

EXECUTIVE SUMMARY

BACKGROUND

Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Public Law 96-510), commonly known as Superfund, in 1980. The Superfund Amendments and Reauthorization Act (SARA) (Public Law 99-499), which amended CERCLA in 1986, added Section 120 regarding the cleanup of contaminated sites at Federal facilities.

Under Section 120(e)(5) of CERCLA, each department, agency, or instrumentality of the Federal government responsible for compliance with Section 120 must submit an annual report to Congress concerning its progress in implementing the requirements of Section 120. The report must include information on the progress in reaching Interagency Agreements (IAGs), conducting remedial investigation and feasibility studies (RI/FSs), and performing remedial actions. Federal agencies that own or operate facilities on the National Priorities List (NPL) are required to begin an RI/FS for these facilities within 6 months after being placed on the NPL. Remediation of these facilities is addressed in an IAG between the Federal agency, the U.S. Environmental Protection Agency (EPA), and in some instances the state within which the facility is located.

This report, prepared by the U.S. Department of Energy's (DOE's) Office of Environmental Management, is being submitted to Congress in accordance with Section 120(e)(5) of CERCLA. It is DOE's Tenth Annual Report to Congress and provides information on DOE's progress in implementing CERCLA Section 120 in fiscal year 1996 (FY 96), i.e., from October 1, 1995, to September 30, 1996.

CURRENT STATUS

There are 95 DOE facilities subject to CERCLA Section 120 and 21 DOE facilities on the NPL. DOE's NPL facilities are presented by state on Table ES-1. Table ES-1 also includes information relating to when each facility was placed on the NPL and the status of the IAG for the facility. No new facilities were placed on the NPL in FY 96; however, the three facilities placed on the NPL in FY 94 have not yet entered into IAGs. Two facilities, Hanford - 1100 Area and Ross Complex, were deleted from the NPL in FY 96. The other 16 facilities are conducting remedial activities as specified in their IAGs.

REPORT CONTENTS AND ORGANIZATION

This report provides the status of ongoing activities being performed in support of CERCLA Section 120 at DOE facilities. This includes activities conducted to reach IAGs and progress in conducting remedial actions.

Section I describes Section 120 of CERCLA, the requirements of the Annual Report to Congress, the DOE facilities subject to Section 120 of CERCLA, a summary of ten years of CERCLA Section 120 reporting, and remediation progress at DOE facilities on the NPL.

Section II describes DOE's CERCLA compliance strategy and identifies the:

- DOE organizations responsible for CERCLA compliance,
- Legal context for DOE's remediation activities,
- Causes of environmental contamination at DOE facilities,

Table ES-1. U.S. Department of Energy Facilities on the National Priorities List

STATE	SITE NAME	DATE OF FR ¹ NOTICE OF NPL LISTING	INTERAGENCY AGREEMENT (IAG) STATUS
California	Laboratory for Energy-Related Health Research (LEHR)	05/31/94	Memorandum of Agreement with University of California, Davis, signed in 1989, revised 1993; Federal Facility Agreement and the Potentially Responsible Party Agreement are currently being negotiated.
	Lawrence Livermore National Laboratory - Livermore Site	07/22/87	Federal Facility Agreement executed on November 1, 1988.
	Lawrence Livermore National Laboratory - Site 300	08/30/90	Federal Facility Agreement signed on June 29, 1992.
Colorado	Rocky Flats Environmental Technology Site (formerly the Rocky Flats Plant)	10/04/89	On July 19, 1996, the Rocky Flats Cleanup Agreement was signed by DOE, EPA Region VIII, and the Colorado Department of Public Health and Environment.
Idaho	Idaho National Engineering Laboratory (includes Argonne National Laboratory - West)	11/21/89	Federal Facility Agreement/Consent Order executed on December 9, 1991.
Kentucky	Paducah Gaseous Diffusion Plant	05/31/94	IAG under negotiation.
Missouri	St. Louis Site (includes St. Louis Airport Site and Vicinity Properties, Latty Avenue Properties) ²	10/04/89	Federal Facility Agreement signed on June 26, 1990.
	Weldon Spring Site Remedial Action Project (formerly referred to as Weldon Spring Quarry and Feed Materials Plant and Raffinate Pits Site)	07/22/87, 03/13/89 ³	Federal Facility Agreement signed on August 22, 1986; amended June 30, 1992.
New Jersey	Maywood Site ²	09/08/83	Federal Facility Agreement signed on July 23, 1990, and made effective in April 1991.
	Wayne Site ²	09/21/84	Federal Facility Agreement signed on July 23, 1990, and made effective in April 1991.
New York	Brookhaven National Laboratory	11/21/89	IAG executed on February 28, 1992, and made effective May 27, 1992.

