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Formerly Utilized Sites Remedial Action Program Update



Fiscal Year 2020

JANUARY 2021



FUSRAP Update

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FUSRAP information can be found at:

<http://www.usace.army.mil/Missions/Environmental/FUSRAP/>

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Cover photo: Excavation at the Luckey Site begins at dawn.

Photo credit: David Stinnett, North Wind Portage, Inc.

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Acronyms

AEC	Atomic Energy Commission	FY	fiscal year
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	HISS	Hazelwood Interim Storage Site
COVID-19	2019 Novel-Coronavirus Disease	IWCS	Interim Waste Containment Structure
CWC	Coldwater Creek	MED	Manhattan Engineer District
DOE	Department of Energy	MSP	Middlesex Sampling Plant
DOE LM	Department of Energy Office of Legacy Management	NCP	National Oil and Hazardous Substances Pollution Contingency Plan
DT	St. Louis Downtown Site Vicinity Property	NFSS	Niagara Falls Storage Site
DU	depleted uranium	OU	operable unit
EPA	U.S. Environmental Protection Agency	RACR	remedial action completion report
FS	Firing Site	ROD	record of decision
FSSE	final status survey evaluation	RWDA	Radioactive Waste Disposal Area
FUSRAP	Formerly Utilized Sites Remedial Action Program	SLAPS	St. Louis Airport Site
		SLDS	St. Louis Downtown Site
		VP	Vicinity Property

Introduction

The Formerly Utilized Sites Remedial Action Program Update provides information about progress the U.S. Army Corps of Engineers (USACE) is making in cleaning up sites with contamination resulting from the Nation's early atomic energy program. The Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated in 1974 to identify, investigate and, if necessary, clean up or control sites throughout the United States contaminated as a result of Manhattan Engineer District (MED) or early Atomic Energy Commission (AEC) activities. Both the MED and the AEC were predecessors of the U.S. Department of Energy (DOE).

Congress transferred administration and execution of FUSRAP cleanups from the DOE to USACE in October 1997. USACE continues to address sites the DOE began, sites that were referred to USACE by the DOE Office of Legacy Management (LM) under a USACE/DOE Memorandum of Understanding, and one site added to the program by Congress.

USACE FUSRAP objectives are to safely, effectively and efficiently:

- Identify and evaluate sites where authority and the need for a response action exist.
- Clean up or control FUSRAP sites to ensure protection of human health and the environment.
- Dispose of or stabilize radioactive material in a way that is safe for the public and the environment.
- Perform work in compliance with applicable federal, state and local environmental laws and regulations.
- Return sites for appropriate future use.

When executing FUSRAP, USACE follows the framework of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This framework is shown on pages 4 and 5. Each site may have multiple operable units (OUs), each in a different phase of the CERCLA process.

USACE is committed to informing and involving the public as it progresses through the decision-making process for each site. USACE coordinates response

actions with the U.S. Environmental Protection Agency (EPA) and/or state environmental regulatory agencies on all sites.

Two years after USACE completes a response action and final closeout activities at a FUSRAP site, that site, along with responsibility for any necessary long-term stewardship, reverts to DOE LM. In total, 10 sites have been transferred back to DOE-LM for long-term stewardship:

- Combustion Engineering Site, Windsor, Connecticut.
- Madison Site, Madison, Illinois.
- Shpack Landfill, Norton/Attleboro, Massachusetts.
- Wayne Interim Storage Site, Newark, New Jersey.
- Bliss and Laughlin Site, Buffalo, New York.
- Colonie Site, Colonie, New York.
- Ashland 1 Site, including Seaway Area D, Tonawanda, New York.
- Ashland 2 Site, including Rattlesnake Creek, Tonawanda, New York.
- Linde Site, Tonawanda, New York.
- Painesville Site, Painesville, Ohio.

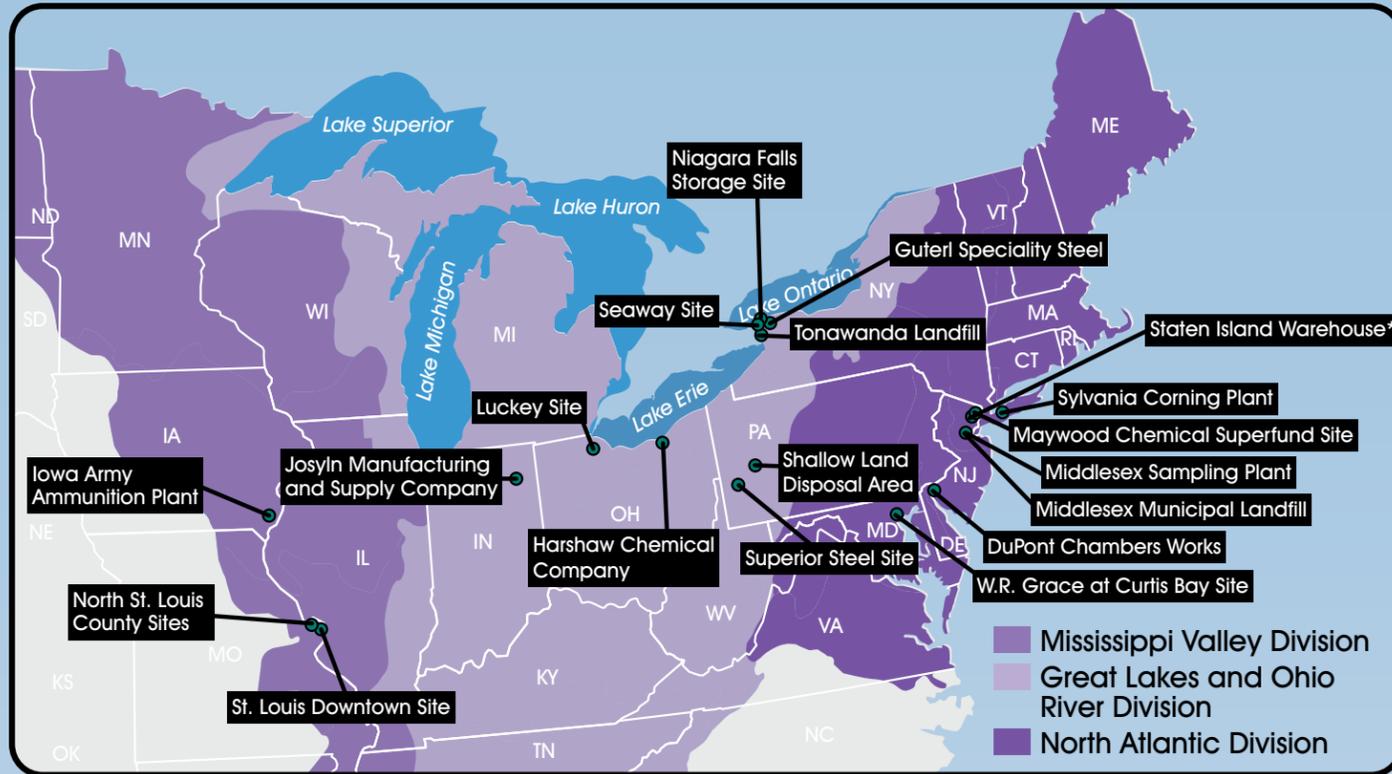
Five of these sites, the Painesville Site, the Linde Site, the Colonie Site, the Combustion Engineering Site and the Shpack Landfill, were transferred within the last five years.

