storage Building, which was used to store incoming mercury bearing material for processing, unless the excavation follows a Site Management Plan (see below); and (e) restrict the use of groundwater as a source of potable or process water until groundwater quality standards are met;
- Development and implementation of an EPA-approved Site Management Plan (SMP). The SMP will, among other things, address long-term operation and maintenance (O&M) of the Site, and future excavation of soils, including, but not limited to, soils beneath the Phase 1 and Container Buildings on the MERECO property, and soils on the Albany Pallet property, the Allied property, and the Diamond W property, which will not be remediated by this remedy, to ensure that the soils are properly tested and handled to protect the health and safety of workers and the nearby community. The approved SMP will also require an evaluation of the potential for vapor intrusion at all existing buildings on-Site and/or those to be constructed in the future, and mitigation, if necessary, in

compliance with the SMP. Finally, the SMP will provide for the proper management of all Site remedy components post-construction and shall include: (a) monitoring of groundwater to ensure that, following Site remediation, the contamination has attenuated and the groundwater has been remediated; (b) monitoring and maintenance of institutional controls; (c) a provision for operation and maintenance of the clay cap; (d) periodic certifications by the owners/operators of the Site properties or other party implementing the remedy that the institutional and engineering controls are in place; and (e) a provision to manage the demolition or alteration of the existing buildings on-Site, if such demolition or alteration is proposed in the future, to protect the health and safety of the workers and the nearby community and to ensure proper disposal of any building debris;

- Removal, dewatering, and disposal of the mercury-contaminated sediments in the Unnamed Tributary, exceeding the cleanup level for mercury in sediments of 1.3 ppm;
- Verification sampling to confirm the effectiveness of the remedy;
- Sampling of the fish, surface water, and sediments in the Patroon Creek, the Unnamed Tributary, and the I-90 Pond to assess impacts on the biota on an annual basis for five years. Sampling thereafter will be based on the results of the five annual sampling rounds, as reported within the first FYR. Should conditions change with regard to the I-90 Pond dam (i.e., the dam is repaired, removed, or if it should fail), the EPA will evaluate the potential impact of any significant releases and, if necessary, take or require response actions to mitigate their potential impact; and
- In accordance with CERCLA Section 121 and because the remedy will result in contaminants remaining onsite above levels that will not allow for Unlimited Use/Unrestricted Exposure (UU/UE), the remedy will be reviewed at least once every five years.

There were extensive enforcement actions taken by EPA at the Site. Between 2005 and 2016, EPA entered into a total of 13 settlements with 418 potentially responsible parties (PRPs) at the site, which include all of the viable and locatable PRPs. Specifically, EPA entered into one ability to pay settlement with the owner and operator of the site, seven de minimis settlements with a total of 317 de minimis parties, two settlements in bankruptcy with two de minimis parties, a settlement agreement and order on consent for the performance of the remedial design (RD) with seven major parties, a unilateral administrative order for performance of the RD with two major parties, and a remedial action judicial consent decree with nine major parties, 19 federal agencies and departments, 42 de minimis parties, and the owner/operator. Through these settlements, EPA recovered over $6.5 million of EPA's response costs and certain future response costs and secured performance of the work.

Remedy Implementation

Soil and Sediment Cleanup

The EPA approved the Remedial Design Report for the cleanup in September 2013. Soil and sediment excavation and disposal began on October 1, 2013 and was completed on December 30, 2013. This effort was undertaken by the PRP Group through their contractor under the aforementioned consent decree and resulted in the removal and off-site disposal of 5,588 tons of

non-hazardous soil and sediment and 173 tons of hazardous soil. Excavated areas were backfilled with clean soil and restored to their original surface cover condition (i.e., paved or reseeded).

