Formerly Utilized Sites Remedial Action Program Strategic Plan

August 2014

I. INTRODUCTION, MISSION, AND VISION

Introduction

This plan addresses the projected growth of the Department of Energy's (DOE) Formerly Utilized Sites Remedial Action Program (FUSRAP) responsibility over the next 10 years. It provides background information and describes where the program will be going over the next decade. The plan includes how Legacy Management (LM) plans to get there, and how LM will determine success.

The plan's structure and goals are consistent with the 2011 Legacy Management strategic plan. In addition to goals, objectives, and strategies, this plan identifies specific FUSRAP performance measures. These performance measures must be achieved for a successful program. They are specific, measureable, attainable, realistic, and time bound. They also include cost schedules and quality characteristics.

Mission

The mission of FUSRAP is to fulfill LM's post-closure responsibilities and ensure the future protection of human health and the environment at sites that formerly supported the research, development, and production of the nation's nuclear arsenal and nuclear energy.

Vision

- FUSRAP sites are protective of human health and the environment
- Records and information are accessible to the public and managed in accordance with federal regulations
- Communities understand the historic and environmental legacy of the sites in their neighborhoods
- Residual risk is understood and the site owner ensures use is consistent with that risk
- DOE and the U.S. Army Corps of Engineers (USACE) have a strong and efficient working relationship

II. BACKGROUND

World War II and the Cold War

With the outcome of Second World War still far from certain and the possibility of Germany building an atomic bomb first, in 1942 the U.S. Army Corps of Engineers (USACE) set up the Manhattan Engineer District (MED) to develop nuclear weapons as quickly as possible. Commonly referred to as the Manhattan Project, MED took just three years to turn what had previously been a matter of theoretical physics into the world's first atomic bombs. Although too late to shape the course of war in Europe, the new weapons hastened the end of the war in the Pacific with the decision to drop them on Hiroshima and Nagasaki, Japan. Confronting the never-before-seen destructive power of the bombs, Congress passed the Atomic Energy Act of 1946, which reassigned control of nuclear weapon development from the military to the new, civilian-led Atomic Energy Commission (AEC).

The sense of security that came with victory in World War II proved short-lived, as did the United States' monopoly over nuclear weaponry. Defeating Germany had brought the United States and the Soviet Union together in an uneasy alliance while the fighting lasted. However, with the war over, relations between the two superpowers had already soured by the time the Soviets detonated their first atomic bomb in 1949.

To prevent the Soviet Union from winning an atomic arms race, AEC greatly expanded the nuclear weapons complex initiated by the MED; the Cold War had begun. AEC engaged hundreds of sites from the private sector in developing the United States' nuclear weapons production capabilities. The sites' activities ranged from raw material acquisition and chemical processing to manufacturing and testing weapon components. AEC continued to use private sector sites until they were replaced with government-owned facilities.

Before being released for unrestricted use, the AEC typically surveyed the formerly used sites for radiological contamination and decontaminated them to the standards in effect at the time of cleanup. Because standards were less stringent then than current guidelines, radioactive materials remained at some sites. Radioactive contamination primarily consisted of low concentrations of uranium, radium, and thorium on building surfaces and in the soil. Over the years, contamination at some sites spread to nearby properties, often through soil or by air during operations, when buildings were dismantled, or materials were moved.

AEC Establishes FUSRAP

As public environmental awareness grew in the 1960s and early 1970s, acceptable radiological release standards became more stringent. Recognizing that some of sites that had been used in the production of the first nuclear weapons did not meet these new standards, AEC established FUSRAP in 1974. FUSRAP's mission was to remediate sites where radioactive contamination remained from the Manhattan Project and early AEC operations.

Initial FUSRAP efforts were spent on researching the locations where private sector work had been contracted. AEC then conducted radiological surveys at selected sites to determine if the levels of contamination were above current standards. In order to be eligible for remediation under FUSRAP, sites had to be vetted through a formal evaluation process. Ultimately, AEC investigated over 400 locations, of which 46 sites in 14 states were designated for remediation through FUSRAP. Several of the sites had processed radioactive materials commercially, rather than for the AEC, but, nevertheless, were designated for remediation by DOE at the request of Congress.