Table ES-1. U.S. Department of Energy Facilities on the National Priorities List (Continued)

STATE	SITE NAME	DATE OF FR ¹ NOTICE OF NPL LISTING	INTERAGENCY AGREEMENT (IAG) STATUS
Ohio	Fernald Environmental Management Project	11/21/89	Consent Agreement made effective on June 29, 1990; amended on September 20, 1991 and April 5, 1993.
	Mound Plant	11/21/89	Federal Facility Agreement executed on August 6, 1990; amended on July 15, 1993.
South Carolina	Savannah River Site	11/21/89	IAG executed on January 15, 1993, and made effective on August 16, 1993.
Tennessee	Oak Ridge Reservation	11/21/89	IAG made effective on January 1, 1992.
Texas	Pantex Plant	05/31/94	Federal Facility Agreement under negotiation.
Utah	Monticello Mill Site	11/21/89	Federal Facility Agreement executed on December 22, 1988. ⁴
	Monticello Vicinity Properties	06/10/86	Federal Facility Agreement executed on December 22, 1988. ⁴
Washington	Hanford Site - Area 100	10/04/89	Tri-Party Agreement signed on May 15, 1989; amended in 1991, 1992, 1994, 1995, and February 1996.
	Hanford Site - Area 200	10/04/89	Tri-Party Agreement signed on May 15, 1989; amended in 1991, 1992, 1994, 1995, and February 1996.
	Hanford Site - Area 300	10/04/89	Tri-Party Agreement signed on May 15, 1989; amended in 1991, 1992, 1994, 1995, and February 1996.

¹ FR = *Federal Register*

² Congress directed DOE to remediate these sites. The states (New Jersey and Missouri) are not parties to these IAGs.

³ The Feed Materials Plant and Raffinate Pits were added to the site 3/13/89.

⁴ One IAG was developed for both Monticello sites, but the sites are listed separately on the NPL.

- Approach to environmental restoration used by other DOE organizations, and
- DOE's 2006 Plan for Accelerating Cleanup.

Section III provides a discussion of DOE's overall progress in reaching IAGs and responding to public comments regarding proposed IAGs. It also identifies instances where no IAG has been concluded. Section III further provides highlights on progress in conducting RI/FSs, remedial actions, and other response activities at NPL facilities, and in performing cleanup activities at facilities not on the NPL.

Section IV provides a detailed description of the status of each NPL facility subject to CERCLA Section 120 on a state-by-state basis. Included in this section is a description of the hazards presented, plans and schedules for initiating and completing response actions, enforcement status (where appropriate), and an explanation of any postponements or failure to complete a response action. This section identifies DOE's FY 96 funding, appropriated FY 97 funding, and funding requested in the President's Budget for FY 98 for environmental restoration at each NPL facility.

Section V provides a description of the remediation status of non-NPL facilities (by state) subject to CERCLA Section 120 where 1996 CERCLA funding was more than \$1 million.

Appendix A is a list of the acronyms and abbreviations used in this report. Appendix B is an alphabetical listing of the facilities discussed in this report by facility name, showing the pages in the report on which their primary information is discussed.

I. INTRODUCTION

I.A. Background: Section 120 of CERCLA

Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Public Law 96-510), commonly known as Superfund, in 1980. The primary goal of the Act is to encourage the identification and remediation of sites contaminated with hazardous substances.

The Superfund Amendments and Reauthorization Act (SARA) (Public Law 99-499), which amended CERCLA in 1986, added certain specific provisions applicable to the cleanup of contaminated sites at Federal facilities. These provisions, located in Section 120 of CERCLA, are briefly described below.