In-Situ Solidification/Stabilization (ISS)

The purpose of the ISS portion of the cleanup was to immobilize contaminants in surface soils, subsurface soils, and soils below the water table in areas where mercury concentrations in groundwater exceeded its cleanup goal. This effort was again undertaken by the PRP Group through their contractor under the aforementioned consent decree. The ISS work involved the use of an auger system to blend columns of soil within the ISS area with a mixture of Portland cement and a sulfur-containing compound. A total of 235 overlapping, six-foot diameter columns were installed and extended into a clay layer underlying the Site. Pre-excavation of the ISS area resulted in the removal and off-site disposal of an additional 2,618 tons of non-hazardous soil. Excavated areas were backfilled with clean soil and restored to their original surface cover condition (i.e., paved or reseeded). ISS activities took place between June 12, 2014 and October 31, 2014.

EPA completed a final inspection of the remedy in April 2015 and a Remedial Action Report documenting both the soil excavation and ISS portions of the remedy was approved by EPA on August 26, 2015.

Institutional Controls Table

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Site Use	Yes	Yes	MERECO, 26 Railroad Ave, Allied, SealMaster, and CSX Properties	Restrict site use to industrial activities.	See discussion below.
Soil	Yes	Yes	MERECO, 26 Railroad Ave, and CSX Properties	Preserve the integrity of the single-layer clay cap and pavement over the ISS area.	See discussion below.
Soil	Yes	Yes	MERECO, 26 Railroad Ave, Allied, and SealMaster Properties	Ensure proper testing and disposal of any future soil excavations.	See discussion below.
ISS Material	Yes	Yes	MERECO, 26 Railroad Ave, and Allied Properties	Prevent mechanical disturbance of the stabilized mass.	See discussion below.
Building Materials	Yes	Yes	MERECO and 26 Railroad Ave Properties	Require demolition activities of remaining on-site structures to be conducted in accordance with the SMP.	See discussion below.
Groundwater	Yes	Yes	MERECO, 26 Railroad Ave, Allied, SealMaster, and CSX Properties	Prohibit use of groundwater as a source of potable or process water until groundwater quality standards are met.	See discussion below.
Vapor Intrusion	Yes	Yes	MERECO, 26 Railroad Ave, Allied, and SealMaster Properties	Require a vapor intrusion investigation within the footprint of any proposed future construction in accordance with the SMP.	See discussion below.

ICs, as required in the ROD, are currently in place for all areas of the site. A Declaration of Covenants and Restrictions and Environmental Easement (DCR&EE) for each of the Mercury Refining Property, the 26 Railroad Ave Property, the Allied Property, the SealMaster Property, and the CSX Property have been signed and recorded in the Albany County Clerk's office on September 29, 2020, September 30, 2020, May 28, 2021, May 28, 2021, and April 18, 2024, respectively.

Community Relations Activities

There has been minimal community interest in the Site since the time of the remedial investigation. A public meeting was held after the issuance of the Proposed Plan, and a community availability session was held prior to the start of remedial activities.

Site Redevelopment

MERECO continues to operate on the Site property; adjacent properties also contain active businesses. The ICs require any future development at the Site to be completed in accordance with the approved SMP.

III. Monitoring Results

Groundwater samples are currently collected from four monitoring wells. These consist of an upgradient well, MW-15S, a side-gradient well, MW-14S, and two plume wells, MW-12S and MW-12I. Over the past five years, including the most recent sampling event conducted on June 5, 2023, three of the four wells, MW-15S, -14S, and -12I showed non-detect for mercury. The fourth well, MW-12S, has had detections of mercury ranging from 0.17 ppb in a filtered sample collected in June 2023 to 2.3 ppb in an unfiltered sample collected in March 2021. None of the filtered samples collected from this well have exceeded the ROD cleanup goal of 0.7 ppb for dissolved mercury since the December 2017 sampling event which had a mercury detection of 1.2 ppb.

Sediment samples are collected from five locations (two in the Unnamed Tributary, two in the Patroon Creek, and one in the I-90 Pond). Over the last five years, total mercury concentrations have ranged from 0.026 ppm at location SD-09 in the Patroon Creek in January 2023 to 1.2 ppm at location SD-06 in the Unnamed Tributary in December 2019. No observations have exceeded the ROD-specified sediment cleanup objective of 1.3 ppm over the past five years. Concentrations of methyl mercury have ranged from non-detect to 7.85 ppb at location SD-10 located in the I-90 Pond in December 2019. Currently, there is no NYSDEC or EPA cleanup criterion for methyl mercury in sediments.