A total of six districts from three USACE divisions work on 20 active FUSRAP sites in eight states. Districts involved in FUSRAP are Buffalo and Pittsburgh districts from the Great Lakes and Ohio River Division; St. Louis District from the Mississippi Valley Division; and Baltimore, New York and Philadelphia districts from the North Atlantic Division. The USACE Environmental and Munitions Center of Expertise and the Kansas City District also provide technical assistance.

Since USACE began administering FUSRAP, program funding has ranged from \$99.9 million to \$200 million a year. The FUSRAP appropriation for fiscal year (FY) 2020 was \$200 million. Progress and the schedule for each site is dependent on USACE prioritization among all active FUSRAP sites considering the CERCLA phase they are in and the availability of FUSRAP funds nationally. An active FUSRAP site is any eligible FUSRAP site which is undergoing or is programmed and is funded to undergo response actions by USACE under CERCLA.



Active FUSRAP Sites



* Staten Island Warehouse was added to FUSRAP in FY 2020 and will be considered an active site in FY 2021.

FY 2020 Overall Program

- 12** Sites in remedial action
- 6** Sites being investigated
- 1** Site oversight provided
- 1** Site preparing for transfer
- 1** Site added to FUSRAP

- 20** Active sites
- 8** States
- 3** Divisions
- 6** Districts

Mississippi Valley Division

St. Louis District

Iowa Army Ammunition Plant
Middletown, Iowa

North St. Louis County Sites
St. Louis County, Missouri

Latty Avenue Properties

St. Louis Airport Site

St. Louis Airport Site Vicinity Properties

St. Louis Downtown Site
St. Louis, Missouri

Great Lakes and Ohio River Division

Buffalo District

Joslyn Manufacturing and Supply Company
Fort Wayne, Indiana

Guterl Speciality Steel
Lockport, New York

Niagara Falls Storage Site
Lewiston, New York

Seaway Industrial Park
Tonawanda, New York

Tonawanda Landfill
Tonawanda, New York

Harshaw Chemical Company
Cleveland, Ohio

Luckey Site
Luckey, Ohio

Superior Steel
Carnegie, Pennsylvania

Pittsburgh District

Shallow Land Disposal Area
Parks Township, Pennsylvania

North Atlantic Division

Baltimore District

W.R. Grace at Curtis Bay Site
Baltimore, Maryland

New York District

Maywood Chemical Superfund Site
Maywood, New Jersey

Middlesex Municipal Landfill
Middlesex, New Jersey

Middlesex Sampling Plant
Middlesex, New Jersey

Staten Island Warehouse
Staten Island, New York

Sylvania Corning Plant
Hicksville, New York

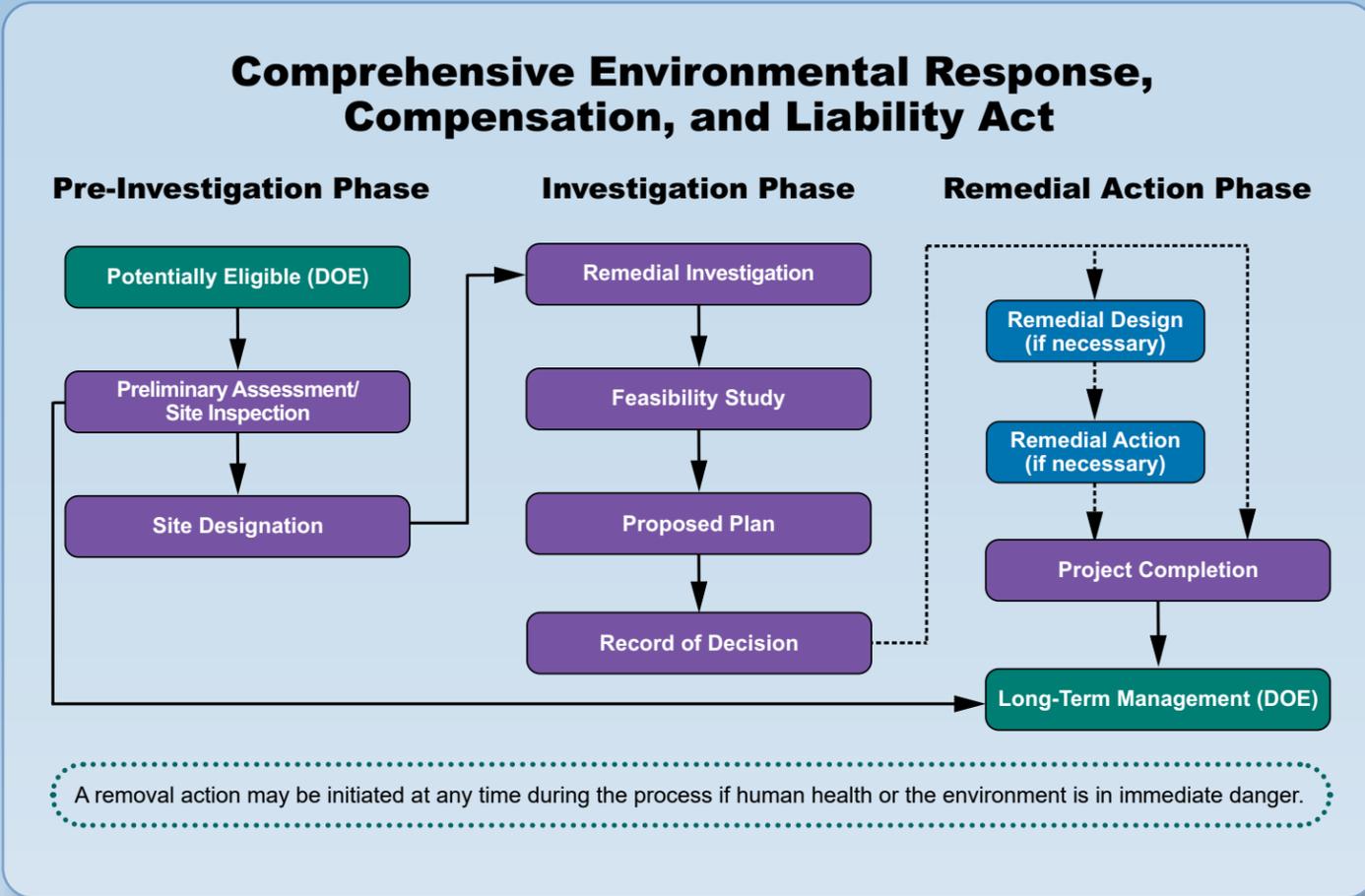
Philadelphia District

DuPont Chambers Works
Deepwater, New Jersey



CERCLA Process for FUSRAP

When executing FUSRAP, USACE follows the CERCLA framework, which is described below.



Preliminary Assessment/Site Inspection

To determine whether there has been a release or potential release that may require further action or investigation and to assess the nature of associated threats.

Remedial Investigation

To determine the nature and extent of the problem presented by the release.

To evaluate the fate and transport of contaminants through site media (e.g., groundwater, surface water).

To assess potential human health and ecological risks from contaminants in the environment.

Feasibility Study

To identify, develop, and evaluate remedial alternatives, analyzing in detail each remedial alternative for its:

- 1) Overall protection of human health and the environment.
- 2) Compliance with applicable or relevant and appropriate requirements.
- 3) Long-term effectiveness and permanence.
- 4) Reduction of toxicity, mobility, or volume through treatment.
- 5) Short-term effectiveness.
- 6) Implementability.
- 7) Cost.

Proposed Plan

To document USACE's preferred remedial alternative.

To seek and consider comments from federal and state environmental regulatory agencies.

