

US Army Corps
of Engineers®

Formerly Utilized Sites Remedial Action Program Update

Fiscal Year 2018





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 two sites 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 the DOE. Sites that have been transferred back to DOE LM for long-term stewardship are 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 \$140 million a year. The FUSRAP appropriation for fiscal year (FY) 2018 was \$139 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.

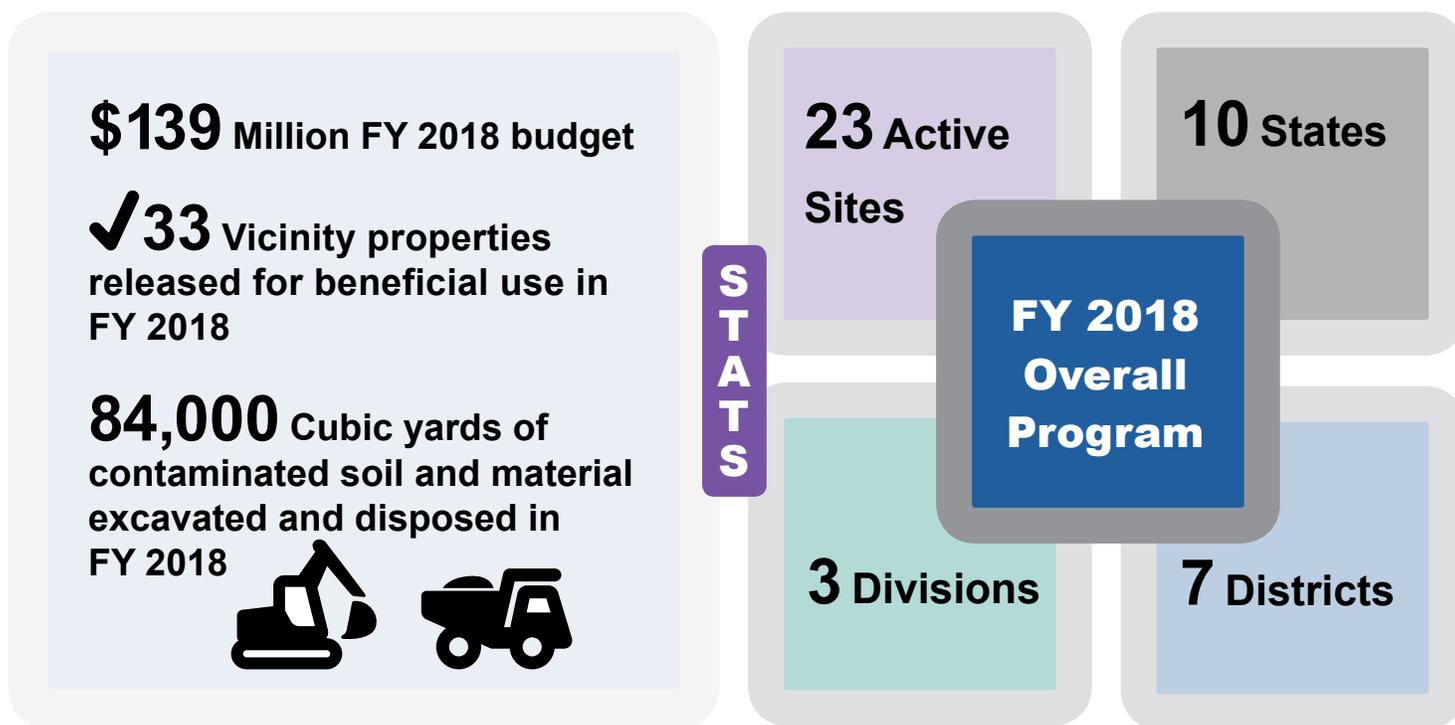
More FUSRAP information can be found at: <http://www.usace.army.mil/Missions/Environmental/FUSRAP/>

Program Accomplishments

The Corps of Engineers completed a successful FY 2018 with a budget of \$139 million. The 2018 funds were used for the continuation of ongoing remedial activities at 12 sites, conducting ongoing investigations at eight sites, and the continuing navigation of three sites through the close out/transfer process to DOE LM. The program authorized a new investigation start at the Joslyn Site and a new remediation start at the Tonawanda Landfill Vicinity Property. More than 84,000 cubic yards of contaminated material were disposed and 33 vicinity properties were released for beneficial use.

