



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 low-level radioactive contamination resulting from the Nation's early atomic weapons and energy programs.

The Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated in 1974 to identify, investigate and clean up or control sites throughout the United States (U.S.) contaminated as a result of Manhattan Engineer District or early Atomic Energy Commission activities. Both the Manhattan Engineer District and the Atomic Energy Commission were predecessors of the U.S. Department of Energy (DOE).

Congress transferred execution of FUSRAP from the DOE to the Corps of Engineers in October 1997. The Corps continues to clean up sites the DOE began and also addresses sites added to the program by Congress or designated into the program by the Corps. While the DOE retains responsibility for FUSRAP, the Corps implements the program under a Corps/DOE Memorandum of Understanding.

The Corps' FUSRAP objectives are to safely, effectively and efficiently:

- Identify and evaluate sites where authority and a need for response action exist;
- Clean up or control FUSRAP sites to ensure protection of human health and the environment;
- Dispose 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; and
- Release sites for appropriate future use.

When implementing FUSRAP, the Corps 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. This framework is shown on Page 3. Each site may have multiple operable units each in a different phase within the CERCLA process.

The DOE determines site eligibility for the program using historical evaluations of site activities.

Potentially eligible sites are referred to the Corps for further evaluation. The Corps performs a CERCLA preliminary assessment/site inspection and a preliminary legal analysis of government responsibility at a site that requires further evaluation. Based on the results of these studies and CERCLA requirements, the Corps may designate a site into the program for further investigation and potential action.

The Corps is committed to informing and involving the public as it progresses through the decisionmaking process for each site. Cleanup activities are coordinated with the U.S. Environmental Protection Agency (EPA) and/or state regulators on all sites.

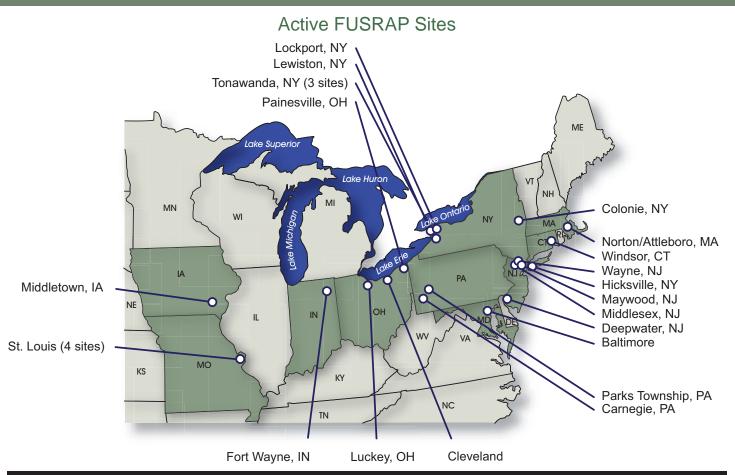
Two years after the Corps completes a response action and final closeout activities at a FUSRAP site, responsibility for long-term stewardship, if necessary, is transferred back to the DOE. During fiscal year (FY) 2012 the Wayne Interim Storage Site was transferred to the DOE's Office of Legacy Management for long-term stewardship. Additional sites that have been transferred to DOE in the past are Bliss and Laughlin, Buffalo, N.Y.; the Ashland 1 Site including Seaway Area D and the Ashland 2 Site including Rattlesnake Creek, Tonawanda, N.Y.

Currently seven districts within the Corps work on 24 active FUSRAP sites within 10 states. Districts involved in FUSRAP are Baltimore, Buffalo, New England, New York, Philadelphia, Pittsburgh, and St. Louis. The Corps' Environmental and Munitions Center of Expertise and the Kansas City District also provide program assistance.

Since the Corps began administering FUSRAP, program funding has ranged between \$109 million and \$140 million a year. The FUSRAP budget for FY 2012 was \$109 million. Progress and the schedule for each site are based upon completion of other FUSRAP site cleanups and the availability of FUSRAP funds nationally.