To seek and consider comments from the public through a mandatory minimum 30-day public review period.

Record of Decision

To document USACE's selection of the remedial alternative based on the remedial investigation, the feasibility study, and comments received from federal and state environmental regulatory agencies and the public on the proposed plan.

Remedial Design (if necessary)

To develop detailed designs, plans, specifications, and bid documents for conducting the remedial action.

Remedial Action (if necessary)

Upon approval of the remedial design, remedial action (the actual construction and implementation of the selected remedial alternative) is initiated. The remedial action is conducted until the remedial action objectives are achieved.

Site Closeout

To document and demonstrate that USACE completed the response action in accordance with the record of decision (ROD) and in compliance with CERCLA, as amended, and the NCP.

Long-Term Management

Certain remedies may require a period of operation and maintenance, after the remedy is implemented, before the remedial action objectives and cleanup criteria are achieved.

Under FUSRAP, USACE must conduct necessary operations and maintenance and/or site monitoring for the first two years following remedy completion. After that time, USACE turns the site over to the DOE's Office of Legacy Management for long-term stewardship.

Program Accomplishments

USACE completed a successful and challenging FY 2020. The 2020 FUSRAP budget of \$200 million was the highest budget amount received in the history of the program. It was used for the efficient continuation of ongoing remedial activities at 12 sites, conducting ongoing investigations at six sites, conducting site closeout activities at one site and providing government oversight at one site. The program initiated the remedial investigation of the Joslyn Site, Fort Wayne, Indiana; completed remedial activities at the Tonawanda Landfill Vicinity Property (VP), Tonawanda, New York; and added the Staten Island Warehouse Site, Staten Island, New York, to the program. A total of 95,000 cubic yards of contaminated material were disposed and 54 VPs were released for beneficial use.

The program quickly and successfully implemented 2019 novel-coronavirus disease (COVID-19) safety protocols for all field work and office activities starting in March 2020. USACE personnel and contractors are taking appropriate actions to safeguard their health and welfare as prescribed by the nation's health experts. Site safety and progress of field execution activities were not significantly impacted by the addition of these necessary health and safety requirements.

FY 2020 Program Overview

\$200M
FY 2020 budget

54 Vicinity properties released for beneficial use

95K
Cubic yards of contaminated soil and material excavated and disposed





Site Updates

Mississippi Valley Division

St. Louis District

Iowa Army Ammunition Plant
Middletown, Iowa

The Iowa Army Ammunition Plant is an active, government-owned facility that covers more than 19,000 acres in southeastern Iowa. From 1947 to 1975, portions of the plant were under the control of the AEC for munitions testing and weapon-assembly operations. This resulted in uranium and munitions explosives contaminating the soils. The St. Louis District is addressing the plant areas formerly used by the AEC in accordance with the Federal Facilities Agreement signed among USACE, DOE, EPA and the State of Iowa.

In September 2011, the district completed a ROD for OU-8, which addresses depleted uranium (DU) contamination using a sorting process to remove DU from the surrounding soil. This process reduces the amount of contaminated soil that must be shipped off-site, thus saving money.