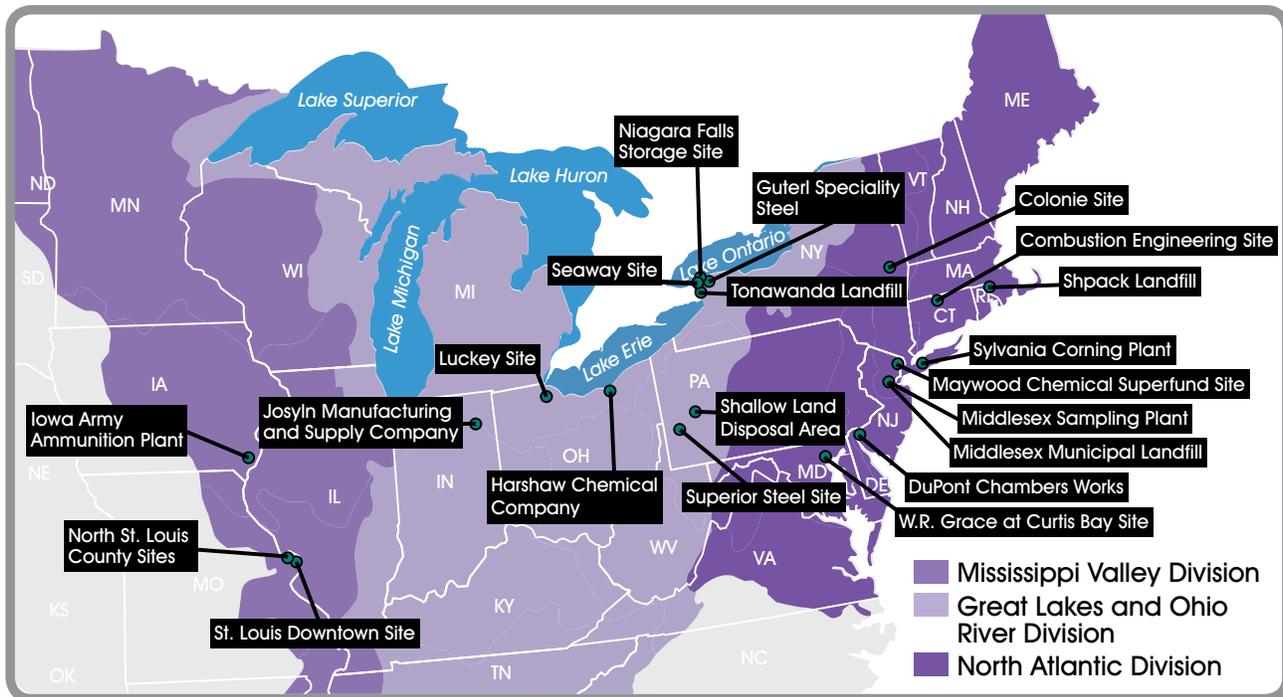
This year the program achieved a significant milestone with the completion of all site close out activities for the Colonie Site, New York.

Colonie Site remedial activities were started in 1984 by DOE and were continued by the Corps of Engineers after FUSRAP was transferred to their responsibility in 1998. Since that time, the New York District conducted site remedial action removing contaminated soil and materials and shipping them to an off-site disposal facility. The District removed and disposed of 149,000 cubic yards of contaminated soil and materials from the site. The total cost of the Corps of Engineers remediation for the Colonie Site was approximately \$92 million. Remaining work consists of file transfer and implementation of land use controls before the site is transferred back to DOE LM for long-term stewardship activities.