More FUSRAP information can be found at:

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



Baltimore District

W.R. Grace Site, Baltimore

Buffalo District

Seaway Industrial Park, Tonawanda, N.Y. Former Linde Air Products, Tonawanda, N.Y. Niagara Falls Storage Site, Lewiston, N.Y. Guterl Specialty Steel, Lockport, N.Y. Harshaw Chemical Company, Cleveland Joslyn Manufacturing and Supply Company, Fort Wayne, Ind. Luckey Site, Luckey, Ohio Painesville Site, Painesville, Ohio Superior Steel, Carnegie, Pa. Tonawanda Landfill, Tonawanda, N.Y.

New England District

Combustion Engineering Site, Windsor, Conn. Shpack Landfill, Norton/Attleboro, Mass.

Philadelphia District

DuPont Chambers Works, Deepwater, N.J.

Pittsburgh District

Shallow Land Disposal Area, Parks Township, Pa.

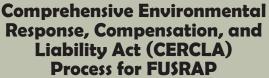
St. Louis District

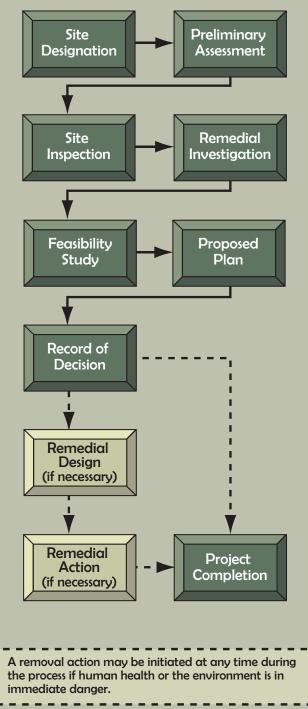
Iowa Army Ammunition Plant, Middletown, Iowa Hazelwood Interim Storage Site/ Latty Avenue Vicinity Properties St. Louis Airport Site St. Louis Airport Site Vicinity Properties St. Louis Downtown Site, St. Louis

New York District

Maywood Chemical Superfund Site, Maywood, N.J. Middlesex Sampling Plant, Middlesex, N.J. Wayne Interim Storage Site, Wayne, N.J. Colonie Site, Colonie, N.Y. Sylvania Corning Plant, Hicksville, N.Y.







SITE UPDATES

Combustion Engineering Site *Windsor, Conn.*

In FY 2012, Combustion Engineering completed the cleanup of FUSRAP-related material at the Combustion Engineering Site, a research, development, engineering, production, and servicing facility for nuclear fuels, systems, and services from the mid-1950s through 2000. The cleanup was performed as part of ongoing decommissioning work leading toward license termination and unrestricted release in accordance with the requirements of the License Termination Rule at 10 CFR Part 20, Subpart E. The New England District is reviewing the final status survey reports submitted by Combustion Engineering to the Nuclear Regulatory Commission and providing comments to the Nuclear Regulatory Commission. In FY 2013 the district will prepare a completion report for the site. Environmental monitoring will continue until the site is released for unrestricted use and returned to the DOE for longterm stewardship.

Joslyn Manufacturing and Supply Company *Fort Wayne, Ind.*



Circa 1947 photo of the Joslyn Manufacturing and Supply Company

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 23acre Joslyn Site was entered into FUSRAP in FY 2009 and assigned to the Buffalo District. A historical photo analysis was completed in FY 2012. The remedial investigation is currently scheduled to begin FY 2015.

Iowa Army Ammunition Plant Middletown, Iowa



Iowa Army Ammunitions Plant - Line 1 Excavation

In accordance with the Federal Facilities Agreement with EPA, the St. Louis District is addressing plant areas formerly used by the Atomic Energy Commission for this19,000-acre site near Burlington in southeastern Iowa. In September 2011 the district completed a ROD for plant areas formerly used by the Atomic Energy Commission (but which were not addressed by the Army ROD). The district proceeded with the remedial design plan for this ROD in FY 2012. Under an existing Army ROD, remedial activities continued at Line 1 in 12 separate locations in FY 2012. Approximately 5,500 cubic yards of contaminated material have been removed and disposed in FY 2012. Remedial action for these areas is scheduled to begin in late FY 2013.

