



US Army Corps  
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# Formerly Utilized Sites Remedial Action Program Update



Fiscal Year

# 2019



## FUSRAP Update

The *Formerly Utilized Sites Remedial Action Program Update*, EP 360-1-36, is published annually by the U.S. Army Corps of Engineers in accordance with U.S. House of Representatives Report 107-112, dated June 26, 2001, to accompany the Energy and Water Development Appropriations Act 2002, Public Law 107-66.

**FUSRAP information can be found at:**

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

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All Photos: U.S. Army Corps of Engineers

Cover photo: *Excavation of Lagoon A at the Luckey Site*

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## Acronyms

<b>AEC</b>	Atomic Energy Commission	<b>HISS</b>	Hazelwood Interim Storage Site
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation and Liability Act	<b>IA</b>	investigative area
<b>CWC</b>	Coldwater Creek	<b>IWCS</b>	Interim Waste Containment Structure
<b>DOE</b>	Department of Energy	<b>MED</b>	Manhattan Engineer District
<b>DOE LM</b>	Department of Energy Office of Legacy Management	<b>MSP</b>	Middlesex Sampling Plant
<b>DU</b>	depleted uranium	<b>NCP</b>	National Oil and Hazardous Substances Pollution Contingency Plan
<b>EPA</b>	Environmental Protection Agency	<b>NFSS</b>	Niagara Falls Storage Site
<b>FS</b>	Firing Site	<b>NRC</b>	Nuclear Regulatory Commission
<b>FUSRAP</b>	Formerly Utilized Sites Remedial Action Program	<b>OU</b>	operable unit
<b>FY</b>	fiscal year	<b>ROD</b>	record of decision
		<b>RWDA</b>	Radioactive Waste Disposal Area
		<b>SLAPS</b>	St. Louis Airport Site

## Introduction

The *Formerly Utilized Sites Remedial Action Program Update* provides information about progress the U.S. Army Corps of Engineers 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 the Corps of Engineers in October 1997. The Corps of Engineers continues to address sites the DOE began, sites that were referred to the Corps of Engineers by the DOE Office of Legacy Management (LM) under a Corps of Engineers/DOE Memorandum of Understanding, and one site added to the program by Congress.

### **The U.S. Army Corps of Engineers' 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, the Corps of Engineers 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 5 and 6. Each site may have multiple operable units (OUs), each in a different phase of the CERCLA process.

The Corps of Engineers is committed to informing and involving the public as it progresses through the decision-making process for each site. The Corps of Engineers coordinates response actions with the U.S. Environmental Protection Agency (EPA) and/or state environmental regulatory agencies on all sites.