Active FUSRAP Site Locations



Active FUSRAP Sites

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 Airport Site Vicinity Properties**

 **St. Louis Downtown Site**

FY 2018 overall program

PHASES

12 Sites in remedial action 

8 Sites being investigated 

3 Sites preparing for transfer 

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

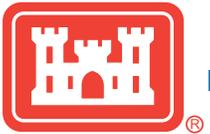
 **Middlesex Sampling Plant**
Middlesex, New Jersey

 **Colonie Site**
Colonie, New York

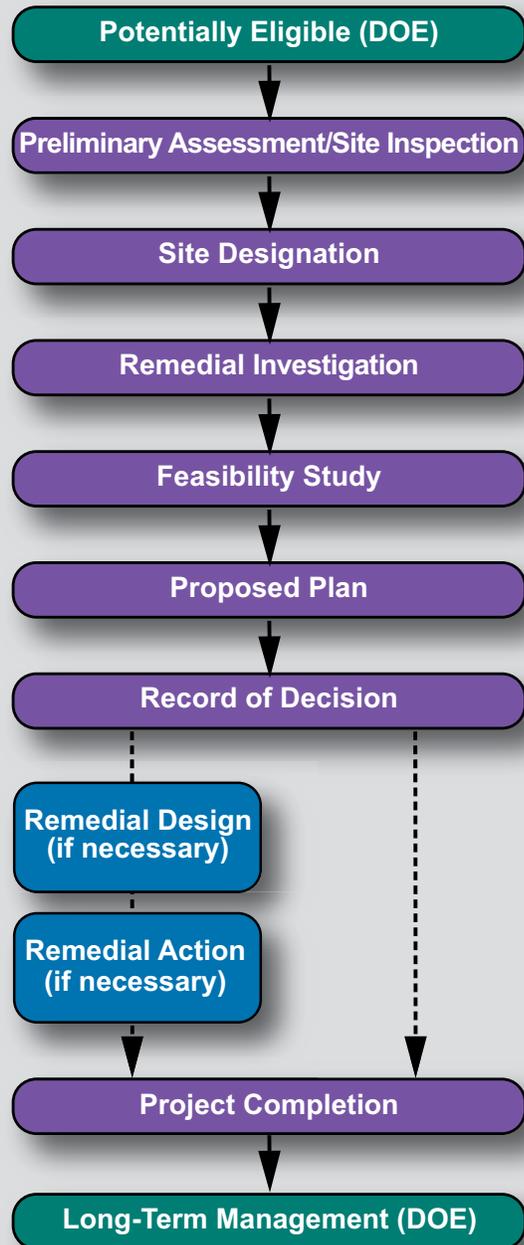
 **Sylvania Corning Plant**
Hicksville, New York

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.

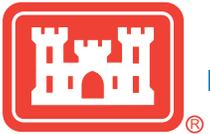
Long-Term Management

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.

Acronyms

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



Site Updates

ST. LOUIS DISTRICT

Iowa Army Ammunition Plant

Middletown, Iowa



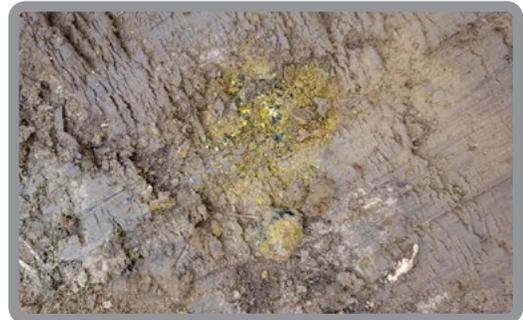
The Iowa Army Ammunition Plant is an active, government-owned facility that covers more than 19,000 acres in southeastern Iowa. From 1947 to 1975, portions of the plant were under the control of the AEC for weapon-assembly operations and munitions testing resulting in uranium and munitions explosives 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.



Contaminated soil traveling to the soil sorter detectors at the Iowa Army Ammunition Plant

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 2018, approximately 9,539 cubic yards of DU-contaminated soil were handled and processed using an on-site soil sorting process, which resulted in only 1,155 cubic yards of DU-contaminated soil being shipped off-site for disposal. Another 762 cubic yards of DU-contaminated soil and debris were stockpiled for shipment in early FY 2019.



Typical DU fragment and oxidation found during excavations

In FY 2019, the district will continue the ongoing cleanup efforts at the site under the FUSRAP ROD. In addition, approximately 32 survey units outside of the general excavation area are scheduled for final status survey in FY 2019.