Under Section 120(a)(1), CERCLA specifies that Federal departments, agencies, and instrumentalities must comply with CERCLA in the same manner and to the same extent as nongovernmental entities. Except for requirements applicable to bonding, insurance, or financial responsibility, all guidelines, rules, regulations and criteria applicable to preliminary assessments (PAs), National Contingency Plan (NCP) evaluations, inclusion on the National Priorities List (NPL), and the conduct of remedial action are applicable to contaminated sites at Federal facilities (Sections 120(a)(2), (3), and (4)).

Even before the passage of SARA, Federal agencies were required to identify sites where hazardous waste was treated, stored, or disposed of at any time. SARA added Section 120(b), which requires Federal agencies to also identify contamination affecting contiguous or adjacent property and any monitoring data associated with this contamination.

Section 120(c) of CERCLA requires the U.S. Environmental Protection Agency (EPA) to compile information about contaminated sites at Federal facilities and to enter the information into the Federal Agency Hazardous Waste Compliance Docket (the docket). The docket must also include information about Federal facilities where hazardous wastes are generated and managed under Sections 3005 and 3010 of the Resource Conservation and Recovery Act (RCRA), even if these facilities are not contaminated.

To compile the docket, each Federal Agency, including the U.S. Department of Energy (DOE), notifies EPA of hazardous waste activity under:

- CERCLA Section 103 (notification of a release or potential release);
- RCRA Section 3005 (permitting authority);
- RCRA Section 3010 (notification of hazardous waste activity for generators, transporters, and treatment, storage, and disposal facilities); and
- RCRA Section 3016 (biennial inventory of hazardous waste treatment, storage, and disposal facilities).

Certain Federal facilities that conduct hazardous waste activities under these sections of CERCLA and RCRA are, however, exempt from docket listing. These facilities include small quantity generators of hazardous waste (generators of less than 1,000 kg/month of hazardous waste) and facilities that notify EPA of hazardous waste activity under Section 3010 of RCRA only because they are transporters of hazardous waste.

Information submitted to EPA under the above requirements is entered into several EPA databases. EPA extracts the information from the databases to compile a proposed update to the docket that is provided to Federal agencies, including DOE. DOE reviews the proposed docket update and provides formal comments to EPA headquarters.

A facility is listed on the docket with a code that relates to the facility's NPL status. The NPL is EPA's list of the most serious or abandoned hazardous waste sites identified for long-term remedial action under CERCLA. Sites are placed on the NPL if they receive a threshold score from EPA's Hazard Ranking System. Docket status codes and their meanings are as follows:

U	Undetermined
N	No Further Remedial Action Planned
P	Currently Proposed for the National Priorities List
F	Currently Final on the NPL
R	Removed from the Proposed NPL and No Longer Considered for the Final NPL
D	Deleted from the Final NPL

EPA assigns the N code, which denotes No Further Remedial Action Planned (NFRAP), to facilities that are not likely to be placed on the NPL and where no further involvement by EPA in site assessment or cleanup is anticipated.

Section 120(d) of CERCLA requires Federal agencies to conduct a PA of facilities listed on the docket within 18 months after docket listing. If the PA indicates a need for further investigation, the responsible agency must conduct a site investigation (SI). Based on information developed in the PA or Preliminary Assessment/Site Investigation (PA/SI), EPA must determine if: 1) no further remedial action is necessary at this time; or 2) further evaluation and possible inclusion on the NPL are warranted.

Section 120(e) of CERCLA requires Federal agencies that own or operate facilities on the NPL to begin a remedial investigation and feasibility study (RI/FS) for these facilities not later than 6 months after being placed on the NPL. EPA must review the results of each Federal facility RI/FS. Within 180 days after the completion of EPA's review, Federal agencies must enter into interagency agreements (IAGs) with EPA for expeditious completion of remedial action at the facility. The contents of IAGs must include:

- A review of alternative remedial actions and selection of a remedial action,
- A schedule for the completion of the remedial action, and
- Arrangements for long-term operation and maintenance of the facility.

Remedial action must begin not later than 15 months after the completion of a RI/FS and must be completed "as expeditiously as practicable." To ensure that adequate funds are appropriated to perform cleanup, Federal agencies must include a statement of the hazards posed to human health, welfare, and the environment by each facility on the NPL. Also, specific consequences of failure to begin and complete remedial action must be identified and included in annual budget submissions to Congress.