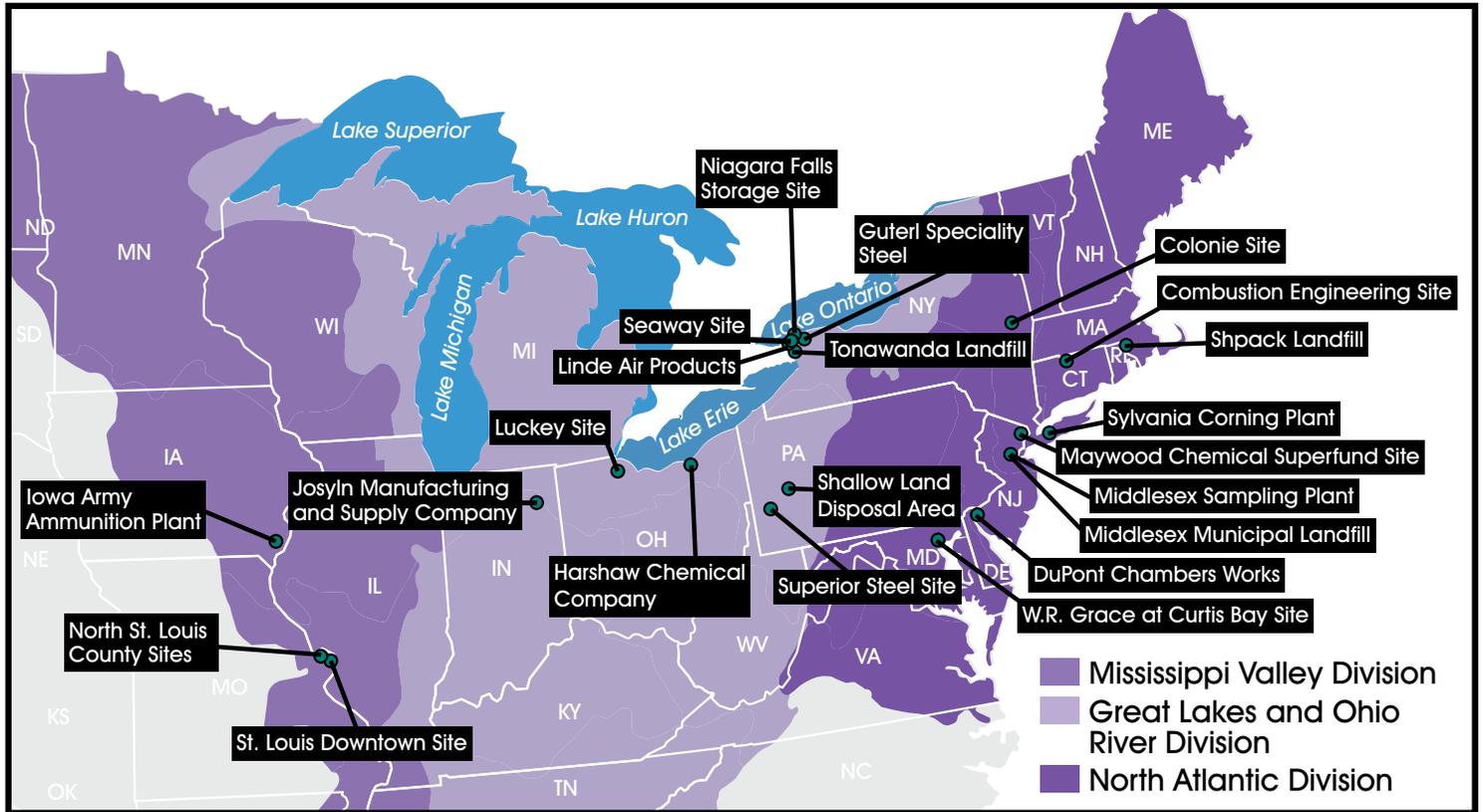
Two years after the Corps of Engineers completes a response action and final closeout activities at a FUSRAP site, that site, along with responsibility for any necessary long-term stewardship, reverts to DOE LM. During fiscal year (FY) 2019, three sites were transferred back to DOE LM for long-term stewardship: the Combustion Engineering Site, Windsor, Connecticut; the Shpack Landfill, Norton/Attleboro, Massachusetts; and the Colonie Site, Colonie, New York. In total, 10 sites have been transferred back to DOE-LM for long-term stewardship. In addition to the three sites listed above, the following sites have already been transferred: the Madison Site, Madison, Illinois; Wayne Interim Storage Site, Newark, New Jersey; the Bliss and Laughlin Site, Buffalo, New York; the Ashland 1 Site, including Seaway Area D, Tonawanda, New York; the Ashland 2 Site, including Rattlesnake Creek, Tonawanda, New York; the Linde Site, Tonawanda, New York; and the Painesville Site, Painesville, Ohio.

A total of seven districts from three Corps of Engineers divisions work on 23 active FUSRAP sites in 10 states. Districts involved in FUSRAP are Buffalo and Pittsburgh from the Great Lakes and Ohio River Division; St. Louis from the Mississippi Valley Division; and Baltimore, New England, New York and Philadelphia from the North Atlantic Division. The Corps of Engineers' Environmental and Munitions Center of Expertise and the Kansas City District also provide technical assistance.

Since the Corps of Engineers began administering FUSRAP, program funding has ranged from \$99.9 million to \$150 million a year. The FUSRAP appropriation for FY 2019 was \$150 million. Progress and the schedule for each site is dependent on Corps of Engineers prioritization among all active FUSRAP sites taking into account 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 to undergo response actions by the Corps of Engineers under CERCLA.