North St. Louis County Sites

St. Louis, Missouri

In FY 2018, the St. Louis District continued remedial activities in accordance with a 2005 ROD for the three sites that comprise the North St. Louis County Sites: the Latty Avenue Properties, which include Hazelwood Interim Storage Site/Futura Coatings Company and ten 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 public meeting and issued two newsletters for the St. Louis Sites. The district will continue with one public meeting and two newsletters in FY 2019.

Latty Avenue Properties



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. The Latty Avenue Properties comprise 10 vicinity properties plus the Hazelwood Interim Storage Site and Futura (77 acres).

In FY 2018, the St. Louis District conducted groundwater monitoring and long-term management activities at the Latty Site. These activities will continue in FY 2019. The St. Louis District will continue to prepare the land use controls to address the remaining contamination beneath the buildings on the Futura property and under utility poles.

St. Louis Airport Site



In 1946, the MED acquired the 21.7-acre tract of land, now known as SLAPS, to store residues from uranium processing at the Mallinckrodt facility in St. Louis. Residuals from the uranium processing accumulated at SLAPS through 1957. In 1966, Continental Mining and Milling Company bought the residues for recycling and moved the residues from SLAPS to a site on Latty Avenue. Contamination containing uranium-238, radium-226, and thorium-230 remained on the property.

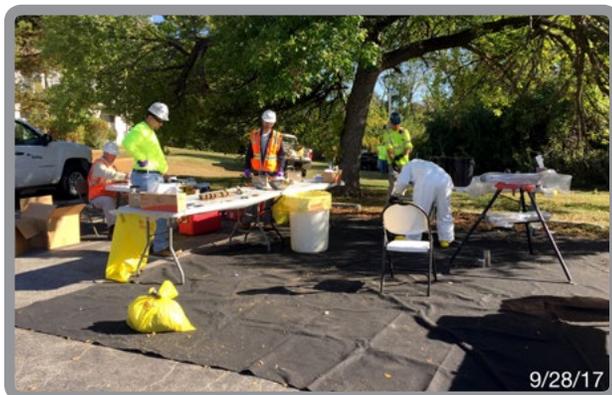
Remedial activities at SLAPs have been complete since 2007. Groundwater monitoring and long-term management activities began in 2007 and are ongoing. The post remedial action report was released in May 2009. The Corps of Engineers will transfer the site back to DOE LM when all of the North County sites are completed.

St. Louis Airport Site Vicinity Properties



The SLAPS Vicinity Properties are located in the cities of Hazelwood and Berkeley, Missouri. A 14.2-mile section of CWC located in North St. Louis County is a SLAPS Vicinity Property. CWC flows adjacent to SLAPS and the Latty Avenue Properties through the communities of Berkeley, Hazelwood, Florissant, Black Jack, and unincorporated St. Louis County and empties into the Missouri River. CWC flows north under Highway 270 through both residential and public recreational areas.

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



Soil Sampling at the Chez Patee St. Louis Airport Site Vicinity Property

and thorium contamination at the SLAPS Vicinity Properties is linked to both SLAPS and the Latty Avenue Properties. Over time, residues migrated from other sites or were deposited as the residues were hauled along transportation routes.

In FY 2018, the St. Louis District completed cleanup of an additional area at the Chez Patee Apartment Complex located in Hazelwood, Missouri; continued remedial activities at Investigative Area (IA)-09 (Ballfields) Phase 2B; and completed the pre-design investigation sampling at Pershall Road, the Highway I-270 areas, and property adjacent to Eva Road. The St. Louis District continued sampling CWC and adjacent properties and issued documentation releasing 60 properties for beneficial use. The Remedial Design/Remedial Action Work Plan for IA-09 (Ballfields) Phase 3 and IA-10 was also released. **The district shipped 18,516 cubic yards of contaminated material off-site for disposal** from the North County SLAPS vicinity properties.



Remedial activities at IA-09 Ballfields Phase 2B

In FY 2019, the St. Louis District will 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 Ballfields Phase 2B, initiate remedial activities at Phase 3, and remediate Pershall Road and Eva Avenue to support the road improvements. In addition, the district will continue sampling CWC and adjacent properties. The St. Louis District will also issue documentation releasing 40 vicinity properties and ship 18,000 cubic yards of contaminated material to an off-site disposal location.