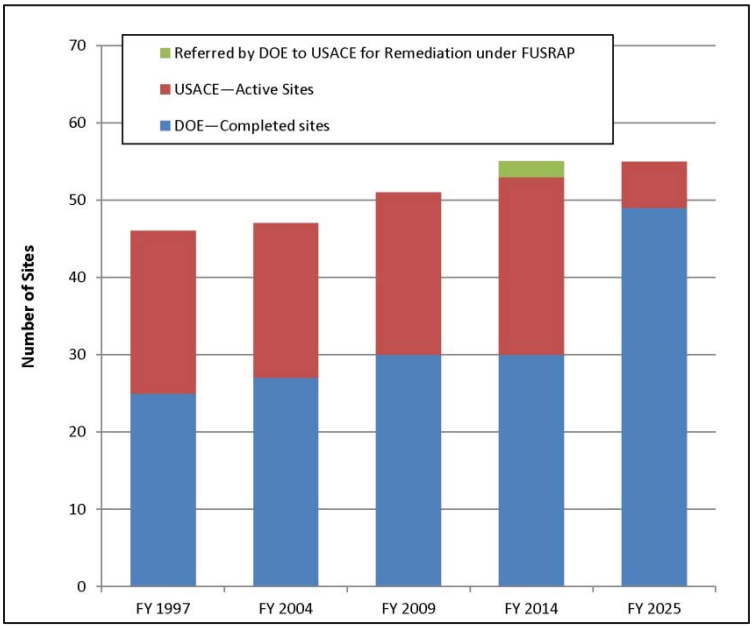
AEC remained solely responsible for FUSRAP activities until it was abolished by Congress in 1975. Two years later, the Department of Energy Organization Act of 1977 placed all FUSRAP responsibilities under the control of DOE. By the end of fiscal year 1997, DOE had remediated 25 of the original 46 FUSRAP sites. DOE completed certification dockets for 20 sites by 1997 and finalized the dockets for the remaining 5 remediated sites after 1997. (A certification docket is the package of information that describes remedial actions, the final site conditions, DOE's statement of completed remediation, and the notifications to affected parties that the cleanup is complete.)

Congress Transfers Cleanup to the U.S. Army Corps of Engineers in 1997

The Energy and Water Development Appropriations Act for fiscal year 1998 brought significant change to FUSRAP by splitting responsibility for the program between DOE and USACE. The two organizations signed a Memorandum of Understanding[1] (MOU) regarding their respective roles and responsibilities and it still holds today. In the agreement, DOE retained responsibility for remediated sites and USACE assumed responsibility for cleaning up the remaining ones. The remedial actions at these sites were conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. The MOU also defined a two-year transition period after cleanup, during which USACE and DOE collaborate to ensure the smooth transition of sites. DOE's Office of Environmental Management (EM) was the Department's lead organization for FUSRAP until 2003.

DOE Establishes the Office of Legacy Management in 2003

In December 2003, DOE established LM to fulfill in a cost-effective and efficient manner the Department's responsibility for managing legacy activities at sites that no longer had a mission need. A year after its inception, LM assumed responsibility for 27[2] remediated FUSRAP sites from EM. Since then, LM has received three more remediated sites from USACE.



[1] The MOU between DOE and USACE can be found at the following hyperlink: http://energy.gov/lm/downloads/memorandum-understanding

[2] Appendix B shows 26 sites; the Middlesex North, NJ, Site (which was one of the 27 sites) was referred back to the USACE for further remediation.