Surface water samples are collected from three locations (one in each of the Unnamed Tributary, Patroon Creek, and I-90 Pond). Over the last five years, three rounds of surface water sampling have been conducted. Total mercury was not detected in any sample collected over the past five years except for the sample collected in the I-90 Pond in January 2023 which had a concentration of 100 parts per trillion (ppt). The NYSDEC chronic water quality criterion for mercury for the protection of aquatic life is 770 ppt (dissolved). Using a more sensitive laboratory analytical method, methyl mercury concentrations have ranged from non-detect to 0.26 ppt in the sample collected in the I-90 Pond in January 2023. There is currently no NYSDEC cleanup criterion for methyl mercury, but the Oak Ridge National Laboratory Tier II Secondary Chronic Value for freshwater aquatic life is 2.8 ppt. All surface water samples collected as part of the ecological monitoring program at this Site are analyzed unfiltered.

Fish tissue samples are collected from three locations (one in each of the Unnamed Tributary, Patroon Creek, and I-90 Pond). Over the last five years, two rounds of fish tissue sampling have been conducted. Concentrations of total mercury in fish tissue have ranged from non-detect to 0.26 ppm.

IV. Attainment of Groundwater Cleanup Levels

Over the last five years, only monitoring well MW-12S had dissolved mercury detected above the remediation goal. Region 2 utilized Groundwater Statistics Tool to evaluate the mercury trends in MW-12S. Dissolved mercury concentrations in the rest of the Site monitoring wells have generally been non-detect since 2012, except for very few low-level detections. At MW-12S, the groundwater data indicate decreasing trends, and the last five sampling events (since March 2018) have been below the remediation goal. Groundwater will continue to be monitored once every five years to verify the remedy (*i.e.*, ISS) is still functioning as intended.

V. Summary of Operation and Maintenance

Following the completion of the remedial action, regular monitoring of the Site has been conducted in accordance with the ROD and the SMP. Groundwater monitoring for mercury is currently completed every fifth quarter from a total of four monitoring wells located in three well clusters. Additionally, ecological monitoring at the Site includes surface water and sediment sampling from the Unnamed Tributary, Patroon Creek, and the I-90 Pond. The ROD required ecological sampling to take place annually for five years, following the implementation of the remedy. These five rounds of ecological sampling have been completed as of the December 2019 ecological sampling event, although additional ecological sampling was conducted in January 2023 at EPA's request for the purpose of the FYR.

The Site is inspected annually to confirm continued compliance with the SMP. This inspection includes verification that Site use remains the same, use of the Site buildings remains the same, and that groundwater is not being used for potable purposes. The clay cap, asphalt covering of the ISS area, and the bank of the Unnamed Tributary are inspected for cracks, erosion, or any other unsatisfactory conditions. Corrective actions, if needed, are taken in accordance with the SMP.

The approved SMP can be found in Appendix P of the Final Remedial Design Report.

Since waste material will remain on-site in the ISS area and beneath the clay cap, groundwater and ecological monitoring will continue to document the continued effectiveness of the remedy. Likewise, ICs must remain in place.

As required by the approved O&M Plan, a Periodic Review Report is submitted annually to EPA by the PRP Group. The Periodic Review Report documents the results of site monitoring and inspections conducted during the year, the results of any groundwater and ecological sampling, certifies that engineering controls and ICs remain in place, and that no activities have occurred in violation of the approved SMP.

VI. Demonstration of Cleanup Activity QA/QC

After post-excavation sampling results associated with the soil and sediment excavation portion of the remedy indicated that RAOs and associated cleanup levels had been met, the excavated areas were backfilled. Verification sampling of ISS application areas indicated that the

performance standards for unconfined compressive strength and synthetic precipitation leaching procedure were achieved.

The QA/QC performance standards, construction quality control, and construction activities were followed and performed in accordance with EPA and NYS standards. EPA determined that all analytical results are accurate to the degree needed to assure that the remedy has been satisfactorily executed, consistent with the 2008 ROD.