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.



Excavation of contaminated soil at the Heintz Steel property at the St. Louis Downtown Site

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 2018, the St. Louis District removed 12,872 cubic yards of contaminated material and shipped it off-site for disposal. The district also finalized documents releasing three properties. Additional FY 2018 efforts consisted of continued remedial activities at Destrehan Street/Plant 7W, and completion of remediation at the Mallinckrodt former Building 17 area inside Plant 1 and the Heintz Steel property. The district anticipates completing the cleanup of Destrehan Street, initiating remedial action at the Gunther Salt property, and issuing documents to release three additional areas during FY 2019.

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. In FY 2019, 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.

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.



Visiting the Joslyn Site to develop a sampling plan for the remedial investigation

The district received funding in FY 2018 to start the remedial investigation for this site. A contract was awarded to conduct a technical project planning meeting and to prepare a sampling plan. A remedial investigation sampling contract award is planned in FY 2019. It is anticipated that the remedial investigation sampling will be conducted in FY 2020.

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 2018, the Buffalo District completed internal reviews of the feasibility study and drafted the proposed plan, which are scheduled to be approved in FY 2019 and publicly released together in FY 2020. Groundwater monitoring continues to be conducted annually for the site.



Groundwater well monitoring and sample preparation during Guterl Site environmental monitoring

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.

The district continued to prepare the feasibility study for the Balance of Plant and Groundwater OUs in FY 2018 with a target completion in FY 2019. The Buffalo



Installing a well for the phytoremediation program at NFSS

District continued to work with Corps of Engineers Headquarters and Department of Army to address questions/comments regarding the IWCS OU ROD. The district anticipates that the IWCS OU ROD will be released in FY 2019. 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 2018. 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 2019.

In FY 2018, a scope of work was awarded to further investigate Vicinity Property H Prime to determine the nature and extent of FUSRAP-related material on it and to evaluate the associated potential risks to human health and the environment. Work will commence in early FY 2019. The 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.

The excavation and disposal of contaminated soil outside of the landfill leachate collection system and the landfill containment remedy are ready to start as soon as ongoing cleanup is completed at other FUSRAP sites or the funding level is increased for 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.



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 2018, the Buffalo District received additional funding and approval to start the remedial action for this project. The funding was used to award a remediation contract and a separate transportation and disposal contract for the vicinity property. The district is currently working with the contractors to develop work plans with a planned remediation start of summer 2019.

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 2018, the Buffalo District completed a feasibility study addendum to incorporate results of additional groundwater investigations and finalized a proposed plan to present preferred remedial alternatives for the site. The feasibility study addendum and proposed plan will be released to the public for comment in FY 2019. During FY 2019, the Buffalo District will also begin drafting 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 2018, the Buffalo District conducted a public poster session to provide information regarding the planned cleanup. During this time, the cleanup contractor completed mobilization of equipment to the site and set up of necessary cleanup infrastructure. In April 2018, the cleanup contractor began the remedial action with the excavation and off-site disposal of

FUSRAP-contaminated wastes. By the end of FY 2018, the Buffalo District had removed and shipped 3,910 cubic yards of FUSRAP wastes off-site for disposal.

In FY 2019, the Buffalo District plans to complete the remedial activities in the Phase 1 area, begin remediation in the Phase 2 area, and anticipates removing and shipping approximately 18,400 cubic yards of FUSRAP-contaminated materials off-site. In addition, the remediation contractor will begin final status survey activities and site restoration work in the Phase 1 area. The Buffalo District will continue to keep the community informed of progress at the site.



Securing the liner in a shipping container at the Luckey 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 2018, the Buffalo District continued to prepare the draft remedial investigation report, and determined additional data is necessary to complete the report.

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

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 2017, a new remediation contract was awarded. The contract was not implemented because protest actions were filed that required corrective action by the district before engaging directly with the contractor.

In FY 2018, the Pittsburgh District resolved all remaining contract protest actions and began moving forward with the selected contractor.