Today

Since 1997, seven additional sites have been accepted into the program, bringing the total to 53 FUSRAP sites. LM manages the long-term surveillance and maintenance (LTS&M) responsibilities for 29 remediated FUSRAP sites. USACE is remediating the remaining 24 sites—all of which are in various stages of the cleanup process. DOE has recommended three additional sites for inclusion, which are awaiting final acceptance into FUSRAP. For sites with active remediation, DOE and USACE collaborate on site-related issues, such as records, real property, remediation options, and stakeholder interests. Coordination between DOE and USACE is critical to minimize the burdens associated with site transfer. LM will continue to foster a good working relationship with USACE on all remaining active sites and any new sites to ensure success in all phases of FUSRAP.[3]

The Next 10 Years (2014–2024)

For the majority of LM FUSRAP sites, LTS&M requirements are limited to records-related activities and supporting stakeholders. However, over the next 10 years, LM is planning to receive up to 20 new FUSRAP sites from the USACE, 14 of which may require substantial long-term responsibilities that go well beyond LM's current resource allocations. For example, they may require inspections to verify the integrity of the engineered and institutional barriers as well as to monitor and maintain environmental activities.[4]

[3] The FUSRAP process flow for adding new sites is provided in Appendix A.
[4] The FUSRAP sites summary is described in Appendix B.

III. RESOURCE STRATEGIES

LM uses resource strategies to ensure that FUSRAP sites are transitioned seamlessly, managed cost-effectively, and in compliance with environmental laws and regulations. Primarily, the strategies address future staffing needs that will be created by the influx of sites into the program. However, they also take into account the resource needs of managing remediated sites that are being considered for possible redevelopment as well as the resource needs for maintaining records and information on sites that were involved in the early nuclear weapons program but found ineligible for inclusion in FUSRAP. The strategies directly support our goal of managing for excellence.[5]

DOE funding for work associated with the FUSRAP sites is provided through the Other Defense Activities appropriations to the Office of Legacy Management. That funding pays for the sites where cleanup has been completed and pays for maintenance of site environmental remedies, management of records and information, and efforts to optimize site use including the potential transfer of FUSRAP sites that are in federal ownership. The USACE also receives separate appropriations for the ongoing cleanup of FUSRAP sites and for the two year transition period before they are transferred to DOE for long term management. Our resource strategies include:

- Developing realistic cost estimates for site management responsibilities and including those estimates in the President's budget request,
- Identifying, documenting, and updating accurate program assumptions and constraints,
- Assessing organizational capacity to identify existing skills necessary to manage FUSRAP responsibilities,
- Using risk management processes to prioritize site actions and inform stakeholders,
- Documenting specific inclusions and exclusions in the program scope, including referral of FUSRAP sites back to the USACE where appropriate,
- Establishing business processes to assess, manage, and optimize resource use,
- Documenting and approving resource changes that lead to adjustments in cost and schedule estimates, and
- Reporting meaningful information to help optimize resource use and provide feedback to the FUSRAP team.

[5] See Section IV, Goal 4.

IV. GOALS AND OBJECTIVES

1. PROTECT HUMAN HEALTH AND THE ENVIRONMENT

Situational Analysis

In an effort to effectively manage sites within its organization, LM uses a 3-tiered system to categorize sites by their LTS&M requirements:

- Category 1 – records-only activities and stakeholder support.
- Category 2 – routine inspection and monitoring/maintenance, records-related activities, and stakeholder support.
- Category 3 – operation and maintenance of active remedial systems, routine inspection and monitoring/maintenance, records-related activities, and stakeholder support.

Over the past 10 years, LTS&M responsibilities for LM's remediated FUSRAP sites have been limited to activities associated with Category 1 (records, information, and stakeholder inquiries). For Category 2 and some Category 1 sites, land use restrictions have been put in place to ensure that exposure limits to radiological contamination are not exceeded. LM routinely inspects these sites to monitor land use and to confirm that the exposure limits set at the time of certification remain valid. As redevelopment activities and population densities increase around sites with land use limitations, LTS&M activities may become more complex and challenging.[6]

For USACE FUSRAP sites that are being remediated, LM is an active partner within the terms and conditions of the MOU and the limits of the Energy and Water Appropriations Acts. In this context, LM's activities include reviewing relevant cleanup documents, performing site visits, and participating in regulatory and stakeholder meetings. For example, LM might participate in a site's CERCLA 5-year review process prior to its transition from USACE. This approach enhances our understanding and ability to make informed decisions about projected resource requirements.