## Active FUSRAP Sites



## FY 2019 Overall Program



**11** Sites in remedial action

**23** Active sites\*



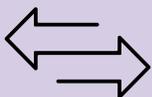
**8** Sites being investigated

**10** States



**1** Site oversight provided

**3** Divisions



**3** Sites transferred

**7** Districts

\*As of beginning of FY 2019

## Mississippi Valley Division

### St. Louis District

 **Iowa Army Ammunition Plant**  
Middletown, Iowa

North St. Louis County Sites:

 **Latty Avenue Properties**  
St. Louis, Missouri

 **St. Louis Airport Site**  
St. Louis, Missouri

 **St. Louis Airport Site  
Vicinity Properties**  
St. Louis, Missouri

 **St. Louis Downtown Site**  
St. Louis, Missouri

## Great Lakes and Ohio River Division

### Buffalo District

 **Joslyn Manufacturing and  
Supply Company**  
Fort Wayne, Indiana

 **Guterl Specialty 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 England District

 **Combustion Engineering Site**  
Windsor, Connecticut

 **Shpack Landfill**  
Norton/Attleboro, Massachusetts

### New York District

 **Maywood Chemical  
Superfund Site**  
Maywood, New Jersey

 **Middlesex Municipal Landfill**  
Middlesex, New Jersey

 **Middlesex Sampling Plant**  
Middlesex, New Jersey

 **Colonie Site**  
Colonie, New York

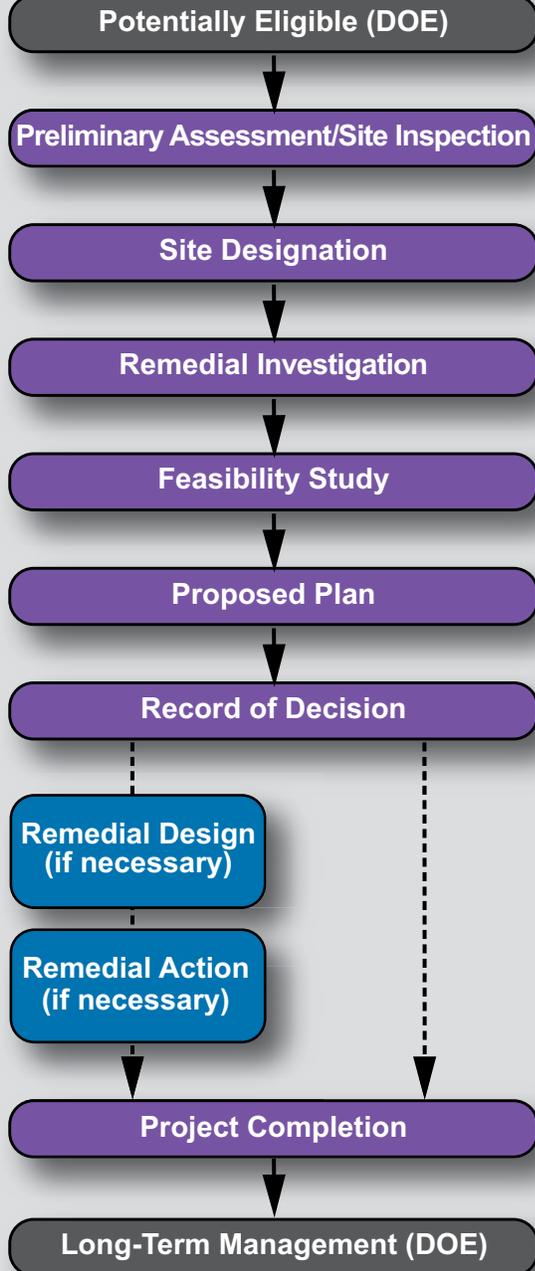
 **Sylvania Corning Plant**  
Hicksville, New York

### Philadelphia District

 **DuPont Chambers Works**  
Deepwater, New Jersey



## Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Process for FUSRAP



A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.