The FY 2019 work will include drafting remediation work plans, developing security requirements and awarding new operations and maintenance contracts. The Pittsburgh District will continue to perform site maintenance, monitoring, and security throughout the project's lifecycle.

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 2018, the Baltimore District in coordination with the site owner prepared design drawings and specifications to complete a partial building demolition at Building 23.

In FY 2019, funds are being used to provide assistance with bidding the Building 23 remedial action, plus re-evaluating the cost effectiveness and protectiveness of the current approved RWDA remedy.

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 2018, the New England District continued the process of transferring site administrative controls and file records management responsibilities to DOE LM for long-term stewardship. The district will complete the site transfer in FY 2019.

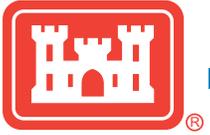
Shpack Landfill

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 2018, the New England District continued the process of transferring site administrative controls and file records management responsibilities to DOE LM for long-term stewardship. The district will complete the site transfer by FY 2019.



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.



Loadout of FUSRAP-related material into railcars at the Maywood Site

Remedial construction within an active chemical plant complex at the Maywood 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 2018, the district continued addressing FUSRAP contamination consistent with the soils and groundwater RODs with **47,008 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.

In FY 2019, the New York District plans to continue cleaning up soils consistent with the soils and groundwater RODs, cleaning up commercial properties (former Sears and Stepan), and to issue more deed notices at properties where inaccessible soils remain in place.

Middlesex Municipal Landfill

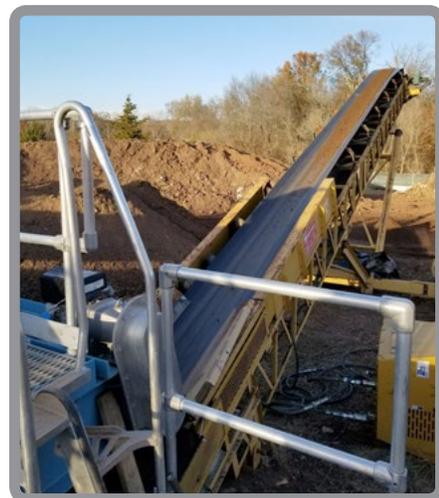
Middlesex, New Jersey



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



Soil sorter used for pilot study at Middlesex Municipal Landfill Site

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 2018 funding was used to continue the feasibility study. FY 2019 funding will be used to complete the feasibility study and initiate 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 Middlesex Site 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. Characterization of groundwater is ongoing, including a supplemental bedrock groundwater investigation to delineate the contamination boundary.

In FY 2018, the New York District initiated the groundwater proposed plan. In FY 2019, the district plans to complete the groundwater proposed plan and initiate the ROD.

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 2018, the New York District issued the five-year review of the groundwater ROD and a *Groundwater 2016-2017 Monitored Natural Attenuation Report*. Both documents were approved by the New York State Department of Environmental Conservation. The *Site Closure Plan* for the Colonie Site was approved and finalized. The *Site Closure Plan* starts the transfer process back to DOE LM for long-term stewardship.

In FY 2019, the district will continue activities related to transfer of the Colonie Site back 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 2018, the New York District completed a draft comprehensive site-wide remedial investigation report for regulatory review. The New York District plans to use FY 2019 funding to finalize the remedial investigation report.

PHILADELPHIA DISTRICT

DuPont Chambers Works

Deepwater, New Jersey



The DuPont Chambers Works FUSRAP 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 2018, the district restarted the remediation activities. **Over 5,000 cubic yards of material was remediated in Operable Unit 1. The wastewater plant treated nearly three-million gallons of contaminated water.**

In FY 2019, the District will continue to treat contaminated wastewater and execute on-site remediation.



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 Corps of Engineers is currently considering whether to include them in the program. If any of these properties are

designated FUSRAP sites, they will be addressed when funding becomes available in the national program.

The *Formerly Utilized Sites Remedial Action Program Update*, EP 360-1-36, is published 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.

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All Photos: U.S. Army Corps of Engineers
Cover photo: Maywood Site remedial action within an active chemical site



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