For remediated sites and sites that are being cleaned-up, a defensible cost estimate of the LTS&M requirements is critical for the program. LM is responsible for estimating the LTS&M costs for remediated FUSRAP sites. Wherever possible, LM integrates activities at FUSRAP sites with its other sites to achieve cost reductions and efficiencies. For example, LM combines and schedules sampling and analysis within geographic regions to reduce deployment costs. LM also participates in an annual 75-year environmental liability audit to validate its cost baseline.

Objectives

1. **Perform LTS&M in a protective, effective, and safe manner.**

   Strategies

   - Perform annual LTS&M reviews, as required, to ensure that site protective measures are operating effectively and efficiently. (Examples include annual inspections and CERCLA 5-year reviews.)

[6] LM has summarized the radiological conditions and LTS&M requirements for all remediated sites in the program document "LTS&M requirements for Remediated FUSRAP Sites, March 2012."

- Collaborate with government and non-government partners to understand future LTS&M requirements for all FUSRAP sites.
- Review MOU and addenda between DOE and USACE for completeness, determine appropriate actions, and pursue creative solutions.

Performance Measures

- Final remedies are compliant.
- Protective measures are working independently and collectively.
- Annual risk analysis to help formulate lifecycle baseline costs.

2. IDENTIFY, PRESERVE, AND SHARE RECORDS AND INFORMATION

Situational Analysis

Information and records management for FUSRAP sites presents challenges because most FUSRAP sites were privately owned and operated and many different DOE offices and federal agencies have been involved. Records from MED and AEC operations are distributed across many organizations and locations, including the LM Business Center and National Archives and Records Administration (NARA) facilities. In addition, both DOE and USACE maintain records and information about FUSRAP sites.

DOE records-related responsibilities include responding to requests for information regarding sites currently included in, or considered for, inclusion in FUSRAP. DOE is also responsible for determining the eligibility of additional sites for inclusion.

To overcome some of the challenges presented by FUSRAP records, LM created "FUSRAP Historical Records: Collections, Contents, Access, Custody, and Finding Aid." The document assists in identifying and retrieving FUSRAP records—records that have been created by, and assembled in support of, FUSRAP, since the program's inception in 1974. It also helps in identifying and retrieving records created during MED and early AEC activities that may be relevant to current or potential FUSRAP sites. LM staff and contractors use the finding aid to locate information to answer questions regarding current or potential FUSRAP sites. It is a "living document," which is updated as conditions warrant and as new information is identified. The aid provides locations of records collections as well as document indices where possible. This information could be shared more efficiently and effectively between DOE, USACE, the regulatory community, and stakeholders.

The primary source of FUSRAP information for the public is the Considered Sites Database (CSD). The CSD holds an inventory of data for sites that have been reviewed for inclusion into FUSRAP. The CSD and FUSRAP finding aid are central to addressing any external requests for site information.

Objectives

1. Identify, preserve, and share access to FUSRAP related records and information.

Strategies

- Identify FUSRAP records in collections that are <u>not</u> in LM custody and determine methods to ensure they are available to support ongoing LM FUSRAP mission requirements.
- Establish clear and concise processes that address external inquiries in a timely manner.
- Identify and pursue methods to visually display LTS&M requirements in a geographic information system (GIS) environment.

2. **Maintain records and information for LM FUSRAP sites.**

   Strategies

   - Review and consolidate FUSRAP related records and information sources to ensure consistency and accuracy with LM program documents in accordance with governing regulations as well as legal and litigation requirements.
   - Ensure that records collections containing documentation that may be needed to evaluate eligibility for a considered site are identified and metadata (indices) are maintained.