W.R. Grace Site Baltimore

Monazite sand processing was conducted at the W. R. Grace Curtis Bay Facility (Baltimore) from mid-

May 1956 through the spring of 1957 under license to the Atomic Energy Commission, for the extraction of source material in the form of thorium, as well as rare earth elements. The processing was conducted in the southwest quadrant of a 100-year-old, five-story building (Building 23) in the active manufacturing portion of the facility. 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 in the non-manufacturing portion of the facility, in the 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 site lead to contract, manage and direct the site cleanup according to the final ROD for Building 23 and the ROD for the RWDA, which the Baltimore District released in FY 2011.

During FY 2012 the Baltimore District reviewed and commented on documents submitted by the site owner under the settlement agreement. For Building 23, the site owner continued remediation activities and the district conducted site visits during the field work.

Plans for FY 2013 include supporting the owner in preparing a request for proposal and selecting a contractor to complete the remaining remedial action work required to implement a final status survey for Building 23. Additionally, the district will continue to work with the owner to develop plans to move forward with remedy implementation for the RWDA. The district anticipates that the Building 23 remedial action can be completed in FY 2014.

Shpack Landfill Norton/Attleboro, Mass.

In FY 2012, the New England District completed the FUSRAP cleanup at the Shpack Landfill Site, an eight-acre abandoned domestic and industrial landfill. The total amount of processed waste shipped off site since FY 2005 is 50,908 cubic yards of material. The district demobilized from the site and completed a

FUSRAP UPDATE



FUSRAP cleanup at the Shpack Landfill Site

final status survey, which was shared with the EPA so that the CERCLA cleanup of the remainder of the property by the responsible party group could continue. The New England District will monitor the site for the next two years before returning it to DOE for long-term stewardship.

North St. Louis County Sites

In FY 2012, the St. Louis District continued remedial activities in accordance with a 2005 ROD for the three sites that comprise the North County St. Louis Sites: St. Louis Airport Site, St. Louis Airport Vicinity Properties, and the Latty Avenue Properties (which includes Hazelwood Interim Storage Site/Futura). The district issued two newsletters for the St. Louis Sites and will continue to do so in FY 2013. An updated community involvement plan will also be released in FY 2013 and a third five-year review will be initiated.

St. Louis Airport Site *St. Louis*

Remedial activities at the St. Louis Airport Site are finished and the post-remedial action report was released in May 2009. In FY 2012, groundwater monitoring and long-term management activities were conducted. These activities will continue in FY 2013.



St. Louis Airport Site VPs - Ballfields Phase 1 Remediation

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

In FY 2012, the St. Louis District completed remediation of Ballfields Phase 1 and issued documentation releasing two properties. Additional documents issued include: sampling work plans for three properties, design data reports for two properties, and remedial designs for three properties. Approximately 9,100 cubic yards of contaminated material were shipped off site for disposal.

In FY 2013, the district will continue the remediation of the Ballfields area, Vicinity Property #16, and the Eva Loadout. In addition, the district will continue sampling Coldwater Creek and issue documentation releasing nine properties.

Latty Avenue Properties St. Louis

In FY 2012, remedial activities at Latty Avenue Properties were nearing completion. The St. Louis District issued documents releasing four Latty Vicinity Properties as well as the remedial design for the Futura buildings. The district completed shipping contaminated material from the remediation of Vicinity Property #2L. Approximately 1,500 yards of contaminated material were shipped off site for disposal.



Latty Avenue Properties - Futura Building

In FY 2013, the district will complete decontamination of the Futura buildings and the Vicinity Property #1L building. The district anticipates issuing the documentation to release three properties and beginning development of a plan for institutional controls to address contamination remaining beneath the buildings on the Futura property.

St. Louis Downtown Site *St. Louis*



St. Louis Downtown Site - Plant 7 - 700 Pad Excavation

The St. Louis District continued remedial activities in accordance with the 1998 ROD for the accessible

areas at the St. Louis Downtown Site, which includes the Mallinckrodt Plants and 37 vicinity properties. In FY 2012, approximately 22,000 cubic yards of contaminated material were removed and shipped off site for disposal and documents releasing four properties were finalized. Additional FY 2012 efforts consisted of the remediation of two vicinity properties and the demolition and remediation of the Mallinckrodt Building 101. The district anticipates continuing the remediation of the Building 101 area and issuing documents to release five additional areas during FY 2013.