## CERCLA Process for FUSRAP

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

## Program Accomplishments

The Corps of Engineers completed a very successful FY 2019. The 2019 FUSRAP budget of \$150 million was used for the continuation of ongoing remedial activities at 12 sites, conducting ongoing investigations at eight sites, providing Government oversight at one site, and completing the navigation of three sites through the close out/transfer process to DOE LM. The program awarded a remedial investigation contract for the Joslyn Site, Fort Wayne, Indiana; initiated remedial activities at the Tonawanda Landfill Vicinity Property, Tonawanda, New York; and restarted remedial action on the Shallow Land Disposal Area, Parks Township, Pennsylvania. More than 122,000 cubic yards of contaminated material were disposed and 44 vicinity properties were released for beneficial use.

This year the program achieved a significant milestone with the completion of all site close out activities for the Colonie Site, Colonie, New York, and transferred this site back to DOE LM for long-term stewardship becoming the 100th site accepted into DOE LM portfolio. The Corps of Engineers also transferred Shpack, Norton/Attleboro, Massachusetts, and Combustion Engineering, Windsor, Connecticut, to DOE LM in FY 2019 for long-term stewardship. Additionally, a Record of Decision was completed for the Interim Waste Containment Structure at Niagara Falls Storage Site, Lewiston, New York.

### FY 2019 Program Overview

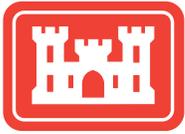
**\$150M**  
FY 2019 budget

**44** Vicinity properties released for beneficial use in FY 2019

Sites transferred to DOE LM **3**

 **122K** 

Cubic yards of contaminated soil and material excavated and disposed in FY 2019



## 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 the Corps of Engineers, DOE, EPA and the State of Iowa.



*Excavator loads soil into the trommel before it goes through the soil sorter at the Iowa Army Ammunition Plant*



*Contaminated soil travels on the conveyor belt*

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 allowed for less contaminated soil to be shipped off-site thus saving money.

In FY 2019, 13,766 cubic yards of DU-contaminated soil were handled and processed using the on-site soil-sorting process, which resulted in only 1,544 cubic yards of DU-contaminated soil being shipped off-site for disposal. Another 1,301 cubic yards of DU-contaminated soil and debris were stockpiled for shipment in early FY 2020. Additionally, a final status survey for 34 survey units outside of the general excavation area was completed.

In FY 2020, the district will continue its ongoing cleanup efforts at the site under the OU-8 ROD. Approximately 30 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 final status survey. The district will also finalize the *OU-1 Remedial Action Completion Report for the West Burn Pads Area South of the Road* and the *OU-8 Remedial Action Completion Report for Line 1 Structures*.

### North St. Louis County Sites

In FY 2019, the St. Louis District continued remedial activities in accordance with a 2005 ROD for the three sites that constitute the North St. Louis County Sites: the Latty Avenue Properties, which include Hazelwood Interim Storage Site (HISS)/Futura Coatings Company and 10 vicinity properties; the St. Louis Airport Site (SLAPS); and the SLAPS Vicinity Properties, which include Coldwater Creek (CWC) and adjacent properties. The district conducted one open house information meeting and issued two newsletters for the St. Louis sites. The district plans to host an open house and issue two newsletters in FY 2020.

#### **St. Louis Airport Site** St. Louis, Missouri

From 1946 to 1957, residues from uranium processing at the Mallinckrodt facility were stored at SLAPS located in North St. Louis County. In 1966, a private company bought the residues and moved the residues from SLAPS to the HISS/Futura site located on Latty Avenue. Remedial activities at SLAPS have been complete since 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 Corps of Engineers will transfer the site to DOE LM when all of the North County sites are completed.

#### **Latty Avenue Properties** St. Louis, Missouri

In 1966, the Continental Mining and Milling 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 vicinity properties plus HISS/Futura.

The vast majority of remedial activities at the Latty Avenue Properties were completed in 2013. In FY 2019, the St. Louis District conducted groundwater monitoring and long-term management activities at the Latty sites. These activities will continue in FY 2020. 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 and under utility poles. In 2019, the St. Louis District remediated the contamination under the utility poles. More than 80 cubic yards of contaminated material was removed to a depth of 8 to 10

feet below ground surface. Remedial activities were halted to ensure the stability of the utility poles. Additional sampling was performed around the poles to further characterize the extent of contamination around them.