In FY 2020, a total of 24,196 cubic yards of soil was handled and processed using the on-site soil-sorting process. This was an increase of 10,430 cubic yards over FY 2019 totals. Using this soil-sorting process, soils were sorted into two stockpiles: soils with levels above remediation goals and soils with levels below remediation goals. Soils that were above remediation goals were loaded into railcars and shipped off-site for disposal, and soils with levels below remediation goals were tested and used for backfill on-site. This resulted in only 2,067 cubic yards of DU-contaminated soil needing to be shipped off-site for disposal. Another 3,068 cubic yards of DU-contaminated soil and debris were stockpiled for shipment in early FY 2021. Additionally, a remedial action completion report (RACR) for the OU-1 West Burn Pads Area South of the Road and a RACR for the OU-8 Line 1 Structures were completed.



Soil sorting at the Iowa Army Ammunition Plant.

The final status survey evaluation (FSSE) for an additional 30 survey units outside of the general excavation area was completed.

In FY 2021, the district will continue its ongoing cleanup efforts at the site under the OU-8 ROD. Approximately 25 survey units at Firing Site (FS)-12 plus all areas outside of FS-12 (FS-1 and 2; FS-3, 4 and 5; etc.) are scheduled for FSSE.

North St. Louis County Sites
St. Louis County, Missouri

The St. Louis District worked on the St. Louis Sites' fourth five-year review report during FY 2020. The report was signed by the District Commander on Aug. 17, 2020. Final comments from the EPA and the Missouri Department of Natural Resources are being resolved.

In FY 2020, the St. Louis District continued remedial activities in accordance with the 2005 North St. Louis County Sites ROD.

In response to COVID-19 safety precautions, the district developed a "FUSRAP Virtual Open House" web presence on its webpage in lieu of its usual open house information meeting. The district also issued two newsletters for the St. Louis Sites.

The district plans to host an open house and issue two newsletters in FY 2021.

St. Louis Airport Site

From 1946 to 1957, residues from uranium processing at the Mallinckrodt facility were stored at the St. Louis Airport Site (SLAPS) located in North St. Louis County. In 1966, a private company bought the residues and moved the residues from SLAPS to the Hazelwood Interim Storage Site (HISS)/Futura Coatings Company Site located on Latty Avenue.

Remedial activities at SLAPS were completed in 2007. Groundwater monitoring and long-term management activities began in 2007 and are ongoing. The post-remedial action report was released in May 2009. The site continues to serve as the loadout area for all the North County Sites.

Latty Avenue Properties

In 1966, a private company purchased ore residues and uranium- and radium-bearing process wastes stored at SLAPS from the MED/AEC and moved them to an 11-acre storage site on Latty Avenue (HISS/Futura). The Latty Avenue Properties are comprised of 10 VPs plus HISS/Futura.

Most remedial activities at the Latty Avenue Properties were completed in 2013.

In FY 2020, the St. Louis District conducted groundwater monitoring at the Latty Avenue Properties as part of the environmental monitoring program. This quarterly activity will continue in FY 2021.

In 2020, the railroad consented to allow USACE to remediate under the Futura fenceline, adjacent to railroad property. Once complete in 2021, this will further reduce the inaccessible footprint on the Futura property. The St. Louis District will also continue to prepare the land use controls to address the remaining contamination beneath the buildings on the Futura property, under utility poles and under the Futura fenceline.



St. Louis Airport Site Vicinity Properties

The SLAPS VPs consist of approximately 148 properties including parcels along former haul routes between the SLAPS and the Latty Avenue Properties, Coldwater Creek (CWC), open fields (former Ballfields area) immediately north of the SLAPS, and other locations contiguous to SLAPS. The impacted areas also include haul routes between the SLAPS and the HISS. These routes include Eva Avenue, Frost Avenue, Hazelwood Avenue, McDonnell Boulevard, and Pershall Road. The SLAPS VPs are primarily located within the cities of Berkeley and Hazelwood, Missouri.

The part of CWC that is a SLAPS VP flows 14.2 miles in a northeasterly direction from Banshee Road to the Missouri River. There are approximately 700 vicinity properties adjacent to CWC from Highway I-270 to the Missouri River that are also SLAPS VPs. These properties are primarily residential and recreational properties with some businesses. USACE continues to investigate/sample the CWC corridor (banks and sediment) and the adjacent properties within the 10-year flood plain. Surface water transport from SLAPS, Latty Avenue Properties, and roads adjacent to CWC was the predominant mechanism for contamination to enter CWC. Once contamination reached CWC, creek flow transported the contaminated material

downstream. Over the years creek flooding deposited contaminated FUSRAP material onto adjacent properties.

In FY 2020, the St. Louis District continued remedial activities at Investigative Area-09 former Ballfields Phase 3, which is estimated to have 95,000 cubic yards of contaminated material (more than 20,040 cubic yards removed in FY 2020); and initiated remedial activities at the I-270/Pershall Road properties to support road improvements by the Missouri Department of Transportation. The district continued sampling the CWC corridor and the 700 adjacent properties and issued documentation releasing 52 properties for beneficial use. In FY 2020,

the St. Louis District added a fourth crew to sample CWC to expedite the pre-design investigation of CWC and adjacent properties. The district shipped 26,171 cubic yards of contaminated material from the SLAPS VPs to an out-of-state licensed facility.

In FY 2021, the St. Louis District will continue to work with the Missouri Department of Transportation to remediate areas where road improvements will occur in North County. The district will continue remedial activities at the former Ballfields Phase 3 and will continue sampling CWC and adjacent properties. The St. Louis District also anticipates issuing documentation releasing 70 VPs and shipping 25,000 cubic yards of contaminated material to an out-of-state, licensed facility.



Pershall Road excavation near I-270.



St. Louis Downtown Site
St. Louis, Missouri

From 1942 until 1957, the MED and AEC contracted with Mallinckrodt Chemical Works to process uranium ore to produce uranium metal. Residuals of the process (including spent pitchblende ore, process chemicals, radium, thorium and uranium) were released from the Mallinckrodt property and into the environment through handling and disposal practices.