In 2012 the district also continued working toward the issuance of a ROD for the remaining (inaccessible) areas at the site. A final remedial investigation report was issued in September 2012. The district anticipates the completion of the feasibility study, proposed plan, and ROD in 2013.

DuPont Chambers Works Deepwater, N.J.

In FY 2012, the Philadelphia District finalized the proposed plan and began writing the draft ROD for this 700-acre active chemical plant. During FY 2013 the district will submit the proposed plan for agency review, finalize the draft ROD, and complete the remedial design. The public meeting and public comment period has been planned for January 2013. An initial contract award for the start of the remedial action is planned for the fourth quarter of FY 2013.

Maywood Chemical Superfund Site, *Maywood, N.J.*

A combination of 88 private and government-owned properties, this site is listed on the National Priorities List. In FY 2012, the New York District completed the groundwater ROD. The ROD calls for source area removal of soils and monitored natural attenuation. The district plans to use FY 2013 funding to continue clean up of soils consistent with the soils and groundwater records of decision and to upgrade the site infrastructure, including construction of a new rail loading platform and spur. A new single award task order contract is planned to be awarded in FY 2013 for \$450 million, which will take the project to completion.

FUSRAP UPDATE



Maywood Site - Concrete placement for loadout pad retaining wall

Middlesex Sampling Plant *Middlesex, N.J.*

In FY 2012, the New York District conducted a supplemental investigation of bedrock groundwater contamination underlying this government-owned site, which is listed on the National Priorities List. The district expects to use FY 2013 funding to continue the groundwater feasibility study incorporating information from the supplemental bedrock groundwater investigation.

Wayne Interim Storage Site *Wayne, N.J.*

On May 15, 2000, the New York District issued a ROD for the Wayne Interim Storage Site authorizing excavation and off-site disposal of radioactively contaminated soil and debris from the former W.R. Grace/Wayne Interim Storage Facility. In FY 2011 the district initiated project closeout. FY 2012 funds were used to complete project closeout and abandon existing on-site wells. The site was removed from the National Priorities List on Sept. 25, 2012, during a formal ceremony with Rep. Bill Pascrell, EPA Regional Administrator Judith Enck, and New York District Commander Colonel Paul Owen participating. This is a significant milestone for the project and the program.

Colonie Site Colonie, N.Y.

At the former National Lead Industries Site, now called the Colonie Site, the New York District continues quarterly groundwater monitoring based on a FY 2010 ROD. In FY 2011 through FY 2012 the district completed an evaluation of 53 vicinity properties previously cleaned up by the DOE. The district determined that two of the 53 vicinity properties required additional investigation. The district began preparation of the soils proposed plan and ROD for the main site and three vicinity properties not addressed by DOE. The district plans to use FY 2013 funding to perform a removal action at one of 53 vicinity properties, address potential contaminated dust, prepare a post-ROD groundwater sampling report, and finalize a soils remedial investigation feasibility study report for the main site.

Guterl Specialty Steel Lockport, N.Y.



Guterl Site - Collecting a groundwater seep sample from the wall of the Erie Canal

The 70-acre former Guterl Specialty Steel Site, also known as Simonds Saw and Steel Corporation, is located in Lockport, N.Y. During FY 2011, the Buffalo District conducted a public information session to update the community regarding the remedial investigation report and initiated the feasibility study, which will develop and evaluate alternatives to address FUSRAP contamination at the site. Development of the feasibility study continued through FY 2012 and is scheduled for completion in FY 2014. Quarterly site monitoring and surveillance continues.

Linde Air Products *Tonawanda, N.Y.*



Linde Site - Processing decontaminated tunnel sections for recycling

Located in Tonawanda, N.Y., the Linde Site is a 135-acre site currently owned and operated by Praxair, Inc. The Tonawanda Landfill, a vicinity property to the Linde Site, is reported separately in this update. Remediation of the Linde Site by the Buffalo District continued in FY 2012 with approximately 185,000 cubic yards of contaminated material excavated and shipped to out-of-state disposal facilities to date. Remedial action at the site continued through FY 2012.

After thoroughly reviewing excavated material data, it was determined that 40 underground utility tunnel sections and the surrounding soil fell below cleanup criteria and did not need to be remediated. This resulted in a savings of \$877,000. Excavation of the final abandoned utility tunnel section completed remediation of the site on Nov. 21, 2012. An additional cost savings of \$8.7 million was achieved by recycling clean soils on the site for use as backfill. Backfill restoration will be completed in FY 2013.