#### **St. Louis Airport Site Vicinity Properties** St. Louis, Missouri

The SLAPS Vicinity Properties (SLAPS VPs) are located in the cities of Hazelwood and Berkeley, Missouri. A 14.2-mile section of Coldwater Creek (CWC) and adjacent properties located in North St. Louis County are SLAPS VPs. CWC flows north under Highway 270 through residential, commercial and recreational areas. It flows adjacent to SLAPS and the Latty Avenue Properties through the communities of Berkeley, Hazelwood, Florissant, Black Jack and unincorporated St. Louis County. CWC empties into the Missouri River.

The St. Louis District is conducting an ongoing sampling effort in the CWC corridor and at adjacent properties north of Highway 270. Contamination



*Removing low-level radioactive material from Eva Road, SLAPS VP*



at the SLAPS VPs is linked to both SLAPS and the Latty Avenue Properties. Over time, residues migrated to these sites or were deposited as the residues were hauled along transportation routes.

In FY 2019, the St. Louis District completed remedial activities at Investigative Area (IA)-09 (former Ballfields) Phase 2B; initiated remedial activities at IA-09 Phase 3 (also part of the former Ballfields), which is estimated to have 95,000 cubic yards of contaminated material; and started remedial activities at Phase 2 Eva Avenue to support the road-construction improvements by St. Louis County. The St. Louis District continued sampling the CWC corridor and the 700 adjacent properties, and issued documentation releasing 41 properties for beneficial use. In FY 2019, the St. Louis District added a third crew to sample CWC to expedite the pre-design investigation of CWC and adjacent properties. The district shipped more than 18,000 cubic yards of contaminated material to an out-of-state licensed facility from the SLAPS VPs.

In FY 2020, the St. Louis District will continue to work with the Missouri Department of Transportation and St. Louis County to remediate areas where road improvements will occur in North County. The district will continue remedial activities at the former Ballfields Phase 3, continue remediation of Eva Avenue Phase 2 and initiate work at the Pershall Road/I-270 Properties to support the highway improvements. In addition, the district will continue sampling CWC and adjacent properties. The St. Louis District will also issue documentation releasing 44 vicinity properties and ship 22,000 cubic yards of contaminated material to an out-of-state, licensed facility.



### St. Louis Downtown Site St. Louis, Missouri

From 1942 until 1957, the MED and AEC contracted with Mallinckrodt Chemical Works to process uranium ore for the production of 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, which includes the Mallinckrodt plant and 42 vicinity properties.

In FY 2019, the St. Louis District removed more than 8,500 cubic yards of contaminated material and shipped it off-site for disposal. The district also finalized documents releasing three properties. Additional FY 2019 efforts consisted of continued remedial activities at Destrehan Street/Plant

7W, initiation of remedial activities in previously inaccessible areas at the Gunther Salt property and continued evaluation of previously inaccessible areas inside the Mallinckrodt Plant. The district anticipates completing the restoration of Destrehan Street, completing remediation at the Gunther Salt Dome 2 areas and issuing documents to release three additional areas during FY 2020.

The inaccessible areas of the St. Louis Downtown Site were broken into Group 1 and Group 2 property groups. 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 2020, 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.



*Remedial activities inside Gunther Salt Dome 3 of the St. Louis Downtown Site*

## 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 entered into FUSRAP in FY 2009 and assigned to the Buffalo District.

In FY 2019, the Buffalo District worked with a contractor to prepare a sampling plan that was included in a scope of work for performing the remedial investigation that includes soil sampling, groundwater sampling and radiological scans of the on-site buildings. The remedial investigation contract was awarded at the end of FY 2019 with work anticipated to start in the spring of FY 2020.



*Interior of building on Joslyn Site*



*Groundwater sampling at the Guterl 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 located in Lockport, New York.

In FY 2019, the Buffalo District completed a draft proposed plan, which is scheduled to be approved in FY 2020 and publicly released together with the feasibility study in FY 2021. Groundwater monitoring continues to be conducted annually for the site.



*Taking a water level measurement in a Guterl Site groundwater well*



*Core sampling at Vicinity Property H Prime*

 **Niagara Falls Storage Site**  
Lewiston, New York

The Niagara Falls Storage Site (NFSS) is a 191-acre federally owned site in Lewiston, New York. It is 19 miles northwest of Buffalo and contains a 10-acre Interim Waste Containment Structure (IWCS). 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.