3. **Keep the public informed.**

   Strategies

   - Participate, where appropriate, in USACE organized public outreach efforts.
   - Use outreach strategies to inform the surrounding communities about LM's FUSRAP site activities and status.
   - Improve the accessibility and availability of FUSRAP information on the LM website.

Performance Measures

- Periodic updates of the FUSRAP finding aid document.
- Improve the quality and timeliness of responses to external inquiries.

GOAL 3: OPTIMIZE THE USE OF LAND AND ASSETS

Situational Analysis

The majority of FUSRAP sites (49 of 53) are privately owned industrial facilities. Remedial action conducted in the 1970s and 1980s met the regulatory requirements, allowing occupants to continue operations. In most cases, legally enforceable controls were not put in place to limit site use with regard to residual contamination. Therefore, LM must work with current owners to increase awareness and understanding, so that their use of properties is consistent with the conditions left after remediation. In some cases, this work requires cooperation and assistance from outside organizations, such as state regulators and local governments. Furthermore, any deed restrictions imposed on privately-owned sites to prohibit certain land uses would likely decrease property values and create a government liability.

At federally owned sites, LM aims to provide the most benefit to stakeholders through beneficial reuse or transfer of the properties, including any remaining assets no longer needed by DOE.

Objectives

1. **Ensure property owners understand land and facility use restrictions.**

   Strategies

   - Engage property owners to discuss and understand long-term site liabilities.
   - Partner with external organizations to develop creative solutions.

2. **Promote the beneficial reuse of government-owned properties and assets.**

   Strategies

- Evaluate all government-owned FUSRAP sites and their remaining assets for beneficial reuse opportunities.
- Transfer eligible government-owned properties**.**
- Maintain current and accurate inventory of federally owned assets for all FUSRAP sites.

Performance Measures

- Accuracy of FUSRAP information in DOE Facilities Information Management System (FIMS).
- Meeting information requests for FIMS.
- Periodic reviews of potential beneficial reuse opportunities for property and assets.

GOAL 4: MANAGE THE PROGRAM FOR EXCELLENCE

Situational Analysis

Managing for excellence will be a challenge as the scope, schedule, and cost requirements for the FUSRAP change over time. First, the execution of this goal begins with aligning all FUSRAP program requirements within the LM organization. By establishing links, LM staff and contractors will understand their contribution to the overall success of the program and to LM as a whole. Second, LM must work within the framework of the MOU and clearly defined roles and responsibilities. LM staff and contractors must work proactively with their governmental partners, and the regulatory community to understand, and be able to meet, future LTS&M requirements. Third, LM must continue to ensure that its business processes are well defined and standardized to make certain that all resources are used productively.

Objectives

1. **Align FUSRAP business processes within the LM organization.**

   Strategies

   - Develop, manage, and update, key business plans, processes, and procedures to optimize scope, schedule, and cost resources.
   - Establish reasonable and appropriate quality assurance and quality control procedures to ensure high-quality work products.
   - Align contractor scope, schedule, and costs with LM's short-term and long-term strategies.

2. **Build and sustain strong working relationships with governmental organizations.**

   Strategies

   - Conduct progress meetings and/or site visits with USACE Headquarters and District representatives to understand transition issues and ensure FUSRAP related actions items are being processed in a timely manner.
   - Work closely with affected and responsible regulatory agencies, local governments, and Tribal Nations.
   - Collaborate with government partners to identify and publish lessons learned and progress updates.

3. **Reduce the cost of LTS&M.**

Strategies

- Integrate scope activities and schedule with cost baseline.
- Identify annual cost savings opportunities and implement as appropriate.

4. Analyze and reduce public health risk.

Strategies

- Identify, analyze and document program and site-specific risk profiles.
- Review and evaluate relevant health studies performed by DOE, State, and Federal agencies.
- Prioritize LTS&M activities and/or refer sites back to USACE to address higher risk issues.