Niagara Falls Storage Site *Lewiston, N.Y.*



Measuring the water levels in a monitoring well during environmental sampling at NFSS

The Niagara Falls Storage Site (NFSS) is a 191-acre federally owned site, located in Lewiston, N.Y., 19 miles northwest of Buffalo, containing a 10-acre Interim Waste Containment Structure (IWCS). The Buffalo District performs daily site maintenance, monitoring and surveillance activities at the site.

In FY 2012, the district continued progress on its phased approach to the *IWCS Operable Unit Feasibility Study* by releasing two technical memoranda titled *Radon Assessment* and *Health Effects from Hypothetical Exposures*. The technical memoranda are chapters of the feasibility study focusing on key subject areas to solicit community and stakeholder input during the development of the document. The Buffalo District also awarded a contract to obtain additional data for the Balance of Plant Operable Unit (i.e., all on-site areas outside the IWCS).

The district has an active outreach program for this site that included periodic community workshops and regular e-mail updates to the community in FY 2012. The district also employs a technical facilitator for the community to enhance communication and technical understanding during the *IWCS Operable Unit Feasibility Study* development.

Two remaining technical memoranda titled *Remedial Alternatives Technology Development*, and *Remedial*



FUSRAP UPDATE

Action Objectives and Applicable and Relevant and Appropriate Requirements (ARARs) will be complete in FY 2013 with their release in the spring and summer, respectively. The *IWCS Operable Unit Feasibility Study* is in full development and will use the cost and schedule risk analysis on the remedial alternatives undergoing detailed analysis as identified in the *Remedial Alternatives Technology Development Technical Memorandum*.

The district will continue to conduct daily site maintenance, monitoring and surveillance activities to verify the integrity of the IWCS and continue periodic public workshops and monthly community meetings with the technical facilitator.

Seaway Industrial Park Tonawanda, N.Y.

The Seaway Site is a 93-acre commercial landfill located in Tonawanda, N.Y., a suburb of Buffalo. 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. In FY 2012 the Buffalo District began preliminary remedial design activities for the Seaway Site.

In FY 2013 the Buffalo District will continue preliminary remedial design activities and coordination with site stakeholders. Remediation of the site is scheduled to begin no earlier than FY 2018, pending completion of other sites currently under remediation and the availability of program funding.

Sylvania Corning Plant Hicksville, N.Y.

From 1952 to 1965, the Sylvania Corning Plant had contracts with the Atomic Energy Commission for research, development and production primarily in support of the government's nuclear weapons program. From 1952 to 1967, a second operation concentrated on Atomic Energy Commission-licensed work primarily for the production of reactor fuel and other reactor core components. FY 2012 funding was used to conduct an evaluation of off-site groundwater contamination and initiate the feasibility study. Stakeholder coordination at the site continued. The New York District plans to use FY 2013 funding to continue the groundwater investigation and feasibility study.

Tonawanda Landfill *Tonawanda, N.Y.*



Checking depth and flow in drainage ditch prior to environmental monitoring sampling at the Tonawanda Landfill Vicinity Property

The Tonawanda Landfill Vicinity Property, a 55-acre municipal landfill located in Tonawanda, N.Y., a suburb north of Buffalo, is currently in the feasibility study phase. The vicinity property consists of two operable units: the Tonawanda Landfill Operable Unit and the Mudflats Operable Unit. The Buffalo District completed work at the Mudflats Operable Unit in 2008 with a no-action ROD. The district completed preparation of an updated baseline risk assessment for the Landfill Operable Unit in FY 2012, which 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 potentially increase over acceptable limits in the future, if the surface of the landfill is allowed to erode over time. Additionally, a poster session was conducted in June 2012 to update the community regarding the progress being made at the site.

In FY 2013 the Buffalo District will begin preparation of the feasibility study for the Landfill Operable Unit, which will develop and evaluate alternatives to mitigate the potential future risks from the FUSRAPrelated material buried within the landfill.