The St. Louis District continues remedial activities in accordance with the 1998 ROD for the accessible areas at the St. Louis Downtown Site (SLDS), which includes the Mallinckrodt plant and 42 VPs.

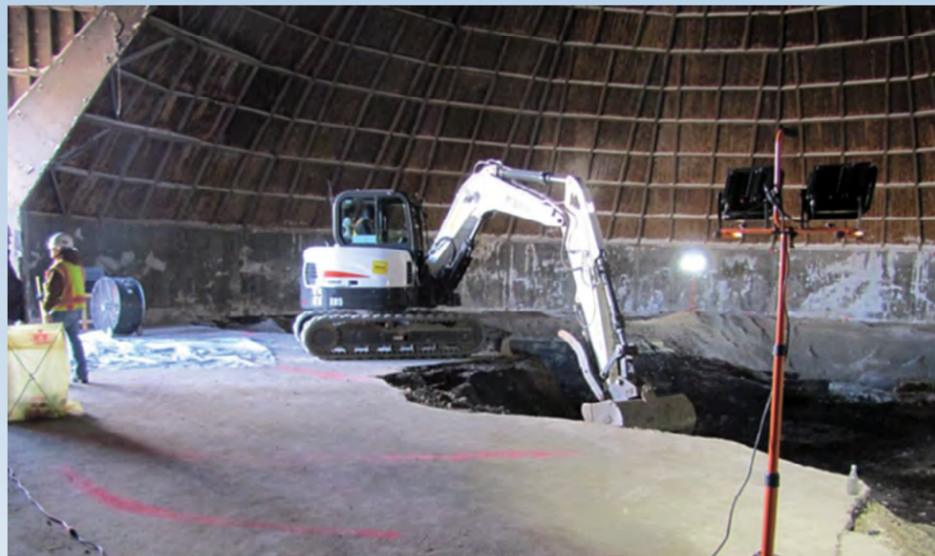
In FY 2020, the St. Louis District removed 3,739 cubic yards of contaminated material from the site and shipped it off-site for disposal. The district also finalized documents releasing three properties. Additional FY 2020 efforts consisted of completing remedial activities and restoration at Destrehan Street/Plant 7W, completion of over-water sampling of the riverbed of the Mississippi River adjacent to SLDS City Property (DT-2), continued remedial activities in previously inaccessible areas at the

Gunther Salt property and continued evaluation of previously inaccessible areas inside the Mallinckrodt Plant.

The inaccessible properties of the SLDS were broken into Group 1 and Group 2. The district issued a ROD with No Further Action as the selected alternative for inaccessible soils at the Group 1 properties in FY 2014. Since then, several areas within the Group 2 properties have been further evaluated for inclusion into Group 1.

In FY 2021, the St. Louis District will continue working toward issuing a remedial investigation addendum focusing on the remainder of the inaccessible soils categorized as Group 2 properties.

The district anticipates completing remediation at the Gunther Salt property, completing sampling and evaluation of the Bruce Oakley property (DT-9), completing the evaluation and plan for addressing the Mississippi River area adjacent to DT-2 and issuing documents to release two additional properties during FY 2021.



Remedial activities inside Gunther Salt Dome 3 of the St. Louis Downtown Site in FY 2019.