Performance Measures

- Periodic progress meetings on FUSRAP status and transition issues.
- Response time for interagency action items.
- Frequency of communications with LM partners.
- Periodic independent programmatic risk analysis at least every five years. (Initial independent baseline to be completed in 2014.)

LIST OF ACRONYMS

AEC	Atomic Energy Commission
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSD	Considered Sites Database
CSL	Considered Sites Library
DOE	Department of Energy
EPA	Environmental Protection Agency
FOIA	Freedom of Information Act
FUSRAP	Formerly Utilized Sites Remedial Action Program
GEMS	Geospatial Environmental Mapping System
GSA	General Services Administration
IC	Institutional Controls
LM	Legacy Management
LTS&M	Long-Term Surveillance & Maintenance
MED	Manhattan Engineer District
MOU	Memorandum of Understanding
NARA	National Archives and Records Administration
NFA	No Further Action
NRC	Nuclear Regulatory Commission
O&M	Operation & Maintenance
PA/SI	Preliminary Assessment/Site Investigation
RA	Remedial Action
USACE	U.S. Army Corps of Engineers

DOCUMENT SIGN-OFF

The above document has been reviewed and accepted as the formal FUSRAP Strategic Plan.

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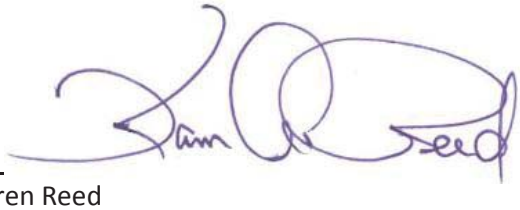
Thomas C. Pauling
Director
Office of Site Operations



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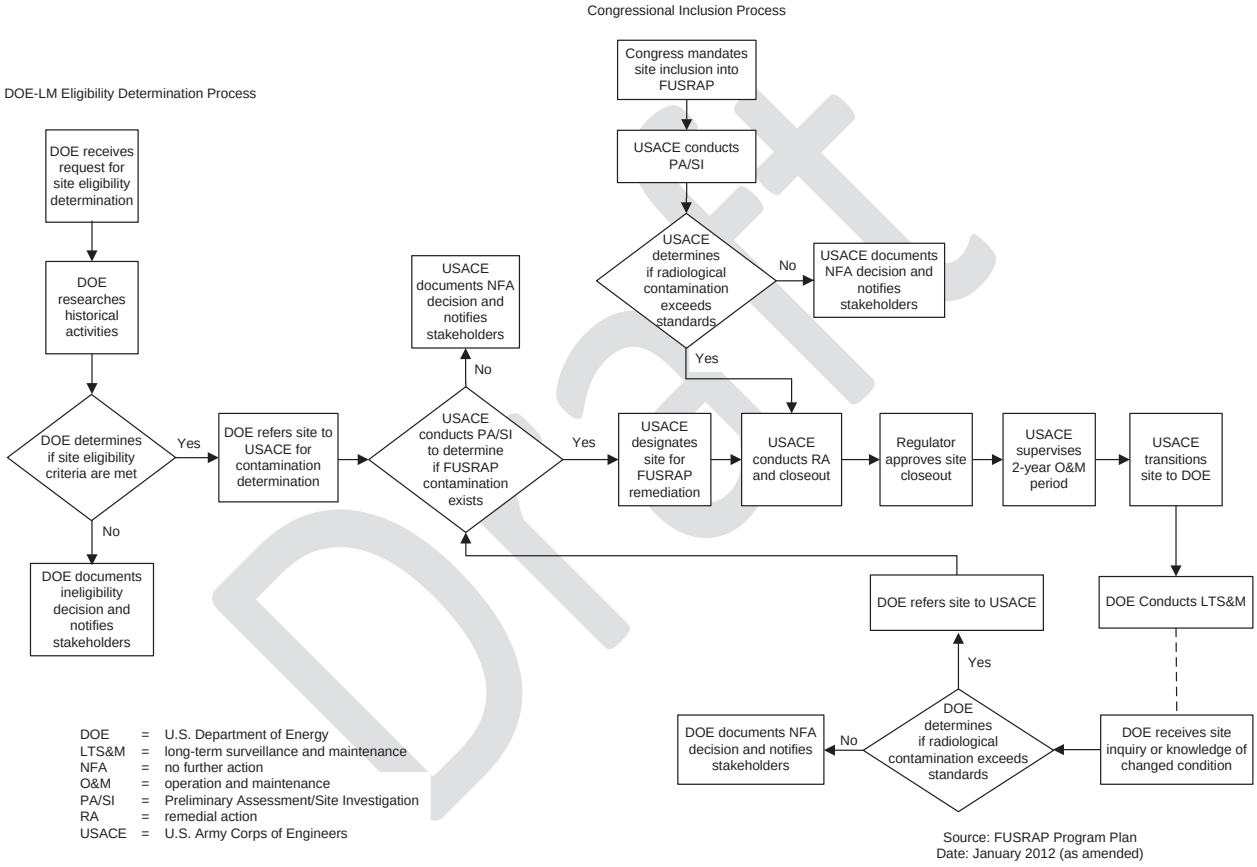
Karen Reed
Team Leader
Environmental Team 2

