



US Army Corps
of Engineers®
Buffalo District

Formerly Utilized Sites Remedial Action Program Update



Fiscal Year 2017



BUILDING STRONG®



Introduction

The *Buffalo District 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's Office of Legacy Management under a Corps of Engineers/DOE Memorandum of Understanding, and 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 the DOE's Office of Legacy Management 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; and the Painesville Site, Painesville, Ohio. In addition, the Linde Site, Tonawanda, New York, was transferred in FY 2017.

Seven districts from three Corps of Engineers divisions work on 24 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) 2017 was \$112 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.

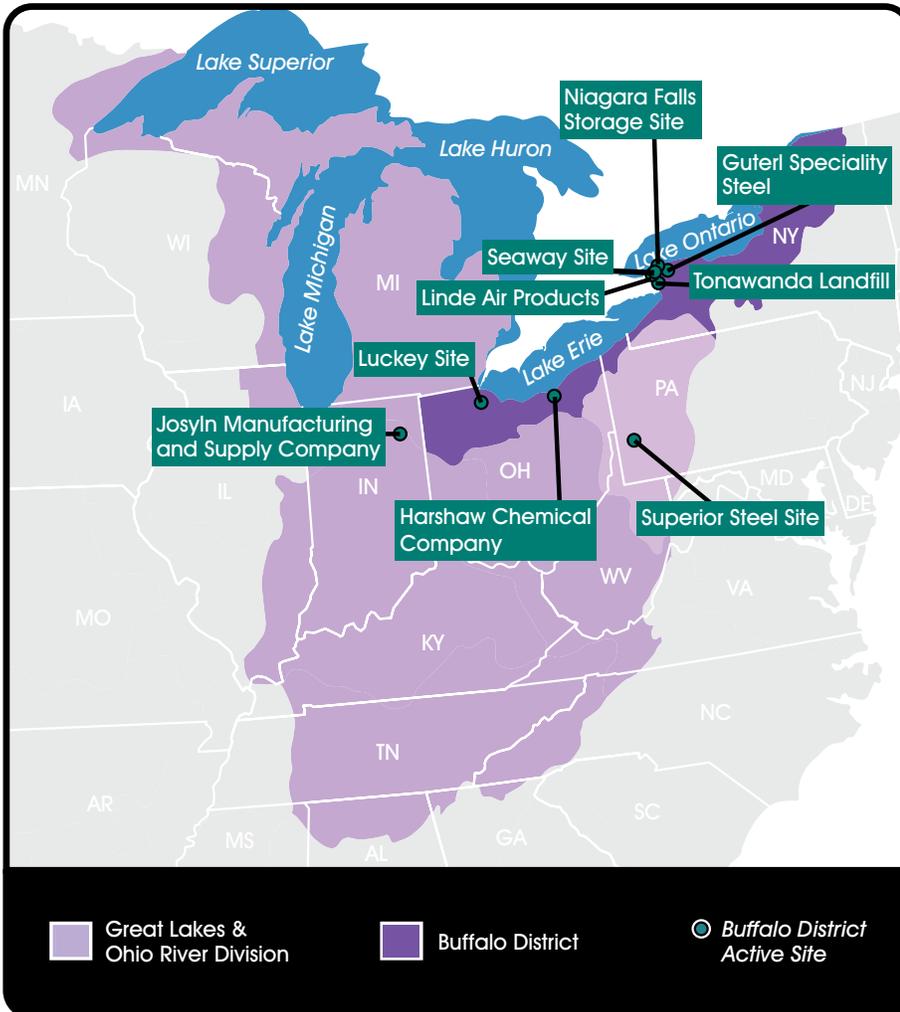
More FUSRAP information can be found at:

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

and

www.lrb.usace.army.mil/Missions/HTRW/FUSRAP/

Active Buffalo District FUSRAP Site Locations

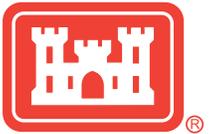


- Joslyn Manufacturing and Supply Company, Fort Wayne, Indiana
- Guterl Specialty Steel, Lockport, New York
- Linde Air Products, Tonawanda, New York*
- Niagara Falls Storage Site, Lewiston, New York
- Seaway Industrial Park, Tonawanda, New York
- Tonawanda Landfill, Tonawanda, New York
- Harshaw Chemical Company, Cleveland, Ohio
- Luckey Site, Luckey, Ohio
- Superior Steel, Carnegie, Pennsylvania

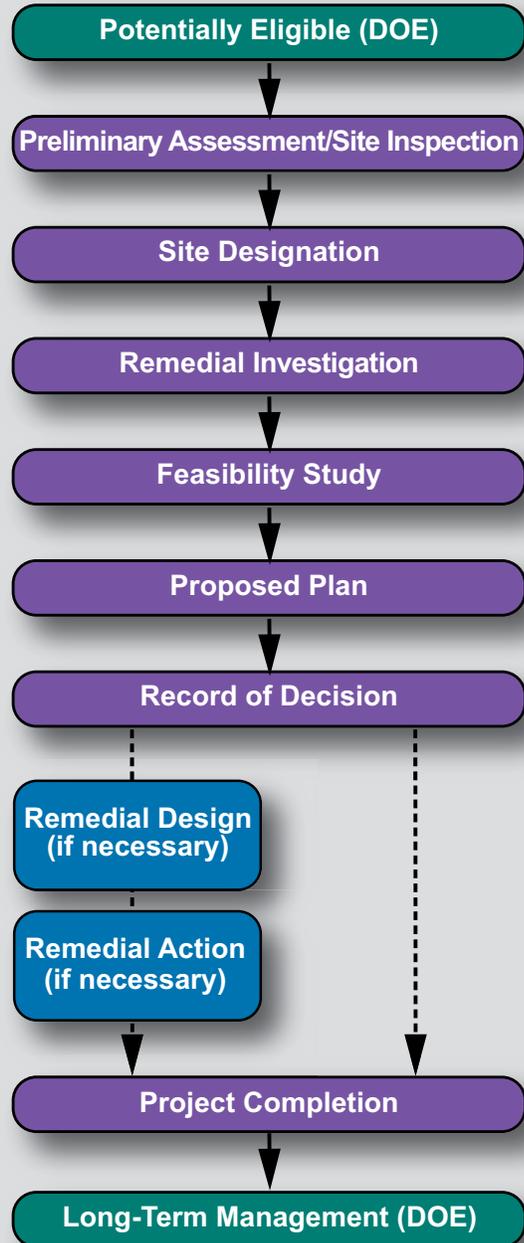
*Transferred to the U.S. DOE Office of Legacy Management during FY 2017.

Acronyms

AEC	Atomic Energy Commission	IWCS	Interim Waste Containment Structure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	MED	Manhattan Engineer District
DOE	Department of Energy	NCP	National Oil and Hazardous Substances Pollution Contingency Plan
EPA	Environmental Protection Agency	NFSS	Niagara Falls Storage Site
FUSRAP	Formerly Utilized Sites Remedial Action Program	NRC	Nuclear Regulatory Commission
FY	fiscal year	OU	operable unit
		ROD	record of decision



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.

Buffalo District Site Updates

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 2014, the Buffalo District initiated project scoping for a remedial investigation. The remedial investigation contract award will occur based on the availability of FUSRAP funds nationally.

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 2017, the Buffalo District completed internal revisions and technical reviews of the draft feasibility study. In FY 2018, the district will complete the feasibility study and the proposed plan, which are scheduled to be approved and publicly released together in FY 2019. Groundwater monitoring continues to be conducted annually for the site.