In FY 2019, the Buffalo District continued to work with Corps

of Engineers Headquarters and Department of Army to address questions/comments regarding the IWCS OU ROD. The ROD for the IWCS OU was released in March 2019; the selected remedy is excavation, partial treatment and off-site disposal of the entire contents of the IWCS. The district continued to prepare the feasibility study for the Balance of Plant and Groundwater OUs in FY 2019, which was released to the public in early FY 2020. The district will continue to perform environmental surveillance to ensure the IWCS is performing as designed until the selected remedy is implemented.

The phytoremediation program at the site was continued in FY 2019. The results of the project are being evaluated by the Engineer Research and Development Center. It is anticipated that the results will be published in FY 2020.

In FY 2019, the district oversaw the completion of test borings and groundwater sampling at Vicinity Property H Prime to determine the nature and extent of FUSRAP-related material. The district is currently evaluating the data and will commence work on the remedial investigation report in FY 2020. The Buffalo District will complete a site inspection for VP X in 2020.

**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. The Corps of Engineers 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.

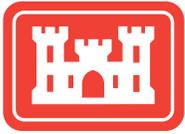
Implementation of the selected remedy is awaiting completion of ongoing cleanup activities at other FUSRAP sites and the availability of funding in the national program.

**Tonawanda Landfill**  
Tonawanda, New York

The Tonawanda Landfill is a vicinity property of the Linde Site. It is located in Tonawanda, New York, a suburb north of Buffalo. The vicinity property 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.



*Removing FUSRAP-related soil from the Tonawanda Landfill Vicinity Property Excavation Area*



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

In FY 2017, the Buffalo District released the Landfill OU ROD. The selected remedy is targeted shallow removal and off-site disposal of FUSRAP-related material. In FY 2019, the district worked with a contractor to develop work plans and started remedial action. A total of 1,372 cubic yards of FUSRAP-related material were excavated and disposed during FY 2019. Work will be completed in FY 2020 with the excavation of an additional 1,600 cubic yards of FUSRAP-related material.

 **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 for isotopic separation and enrichment in Oak Ridge, Tennessee. The Harshaw Site is currently unused and secured by the property owner.

In FY 2019, the Buffalo District publicly released a feasibility study addendum to incorporate the results of additional groundwater investigations and the proposed plan for OU-1 and OU-2, which identified the preferred remedial alternative for each OU. A public meeting was conducted in April 2019 to present the preferred remedial alternatives and receive public comments. The public comment period closed in June 2019, and the Buffalo District has been evaluating the public comments, developing responses and began drafting the record of decision. During FY 2020, the Buffalo District will complete responses to the public comments and prepare the record of decision for the site.



**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.

In FY 2019, the Buffalo District conducted a public poster session to provide information regarding the ongoing cleanup. During this time, the cleanup contractor continued the remedial action with the excavation and off-site disposal of FUSRAP-contaminated wastes from the former lagoons area. In FY 2019 the Buffalo District removed and shipped 27,400 cubic yards of FUSRAP wastes off-site for disposal for a total of 31,310 cubic yards excavated and disposed

from the site. The remediation contractor also began final status survey activities in the Phase 1 area.

In FY 2020, the Buffalo District plans to complete the remedial action and restoration activities in the Phase 1 area, begin remediation in the Phase 2 area and anticipates removing and shipping approximately 37,000 cubic yards of FUSRAP-contaminated materials off-site. In addition, the remediation contractor will complete final status survey activities and site restoration work in the Phase 1 area. Additionally, the Buffalo District will advertise a solicitation for a new remediation contract that will have sufficient 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.



*Luckey Site storage pad*

**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 2019, the Buffalo District conducted a data gap investigation. The draft remedial investigation report will be updated in FY 2020 to include the evaluation of the additional investigation results, and the final report is scheduled for completion in FY 2021.