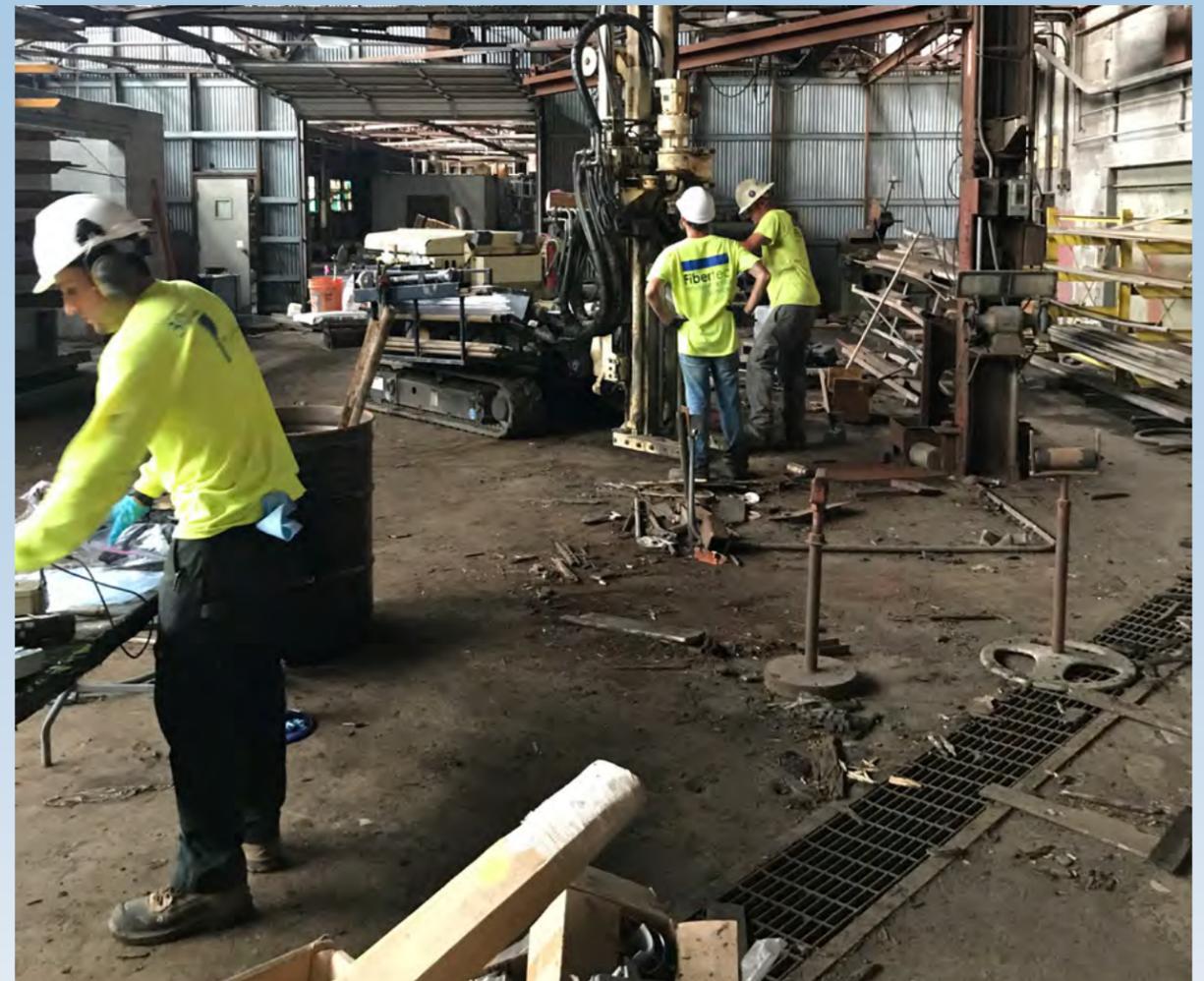
Great Lakes and Ohio River Division

Buffalo District

Joslyn Manufacturing and Supply Company
Fort Wayne, Indiana

From 1943 to 1952, the Joslyn Manufacturing and Supply Company worked under government contract to temper, hot roll, quench, straighten, cool, grind, cut and thread natural uranium billets into metal rods. The 23-acre Joslyn Site was considered FUSRAP eligible in FY 2009 and assigned to the Buffalo District. It became an active site in 2019, when a remedial investigation contract was awarded in 2019 using available budget plus up funding.

In FY 2020, the Buffalo District worked with a contractor to complete a remedial investigation that included soil, groundwater, and sediment sampling. The investigation also included radiological scans of the on-site buildings. The remedial investigation field work will conclude in FY 2021, which will be followed by the drafting of the remedial investigation report.



Remedial investigation activities at the Joslyn Site.



Guterl Specialty Steel
Lockport, New York

From 1948 to 1956, the Simonds Saw and Steel Company, later known as the Guterl Specialty Steel Site, rolled uranium steel billets into rods under a contract with the AEC. The 70-acre site is in Lockport, New York. The Buffalo District issued a remedial investigation report for the site in 2010. The report indicated that action is necessary to address

radionuclide constituents of concern (thorium-232 and uranium in soil and buildings, and uranium in groundwater) on the Guterl Site. Groundwater monitoring continues to be conducted annually for the site.

In FY 2020, the Buffalo District completed reviews of the draft proposed plan, which is scheduled to be approved and publicly released together with the feasibility study in FY 2021.



Groundwater sampling at the Guterl Specialty Steel Site.

Niagara Falls Storage Site
Lewiston, New York

From 1944 to 1952, the MED and its successor, the AEC, used portions of a former TNT production facility located in Lewiston and Porter, New York, to store radioactive residues and wastes from uranium ore processing. In 1982 the DOE began cleanup and consolidation of the radioactive wastes and residues in a 10-acre earthen containment cell (Interim Waste Containment Structure [IWCS]) constructed on the 191-acre, federally owned Niagara Falls Storage Site (NFSS). The IWCS was completed in 1986 and the Buffalo District performs maintenance, monitoring and environmental surveillance activities at the site to verify the IWCS remains protective of human health and the environment and continues to perform as designed.

The Buffalo District is responsible for environmental investigations and response at five NFSS VPs, which are located north of the site. Three VPs, VP-E, E-Prime, and G, were not accessible for investigation by the DOE. USACE will investigate these VPs once the areas are accessible for investigation and enough funding is available. Two additional VPs are being evaluated by the district, VP H Prime and VP X. VP X contained the wastewater treatment plant that supported the former TNT production plant.



Surface water sampling at the Niagara Falls Storage Site.

In FY 2020, the Buffalo District released the Balance of Plant and Groundwater OUs feasibility study and proposed plan. The district also started the contract acquisition process to procure an architect-engineer design/construction service contract for the anticipated remediation work at NFSS. The contract is scheduled to be awarded in FY 2021. The district continues to perform environmental surveillance to ensure the IWCS is performing as designed until the selected remedy is implemented.

Additionally, in FY 2020, the district started drafting the remedial investigation report for VP H Prime, which is scheduled to be released in FY 2022. The Buffalo District is conducting a site inspection for VP X and will be releasing the report in FY 2022.

Seaway Industrial Park
Tonawanda, New York

The Seaway Site is a 93-acre commercial landfill in Tonawanda, New York, a suburb of Buffalo. Approximately 16 acres of the landfill contain radiological waste that originally came from the nearby Linde Site, which processed uranium ore for the MED. USACE signed a ROD for the Seaway Site in October 2009, which identified containment with limited off-site disposal as the selected remedy for the site. In FY 2016, the Buffalo District completed remediation of the northside of the landfill.



Seaway Northside remediation completed in 2016.

In FY 2020 the Buffalo District initiated the project's first five-year review, which is expected to be completed in FY 2021. The Buffalo District also began contract acquisition activities for the construction design of the landfill cap at the Seaway Site. Implementation of the landfill cap construction will start upon completion of ongoing cleanup activities at other FUSRAP sites and/or the availability of funding in the national program.



Tonawanda Landfill
Tonawanda, New York

The Tonawanda Landfill is a VP of the Linde Site. It is in Tonawanda, New York, a suburb north of Buffalo. The VP consists of two OUs: the 55-acre Tonawanda Landfill OU and the 115-acre Mudflats OU. The site was designated into FUSRAP in 1992 when early DOE investigations around the Linde Site detected elevated levels of FUSRAP-related radionuclides in the landfill.

The Buffalo District completed work at the Mudflats OU in 2008 with a no-action ROD.