Sample preparation during the Guterl Site environmental monitoring



Linde Air Products

Tonawanda, New York

Praxair, Inc., owns and operates the 135-acre Linde Site in Tonawanda, New York. From 1942 to 1946, the former Linde Air Products Division of Union Carbide processed uranium ores at this site under contract to the MED.

In March 2017, the Buffalo District completed the transfer of the site to the DOE's Office of Legacy Management for long-term stewardship.

The Tonawanda Landfill, a vicinity property to the Linde Site, is reported separately in this update.

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 2016, the district released the IWCS OU feasibility study and proposed plan and conducted a public meeting. The district received overwhelming public acceptance for the preferred remedy identified in the proposed plan, which was removal and off-site disposal of all materials within the IWCS. The district also initiated development of a feasibility study for the Balance of Plant and Groundwater OUs to evaluate potential remedial alternatives for all on-site materials outside the IWCS as well as groundwater.

The district will release the IWCS OU ROD and continue to prepare the feasibility study for the Balance of Plant and Groundwater OUs in FY 2018. The district will also continue to perform environmental surveillance to ensure the IWCS is performing as designed until the selected remedy is implemented.

The phytoremediation program was continued in FY 2017 with installation of piezometer wells, so the drawdown of the groundwater level by the test plants can be monitored.

The Buffalo District prepared a preliminary assessment for Vicinity Property H Prime to determine if the property should be added to the site. The preliminary assessment, which was publicly released in early FY 2017, determined there is no imminent threat to human health or the environment on the property. However, surface soils, subsurface soils, concrete slabs/foundations, sediment, surface water, and groundwater may have residual impacts from past storage and processing of FUSRAP-related material on the property.

In FY 2018, a scope of work will be awarded to further investigate the vicinity property 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 based on the availability of FUSRAP funds nationally. Additionally, the district intends to prepare a preliminary assessment of Vicinity Property X in FY 2018.

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. The district completed preparation of an updated baseline risk assessment for the Landfill OU in FY 2012. It found that while risks to human health from potential exposure to FUSRAP-related material buried in the landfill are within acceptable limits for the current site conditions, risks could increase above acceptable limits in the future if the surface of the landfill is allowed to erode as time passes.

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. The selected remedy is ready to start as soon as ongoing cleanup is completed at other FUSRAP sites or the funding level is increased for the national program.

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 2017, the Buffalo District continued to prepare a feasibility study addendum to incorporate results of additional groundwater investigations and drafted a proposed plan to present preferred remedial alternatives for the site. The feasibility study addendum and proposed plan will be finalized in FY 2018 with subsequent release to the public for comment.

Luckey Site *Luckey, Ohio*

The Luckey Site, a 40-acre privately owned site 24 miles southeast of Toledo, is in the remedial design 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 site also received scrap steel containing radioactive residues from NFSS, for potential use in magnesium production activities which were never initiated.

The Buffalo District awarded the site cleanup contract in FY 2015 and prepared the cleanup work plans in FY 2016. In FY 2017, the Buffalo District conducted a public poster session to provide information regarding the planned cleanup. During this time, the cleanup contractor conducted necessary background soil and air sampling and monitoring, and began to mobilize equipment to the site and set up necessary cleanup infrastructure. In FY 2018 the cleanup contractor will complete site infrastructure setup activities, and begin excavation and off-site disposal of FUSRAP-contaminated soils.

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 2017, the Buffalo District continued supplemental field sampling activities, prepared the draft remedial investigation report, and began internal team reviews. The Buffalo District will conduct additional sampling in FY 2018. The draft remedial investigation report will be updated to include the evaluation of the additional sampling results, and the final report is scheduled for completion in FY 2020.

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.



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For more information, please email fusrap@usace.army.mil or call 800-833-6390.

All Photos: U.S. Army Corps of Engineers

Cover top photo: Performing a gamma walkover survey at the Luckey Site

Cover bottom photo: Sample preparation during the Guterl Site environmental monitoring



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