Harshaw Chemical Company Site *Cleveland*

This 55-acre industrial facility is located three miles south of downtown Cleveland. From 1944 to 1959, the Harshaw Chemical Company was under contract to the Manhattan Engineer District and the Atomic Energy Commission to produce uranium for isotopic separation and enrichment in Oak Ridge, Tenn.

In FY 2011 the Buffalo District released a ROD for a six-acre, undeveloped area of the Harshaw Chemical Company Site, known as Investigative Area 06. The ROD documented that the parcel did not require any remedial action under FUSRAP for the anticipated future use of the site. The feasibility study for the remainder of the Harshaw Chemical Company Site was completed in FY 2012.

In FY 2013 work will begin to prepare a feasibility study addendum, which will further address groundwater, and a proposed plan to present the preferred remedial alternative for each operable unit.

Luckey Site Luckey, Ohio

The Luckey Site is a 40-acre site, 24 miles southeast of Toledo. In FY 2011 the Buffalo District completed a pre-design investigation at the site to support the remedial design and provide a more accurate projection of remediation costs.

In FY 2012 the district conducted a public information session in July to update the community on the status of site activities and completed the installation of additional monitoring wells with continued annual groundwater monitoring. FY 2013 funding will be used to continue with remedial design, perform annual groundwater sampling, and conduct a public information session. A revised proposed plan and ROD amendment will be prepared in FY 2013 and released for public comment in FY 2014 to document significant and fundamental changes in the scope and cost of the remedial action for the Soils Operable Unit. Site remediation is scheduled to begin in 2015 at the earliest, pending completion of other sites currently under remediation and the availability of program funding.

Painesville Site Painesville, Ohio

The Painesville Site, a 30-acre privately owned site located in Painesville, Ohio, about 22 miles northeast of Cleveland, is currently in the project closeout phase. The Buffalo District completed site remediation of soils containing FUSRAP-related material in FY 2011, using innovative soil-segregation technology to increase the efficiency of shipping soil above the site cleanup levels for off-site disposal resulting in a cost savings of approximately \$6 million. A total of 14,800 cubic yards of contaminated material were shipped off-site for disposal.

In FY 2013 the Buffalo District will prepare the site closeout report for the Painesville Site, and begin preparations for the transfer of the site to DOE's Office of Legacy Management for long-term stewardship.

Shallow Land Disposal Area Parks Township, Pa.

The Shallow Land Disposal Area is a 44-acre site located northeast of Pittsburgh that contains 10 trenches filled with waste. The excavation of waste from Trenches 2 and 3 began in FY 2011. Excavation was suspended in September 2011 when the remediation contractor breached safety protocols related to the handling of complex material. In FY 2012, the Pittsburgh District coordinated with the DOE National Nuclear Security Administration for assistance with addressing the safety breach. Three meetings were conducted with the community during the fiscal year to keep them informed. By December 2012, 2,500 cubic yards of radiologically contaminated material exhumed from Trenches 2 and 3 was shipped off site for disposal. The Pittsburgh District plans to use FY 2013 funding to award a new remediation contract, complete a ROD amendment, and maintain site security.

Superior Steel *Carnegie, Pa.*

The former Superior Steel Site, located in Scott Township near Carnegie, Pa. was added to FUSRAP in FY 2008. In FY 2011, the Buffalo District gathered information on historic site operations to begin project scoping for a subsequent remedial investigation that is planned to be awarded in FY 2014.



Potential New Sites

The DOE considered several hundred sites in the public and private sectors with the potential to have low-level radioactive contamination remaining as a result of work done in support of the Nation's early atomic energy and weapons program. Of these sites, DOE designated a limited number for cleanup under FUSRAP and eliminated the others from further consideration at that time. When new information becomes available, DOE notifies the Corps of that information and the status of eliminated sites can be changed to eligible according to FUSRAP criteria.

The New York District is preparing preliminary site assessments for two potential additions to FUSRAP: the Middlesex Municipal Landfill in Middlesex, N.J., and the Staten Island Warehouse Dock in Staten Island, N.Y. The Formerly Utilized Sites Remedial Action Program Update 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. For more information, please email candice.s.walters@usace. army.mil or call 202-528-4285.

Cover photos:

Top: Soil sample collection from a soil boring at NFSS

Bottom: Investigative trenching performed for the Balance of Plant Operable Unit Feasibility Study at NFSS

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