In FY 2020, the Buffalo District completed the removal of FUSRAP-related material in accordance with the 2017 Landfill OU ROD. In FY 2020, 2,973 cubic yards of FUSRAP-related material was removed from the VP, making the total volume of material excavated and disposed 4,345 cubic yards. The Buffalo District is currently working on the site closeout report, which is expected to be released in FY 2022.

Harshaw Chemical Company Site
Cleveland, Ohio

This 55-acre former industrial facility is located three miles south of downtown Cleveland. From 1944 to 1959, the Harshaw Chemical Company was under contract to the MED and the AEC to produce uranium compounds for isotopic separation and enrichment in Oak Ridge, Tennessee. The Harshaw Site is currently unused and secured by the property owner.

The Buffalo District released a remedial investigation report for the site in 2009. The report identified radium-226, thorium-230, thorium-232, and

total uranium (uranium-234, uranium-235 and uranium-238) in soil and buildings as constituents of concern that needed to be addressed. The district released a feasibility study report in 2012 and a feasibility study addendum in 2019 to incorporate changes at the site, including the FY 2015 removal of Building G-1 where uranium processing had taken place, and an evaluation of newly collected data. A proposed plan was released in 2019. In FY 2020, the Buffalo District continued evaluating the public comments on the proposed plan, developing responses and drafting the ROD. During FY 2021, the district will complete the ROD for the site.



USACE removed Building G-1 at the Harshaw Site during FY 2015.



Luckey Site
Luckey, Ohio

The Luckey Site, a 40-acre privately owned site 24 miles southeast of Toledo, is in the remedial action phase. From 1949 to 1958, the site was operated as a beryllium production facility under contract to the AEC, resulting in beryllium, radionuclide and lead contamination of site soils and groundwater.

The Buffalo District completed a remedial investigation of the site in 2000, a feasibility study in 2003, a ROD to remediate site soils in 2006 and a ROD for monitored natural attenuation of groundwater in 2008. Groundwater monitoring is performed bi-annually at the site during the soil remediation.

In FY 2020, the Buffalo District continued the remedial action with the excavation and off-site disposal of 38,900 cubic yards of FUSRAP-contaminated wastes from the former lagoons area

and Phase 2 area. The remediation contractor also completed final status survey activities in the Phase 1 area and began backfilling activities in the lagoons. In FY 2020, the district awarded a contract for the deconstruction of the former production building at the Luckey Site and continued the source selection process to acquire a new remediation contract.

In FY 2021, the Buffalo District plans to complete the restoration activities in the Phase 1 area, complete remediation, final status survey, and restoration activities in the Phase 2 area, complete deconstruction of the production building, and anticipates removing and shipping approximately 32,300 cubic yards of FUSRAP-contaminated materials off-site. Additionally, the district will complete acquisition for a new remediation contract that will have enough capacity for the remaining site remedial action activities once the capacity of the existing contract is depleted. The Buffalo District will continue to keep the community informed of progress at the site.

Superior Steel
Carnegie, Pennsylvania

The former Superior Steel Site, a 25-acre site located in Scott Township near Carnegie, Pennsylvania, was added to FUSRAP in FY 2008. Uranium metal had been processed at the site in support of the AEC's fuel-element development program from 1952 to 1957. The site was also licensed to receive thorium metal for processing and shaping from 1957 to 1958.

During FY 2020, the Buffalo District completed the draft remedial investigation report, and the final report is scheduled for completion in FY 2021.

Pittsburgh District

Shallow Land Disposal Area
Parks Township, Pennsylvania

In January 2002, Section 8143 of Public Law 107-117 directed USACE to cleanup radioactive waste at the Parks Township Shallow Land Disposal Area under FUSRAP. This 44-acre site, located northeast of Pittsburgh, consists of 10 trenches containing wastes from a facility that processed uranium and thorium.

During FY 2020, the district continued site operations and maintenance and prepared programmatic remediation work plans. Site design plans are currently being developed in anticipation of starting site infrastructure improvements in FY 2021.



Excavation in Lagoon A at the Luckey Site with the production building in the background.



Sewer investigation at the Superior Steel Site during 2019.



North Atlantic Division

Baltimore District

W.R. Grace at Curtis Bay Site
Baltimore, Maryland

From May 1956 through early 1957, thorium and rare earth elements were extracted from monazite sand at the site under an AEC license. This process occurred in the southwest quadrant of a 100-year-old, five-story manufacturing building (Building 23). Building 23 is still in active use by the property owner. Building components and equipment in the southwest quadrant of Building 23 exhibited residual radiological activity remaining from the monazite sand processing. Waste materials from the processing operations (termed gangue) were disposed of on-site in an area referred to as the Radioactive Waste Disposal Area (RWDA).

In April 2008, the U.S. entered into a site-wide settlement agreement with the site owner through the District of Delaware Bankruptcy Court. The agreement states that financial liability shall be shared between the site owner and the government in a 40/60 split. The site owner has the lead to contract, manage and direct the site cleanup according to the final ROD for Building 23 and the ROD for the RWDA, which were signed in 2005 and 2011.

In FY 2020, the Baltimore District issued the revised ROD for the Building 23 OU, which changed the selected remedy of the southwest quadrant of the building from decontamination to demolition and disposal. The district continued to provide government oversight of the remedial action designs prepared by the site owner for remediation of Building 23.

Interior Stepan Building 4 foundation characterization survey at the Maywood site after remediation of contaminated concrete utility trenches and soils.

New York District

Maywood Chemical Superfund Site
Maywood, New Jersey

This site is a combination of 92 private and government-owned properties approximately 13 miles northeast of Newark, New Jersey, in the boroughs of Maywood and Lodi and the township of Rochelle Park. It is a National Priorities List site.

Contamination at the properties resulted from rare earths and thorium processing activities conducted at the Maywood Chemical Works from the early 1900s through 1959.

In FY 2020, the New York District continued addressing FUSRAP contamination consistent with the soils and groundwater RODs with 10,481 cubic yards of FUSRAP-related material removed and transported off-site for disposal. Cleanup efforts were focused on cleaning up commercial properties (Stepan property and streets in Lodi).