VII. Five-Year Reviews

The remedy selected for the Site will leave hazardous substances, pollutants, or contaminants above levels that would not allow for unlimited use and unrestricted exposure. Therefore, in accordance with CERCLA Section 121, EPA has performed two statutory five-year reviews for the Site in 2019 and 2024 and will continue to do so. The February 12, 2024 five-year review found the remedy to be protective in the short term with one Recommendation, to complete the IC on the CSX Property. As of April 18, 2024, ICs have been put in place on all site parcels, the FYR Recommendation is resolved, and the site is now protective. The next five-year review is due February 12, 2029.

VIII. Site Completion Criteria

This Site meets all the site completion requirements as specified in OLEM Directive 9320.2-23, *Close Out Procedures for National Priorities List Sites*. Specifically:

- All remedial decision documents have been completed and the selected remedies are consistent with CERCLA, the National Oil and Hazardous Substances Pollution Contingency Plan, and EPA policy and guidance.
- All response actions documented in the ROD have been completed and appropriately documented in the Site file. The implemented remedy has achieved the RAOs for all pathways of exposure.

No further Superfund response beyond ongoing monitoring, maintenance, and FYRs is needed to protect human health and the environment.

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United States Environmental Protection Agency, *Second Five-Year Review Report*, February 2024.

Table 1 – Site Chronology

Date	Milestone
September 2008	Record of Decision is signed by the USEPA.
September 2009	Administrative Settlement Agreement and Order for Remedial Design and Cost Recovery is signed between the USEPA and the Group.
July 2010	The Remedial Design Work Plan (RDWP), which included the RDI activities as well as the TS Work Plan, was submitted to and approved by the USEPA.
November 2011	The Final TS Report is submitted to the USEPA.
December 2011	The Final TS Report is approved by the USEPA.
July 2010 – December 2011	RDI investigations are conducted onsite between July 2010 and March 2011. Results are submitted in a RDI Report (BC, December 2011).
March 2012	The Preliminary (50% Submittal) RDR is submitted to the USEPA.
June 2012	An addendum to the Remedial Design Work Plan is submitted to the USEPA
June 2012 – September 2012	Supplemental RDI investigations are conducted to delineate dissolved mercury impacts in groundwater under the former CSB. The CSB superstructure was demolished to facilitate drilling and monitoring well installation through the CSB foundation and in the area immediately south of the CSB.
February 2013	The Supplemental TS (STS) Work Plan is submitted to the USEPA.
February 2013	Results of the SRDI are submitted to the USEPA in a Supplemental Remedial Design Investigation Report.
March 2013	The STS Work Plan is approved by the USEPA
July 2013	Draft FRDR is submitted to the USEPA
July 2013	LRI is procured by the Group to perform non-ISS related remedial activities.
August 2013	The FRDR and the RAWP for non-ISS related activities are submitted to the USEPA.
August 2013	The Final STS Report is submitted to the USEPA.
September 2013	The FRDR and RAWP for non-ISS related activities are approved by the USEPA. LRI mobilizes to Site and begins the non-ISS portion of the remedy.
December 2013	LRI completes the non-ISS portion of the remedy and demobilizes from the Site.
April 2014	WRS IE is procured by the Group to perform ISS-related remedial activities.
May 2014 – June 2014	WRS IE mobilizes to the Site and performs the storm system realignment work.
July 2014	The RAWP for ISS-related activities is submitted to the USEPA. The USEPA grants partial approval of the RAWP for ISS-related activities pending the results of the field demonstration and Pilot Test. WRS IE performs the field demonstration test and Pilot Test.
August 2014	Based on the results of the field demonstration and Pilot Study, the USEPA grants final approval of the RAWP for ISS-related activities. WRS IE begins full scale ISS implementation. Performance monitoring samples are collected throughout ISS activities and analyzed to confirm the performance of remedial activities.
October 2014	WRS IE completes the ISS portion of the remedy and demobilizes from Site.
November 2014 – March 2015	Performance monitoring samples continue to be analyzed to confirm the performance of remedial activities.
April 2015	The USEPA performs the final inspection of the Site and deems the remedy to be complete.
May 2015	Post-remedial monitoring begins.

Figure 1 – Site Map