Appendix A: FUSRAP Process Flow for Adding New Sites



Source: FUSRAP Program Plan
Date: January 2012 (as amended)

Appendix B: FUSRAP Sites Summary

	LM Site Name	Pre-LM Name	Designation Date, Fiscal Year[a]	Transition Date, Fiscal Year[b]
COMPLETED SITES – From *Site Management Guide*, Update 16, March 2014				
1	Jersey City, NJ, Site	Kellex/Pierpont	1978	1983
2	Bayo Canyon, NM, Site	Bayo Canyon	1980	1984
3	Acid/Pueblo Canyon, NM, Site	Acid/Pueblo Canyon	1982	1985
4	Berkeley, CA, Site	University of California (Gilman Hall)	1980	1985
5	Chicago North, IL, Site	National Guard Armory	1986	1989
6	Chicago South, IL, Site	University of Chicago	1983	1990
7	Niagara Falls Storage Site Vicinity Properties, NY, Site	Niagara Falls Storage Site Vicinity Properties	1983	1991
8	Albany, OR, Site	Albany Research Center	1983	1992
9	Granite City, IL, Site	Granite City Steel	1992	1994
10	Oak Ridge , TN, Warehouses Site	Elza Gate	1989	1994
11	Adrian, MI, Site	General Motors	1985	1996
12	Chupadera Mesa, NM, Site	Chupadera Mesa	1986	1996
13	Fairfield, OH, Site	Associate Aircraft Tool and Manufacturing	1993	1996
14	New York, NY, Site	Baker and Williams Warehouses	1990	1996
15	Oxford, OH, Site	Alba Craft Laboratory	1992	1996
16	Seymour, CT, Site	Seymour Specialty Wire	1986	1996
17	Springdale, PA, Site	C.H. Schnorr	1992	1996
18	Aliquippa, PA, Site	Aliquippa Forge	1983	1997
19	Hamilton, OH, Site	Herring-Hall-Marvin Safe Company	1994	1997
20	Columbus East, OH, Site	B & T Metals Site	1992	2001[g]
21	Madison, IL, Site	Spectrulite Consortium, Inc.	1993	2001
22	New Brunswick, NJ, Site	New Brunswick Laboratory	1990	2001[g]
23	Toledo, OH, Site	Baker Brothers, Inc.	1992	2001[g]
24	Buffalo, NY, Site	Bliss and Laughlin Steel Company	1992	2002
25	Beverly, MA, Site	Ventron Corporation	1986	2004[g]
26	Indian Orchard, MA, Site	Chapman Valve Site	1993	2004[g]
27	Tonawanda North, NY, Site Unit 1	Ashland #1	1984	2007
28	Tonawanda North, NY, Site Unit 2	Ashland #2	1984	2007
29	Wayne, NJ, Site	Wayne Interim Storage Site	1983	2007
ACTIVE SITES – From USACE *Program Update*, January 2014[c]				
1	Painesville, OH, Site	Painesville Site	1992	2015
2	Attleboro, MA, Site	Shpack Landfill	1984	2016
3	Tonawanda, NY, Site[d]	Linde Air Products	1980	2016
	Tonawanda Landfill, NY, Site[d]	Tonawanda Landfill (VP to the Linde Air Products Site)	1980	TBD[e]
4	Windsor, CT, Site	Combustion Engineering Site	1994	2016
5	Colonie, NY, Site	Colonie Site	1984	2017