In FY 2021, the New York District plans to continue addressing soils consistent with the soils and groundwater RODs and complete cleanup of commercial properties (Stepan property and streets in Lodi). Land use controls, in the form of deed notices, will be used to inform future property owners of the contamination at properties where inaccessible soils currently make excavation unfeasible (such as under interstate highways or around high-pressure gas mains).

Middlesex Municipal Landfill
Middlesex, New Jersey

The Middlesex Municipal Landfill is a 37-acre site approximately 16 miles southwest of Newark. The site consists of parcels belonging to the Borough of Middlesex and the Middlesex Presbyterian Church.

The Middlesex Municipal Landfill was operated as a landfill from approximately 1940 through 1972. The landfill was closed following the regulations at the time and maintained with a minimum cover of two feet and establishment of vegetation. Since its closure, the site has not been developed.

A 2008 radiological survey of the site identified small areas of low-level surface radiation leading the DOE to refer it to USACE in March 2009 for investigation under FUSRAP. The New York District conducted a preliminary assessment and site inspection in FY 2011. The constituents of concern for the Middlesex Municipal Landfill are natural uranium and its decay products.

Based on results of the preliminary assessment and site inspection, the district recommended a remedial investigation for the site under FUSRAP. In 2014, the Middlesex Municipal Landfill was officially added to the program.

FY 2020 funding was used to draft the proposed plan.

FY 2021 funding will be used to finalize the proposed plan and draft the ROD.

Middlesex Sampling Plant
Middlesex, New Jersey

The Middlesex Sampling Plant (MSP) is a 9.6-acre, federally owned site in Middlesex, New Jersey. The MED established the MSP in 1943 for sampling; storage; and shipment of uranium, thorium and beryllium ores.

MED operations ended in 1955, and the AEC later used the site for storage and performed limited sampling of thorium residues. In 1967, the AEC terminated activities at the MSP and decontaminated on-site structures to meet criteria then in effect.

From 1969 to 1979, the site served as a U.S. Marine Corps training center. In 1980, the MSP was returned to the DOE, which designated it for cleanup under FUSRAP. The MSP was used for interim storage of two piles of radioactively contaminated soils removed from VPs and from the Middlesex Municipal Landfill. The MSP was added to the EPA's Superfund National Priorities List in FY 1999.

The New York District completed a ROD for soils in September 2005. Remedial action in accordance with this ROD was completed in FY 2008. A VP investigation was initiated in FY 2018 to determine if VPs previously identified and addressed by DOE meet the release criteria established in the MSP ROD for soils. The groundwater feasibility study was completed in October 2017 and the proposed plan was initiated.

In FY 2020, the New York District completed the groundwater proposed plan.

In FY 2021, the district will initiate and complete the groundwater ROD.

Sylvania Corning Plant
Hicksville, New York

The Sylvania Corning Plant is a 9.49-acre area located in the westernmost portion of Hicksville, Long Island, approximately 30 miles east of lower Manhattan. From 1952 to 1965, the Sylvania Corning Plant had contracts with the AEC for research, development and production primarily in support of the government's nuclear weapons program. From 1952 to 1967, a second operation concentrated on AEC-licensed work primarily to produce reactor fuel and other reactor core components.

In September 2011, the site was included in a regional groundwater listing on the National Priorities List.

In FY 2020, the New York District continued to work on the remedial investigation report. The district plans to use FY 2021 funding to finalize the remedial investigation report.



Staten Island Warehouse
Staten Island, New York

The Staten Island Warehouse is a 1.25-acre site on the north side of Richmond Terrace, directly below the Bayonne Bridge in Port Richmond, Staten Island, New York. The site was used by African Metals Corporation to store high-grade Belgian Congo uranium ore from 1940 to 1942. The uranium ore was later purchased by the MED in support of their activities.

The DOE found the site eligible for inclusion in FUSRAP in October 2009. The DOE then referred

the site to USACE in accordance with Article III.D of the Memorandum of Understanding executed between DOE and USACE in 1999 and it was assigned to the New York District.

Based on results of the preliminary assessment and site inspection, the district recommended a remedial investigation for the site under FUSRAP and the site was officially added to the program in May 2020.

Confirmatory sampling will be conducted in FY 2021 to determine the project path forward.



Staten Island Warehouse Site during 2010 site visit.

Philadelphia District

DuPont Chambers Works
Deepwater, New Jersey

The DuPont Chambers Works Site is a 6.5-acre area located within the 680-acre Chambers Works property in Deepwater, New Jersey. The former DuPont Chambers Works property is currently an active chemical manufacturing facility owned and operated by The Chemours Company (formerly E.I. DuPont De Nemours and Company).

From 1942 to 1947, the MED and AEC contracted with DuPont to process uranium compounds and uranium scrap to produce uranium tetrafluoride, uranium hexafluoride and a small quantity of uranium metal.

In FY 2020, the Philadelphia District continued to treat contaminated wastewater and execute on-site remediation. Over 11,500 cubic yards of material was remediated in OUs 1 and 2 and Area of Concern 6. The contaminated material was transported off-site for disposal. The wastewater treatment plant treated nearly 11 million gallons of contaminated water.

In FY 2021, the Philadelphia District will continue remedial activities and plans on removing and disposing of 9,000 cubic yards of FUSRAP-related materials.



Sheet pile cells being remediated or installed at Area of Concern #4, OU #3 at the DuPont Chambers Works Site.

Potential New Sites

The DOE determines eligibility of new sites for FUSRAP and refers eligible sites to USACE for further evaluation. As funding becomes available, USACE performs a preliminary assessment and potentially a site inspection, as well as a preliminary legal analysis of government responsibility at the referred sites. Based on the results of these studies, USACE may designate a site into the program for further investigation and potential action. Sites may also be added to the program through legislative action.

The DOE has identified Painesville Landfills III and IV, Painesville, Ohio; as eligible for FUSRAP designation, which is currently being evaluated.



Groundwater monitoring is performed annually at the Guterl Specialty Steel Site.