**Pittsburgh District**

**Shallow Land Disposal Area**  
Parks Township, Pennsylvania

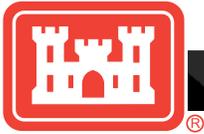
In January 2002, Section 8143 of Public Law 107-117 directed the Corps of Engineers to clean up radioactive waste at the Parks Township Shallow Land Disposal Area under FUSRAP. This 44-acre site, located northeast of Pittsburgh, consists of 10 trenches containing wastes from a facility that processed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

In FY 2019, the Pittsburgh District issued a notice to proceed to the selected remediation contractor who began drafting remediation work plans.

In FY 2020, the Pittsburgh District will continue with remediation planning activities and oversight of site maintenance, security and environmental monitoring. In FY 2022, the district expects to start remediation activities at site.



*Superior Steel Site pit investigation*



## 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 2019, the District provided Government oversight on the Building 23 remedial action designs prepared by the site owner for demolishing the southwest quadrant of the building. The demolition design has been separated into two phases – initial utility installation to move all impacted utilities out of the demolition area and then the future demolition phase. The utility installation contractor proposals were received by W.R. Grace and the Corps of Engineers supported the review and selection process.

In FY 2020, funds will be used to support the utility installation process at W.R. Grace. The team will also support the continued design of the demolition and the future bidding process for the demolition.

### New England District



#### **Combustion Engineering Site Windsor, Connecticut**

The Combustion Engineering Site, located in Hartford County eight miles north of Hartford, was a 600-acre research, development, engineering, production and servicing facility for nuclear fuels, systems and services from the mid-1950s through 2000. In FY 2012, Combustion Engineering completed the cleanup of FUSRAP-related material at the site. The cleanup was performed by the site owner as part of ongoing Nuclear Regulatory Commission (NRC) decommissioning work leading toward license termination and unrestricted use in accordance with License Termination Rule at 10 CFR Part 20, Subpart E. The New England District completed a closeout report for the site in FY 2017.

During FY 2019, the New England District completed the process of transferring site administrative controls and file records management responsibilities to DOE LM for long-term stewardship.



#### **Shpack Landfill Norton/Attleboro, Massachusetts**

In FY 2012, the New England District completed the FUSRAP cleanup at the Shpack Landfill Superfund Site, an eight-acre abandoned domestic and industrial landfill approximately 40 miles southwest of Boston. The New England District completed a closeout report for the site in FY 2016. The site was delisted from the EPA National Priority List in September 2017.

In FY 2019, the district completed the process of transferring site administrative controls and file records management responsibilities to DOE LM for long-term stewardship.

### 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 2019, the New York District continued addressing FUSRAP contamination consistent with the soils and groundwater RODs with 40,009 cubic yards of FUSRAP-related material removed and transported off-site for disposal. Cleanup efforts were focused on two large commercial properties (a former Sears warehouse and the Stepan Company Property) in Maywood. The Sears property remedial action is considered complete except for inaccessible soils around a high pressure gas main.

In FY 2020, the New York District plans to continue cleaning up soils consistent with the soils and groundwater RODs and cleaning up commercial properties (Streets of Lodi and Stepan). 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).



*Completing restoration of wetlands on the Maywood Site Sears parcel*

**Middlesex Municipal Landfill**  
**Middlesex, New Jersey**

The Middlesex Municipal Landfill is a 37-acre site approximately 16 miles southwest of Newark. It 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 the Corps of Engineers in March 2009 for investigation under FUSRAP. The New York District conducted a preliminary assessment and site inspection in FY 2011. 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 2019 funding was used to complete the feasibility study.

FY 2020 funding will be used to complete the proposed plan.



**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 vicinity properties and from the Middlesex Municipal Landfill. The MSP was added to the EPA's Superfund National Priorities List in FY 1999.