Appendix B: FUSRAP Sites Summary (continued)

	LM Site Name	Pre-LM Name	Designation Date, Fiscal Year[a]	Transition Date, Fiscal Year[b]
6	Deepwater, NJ, Site	DuPont Chambers Works	1980	2017
7	Berkeley, MO, Site	St. Louis Airport Site	1984	2019
8	Berkeley, MO, Site Vicinity Properties	St. Louis Airport Site Vicinity Properties	1984	2019
9	Hazelwood, MO, Site	Hazelwood Interim Storage Site/ Latty Avenue Vicinities Properties	1984	2019
10	Middletown, IA, Site	Iowa Army Ammunition Plant	2003	2019
11	St. Louis, MO, Site	St. Louis Downtown Site	1984	2019
12	Hicksville, NY, Site	Sylvania Corning Plant	1986	2020
13	Middlesex South, NJ, Site	Middlesex Sampling Plant	1980	2021
14	Middlesex North, NJ, Site	Middlesex Municipal Landfill	1980/2014[f]	1989/2021
15	Curtis Bay, MD, Site	W.R. Grace at Curtis Bay Site	1984	2022
16	Lockport, NY, Site	Guterl Specialty Steel	2006	2023
17	Cleveland, OH, Site	Harshaw Chemical Company	1999	2024
18	Maywood, NJ, Site	Maywood Chemical Superfund Site	1984	2024
19	Tonawanda North, NY, Site Unit 3	Seaway Industrial Park	1984	2025
20	Carnegie, PA, Site	Superior Steel	1985	2027
21	Luckey, OH, Site	Luckey Site	1992	2027
22	Ft. Wayne, IN, Site	Joslyn Manufacturing and Supply Company	2009	2028
23	Parks Township, PA, Site	Shallow Land Disposal Area	2002	2029
24	Niagara Falls Storage Site, NY, Site	Niagara Falls Storage Site	1990	2036
Sites Referred from DOE to USACE – Not Currently Designated by USACE For Active Status				
1	Berkeley, CA, Site (Referral Letter Sent 1/17/2014)	University of California (Gilman Hall)	1980	1985
2	Brooklyn, NY, Site (Referral Letter Sent 2/26/2013)	Wolff-Alport Chemical Company		2021
3	Staten Island, NY, Site (Referral Letter Sent 10/6/2009)	Staten Island Warehouse		2020

Notes:

[a] Designation is the action to formally include a site into FUSRAP for assessment and, if needed, remediation.

[b] Transition is the action to transfer responsibility for a remediated site from USACE to DOE as the site enters the LTS&M phase.

[c] Information on Active Sites can be found at http://www.usace.army.mil/Missions/Environmental/FUSRAP.aspx.

[d] The Tonawanda and Tonawanda Landfill, NY, Sites are counted as two sites by USACE and as one site by LM.

[e] The Tonawanda Landfill, NY, Site will transition separately from the Tonawanda, NY, Site and the transition date has not been determined.

[f] Middlesex North, NJ, Site, originally designated in 1980 and certified in 1989, was referred back to USACE and redesignated in 2014.

[g] Remediated prior to 1997, but certified complete after 1997

DOE-owned sites