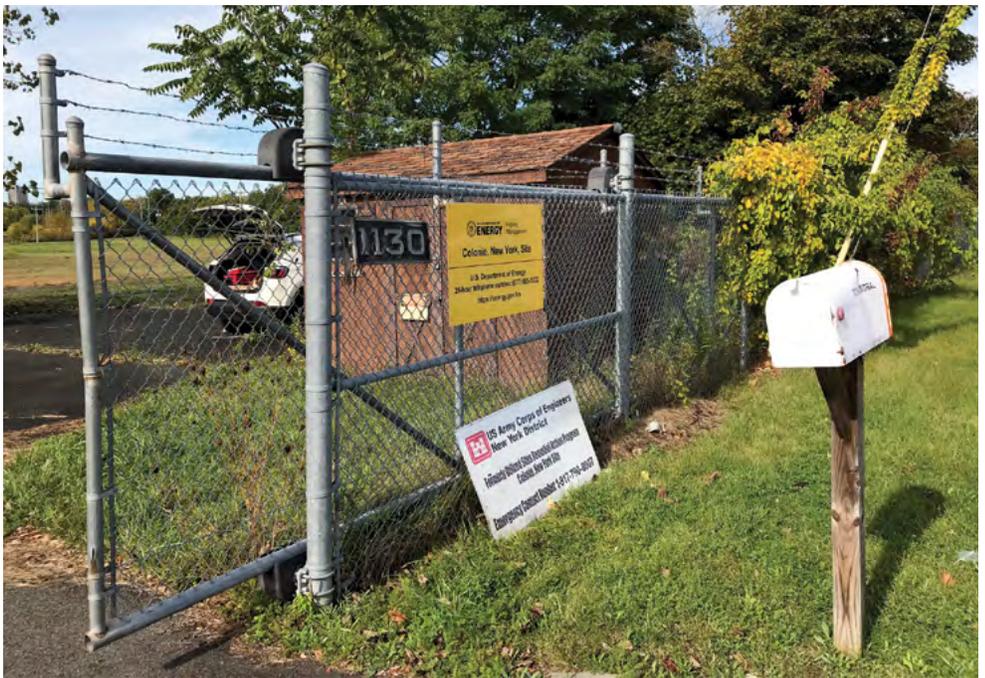
The New York District completed a ROD for soils in September 2005. Remedial action in accordance with this ROD was completed in FY 2008. A VP investigation was initiated in FY 2018 to determine if VPs previously identified and addressed by DOE meet the release criteria established in the MSP ROD for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

In FY 2019, the New York District continued the VP investigation and groundwater proposed plan.

In FY 2020, the district plans to complete the VP investigation, complete the groundwater proposed plan and initiate the ROD.



*Middlesex Sampling Plant after soil remediation*



*Colonie Site gate transitioning site signs to U.S. Department of Energy Office of Legacy Management*

**Colonie Site  
Colonie, New York**

The former 11.2-acre National Lead Industries Site, now called the Colonie Site, was used for electroplating and manufacturing various components using uranium and thorium. Radioactive materials released from the plant exhaust stacks spread to site buildings, portions of the grounds and

56 commercial and residential vicinity properties.

In FY 2019, the New York District transferred the Colonie Site back to DOE LM for long-term stewardship and became the 100th site accepted into DOE LM's portfolio. DOE LM now has full control of the site. All inquiries regarding the Government's future plans for this property should be directed to DOE LM.

 **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 for the production of 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 2019, the New York District continued to work on the remedial investigation report. The district plans to use FY 2020 funding to finalize the remedial investigation report.

**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 2019, the Philadelphia District continued to treat contaminated wastewater and execute on-site remediation. Over 25,000 cubic yards of material was remediated in OUs 1 and 2 and transported off-site for disposal. The wastewater treatment plant treated nearly 7 million gallons of contaminated water.

In FY 2020, the Philadelphia District will continue remedial activities and plans on removing and disposing of 9,000 cubic yards of FUSRAP-related materials.

**Potential New Sites**

The DOE determines eligibility of new sites for FUSRAP and refers eligible sites to the Corps of Engineers for further evaluation. As funding becomes available, the Corps of Engineers 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, the Corps of Engineers 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 the Staten Island Warehouse Dock in Staten Island, New York; the Wolff-Alport Chemical Corporation site in New York City; and Painesville Landfills III and IV, Painesville, Ohio; as eligible for FUSRAP designation. The U.S. Department of the Army is currently evaluating whether the Staten Island Warehouse Dock Site should be included in the program. The Corps of Engineers is currently evaluating the remaining sites and preliminary assessment indicates that these sites will likely not be included within the program.



*Soil sorting pilot study activities at the Middlesex Municipal Landfill Site*



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