I.B. CERCLA Section 120(e)(5): Annual Report to Congress

Under Section 120(e)(5) of CERCLA, each department, agency, or instrumentality of the Federal government responsible for compliance with Section 120 must submit an annual report to Congress concerning its progress in implementing the requirements of Section 120. The report must include information on at least the following items:

- Progress in reaching IAGs under CERCLA Section 120,
- Specific cost estimates and budgetary proposals involved in each IAG,
- A brief summary of the public comments regarding each proposed IAG,
- A description of the instances in which no IAG was reached,
- Progress in conducting RI/FSs,
- Progress in conducting remedial actions,
- Progress in conducting remedial actions at facilities which are not on the NPL,
- An explanation of any failure to conclude an IAG within 180 days after EPA review, and
- A detailed description on a state-by-state basis of the status of each facility subject to CERCLA Section 120, including a description of the hazards presented by each facility, plans and schedules for initiating and completing response actions, enforcement status (where appropriate), and an explanation of any postponements or failure to complete response actions.

This report is being submitted to Congress in accordance with Section 120(e)(5) of CERCLA. It is DOE's Tenth Annual Report to Congress under Section 120(e)(5) and provides information on DOE's progress in implementing CERCLA Section 120 in fiscal year 1996 (FY 96), i.e., from October 1, 1995, to September 30, 1996.

I.C. Overview of DOE Facilities Subject to CERCLA Section 120

Figure I-1 (presented at the end of this section) shows the location of DOE facilities subject to CERCLA Section 120. These facilities are listed on Table I-1 (presented after Figure I-1), by state. The table also shows the status of each facility as listed on the docket, the type of contamination present, and the current status of remediation at each facility.

The last docket (update #9) was published on April 11, 1995. Six DOE facilities subject to CERCLA Section 120 were removed from the docket at that time (West Valley Demonstration Project, New York; Lapine (Bonneville Power Administration (BPA)), Oregon; Cosmopolis (BPA), Maple Valley Substation (BPA), Monroe (BPA), and Snow King Substation (BPA), Washington). For FY 96, there are 95 DOE facilities subject to CERCLA Section 120, as shown on Table I-1.

Several DOE sites have had docket status changes occur in FY 96; however, Table I-1 does not reflect these changes in the "Docket Status" column. The "Docket Status" column reflects the status of DOE facilities listed on the docket at the time of its most recent publication (April 11, 1995). For example, Hanford - 1100 Area was deleted from the NPL on September 30, 1996. Although the site's docket status was changed to "D" in FY 96, this change was not reflected in a published version of the docket by the end of FY 96. Table I-1 presents the docket status of DOE facilities/sites as of April 11, 1995, with a footnote indicating NPL status changes that occurred after the docket was published.

The table includes one facility, the Pittsburgh Energy Technology Center (now the Federal Energy Technology Center - Pittsburgh), for which DOE is not listed as the responsible Federal Agency on the

April 1995 updated docket. DOE believes this to be an error and therefore has included the Pittsburgh Energy Technology Center on the table. Previous docket updates correctly listed the Pittsburgh Energy Technology Center as a DOE facility.

The table does not include the United States Enrichment Corporation, a wholly owned U.S. government corporation created by the Energy Policy Act of 1992. The Corporation generates hazardous waste in its operation of DOE's Paducah Gaseous Diffusion Plant (Kentucky) and Portsmouth Uranium Enrichment Complex (Ohio) (also known as Portsmouth Gaseous Diffusion Plant). The corporation leases these two facilities from DOE and is responsible, per an agreement with DOE, for all of its hazardous waste. EPA included the United States Enrichment Corporation on the docket in the State of Ohio and identified DOE as the Federal agency responsible for the United States Enrichment Corporation in the most recent docket update. However, DOE believes the docket listing to be incorrect because the DOE-owned facilities where United States Enrichment Corporation generates hazardous waste as a site operator, the Paducah Gaseous Diffusion Plant (Kentucky) and the Portsmouth Uranium Enrichment Complex (Ohio), are already listed on the docket.

DOE also believes that the April 1995 docket listing for DOE's Carlsbad Area Office in Carlsbad, New Mexico is an error and has not included the Carlsbad Area office on Table I-1. The Carlsbad Area office administers DOE's Waste Isolation Pilot Plant in New Mexico. The Waste Isolation Pilot Plant is already on the docket.

Two of the facilities on Table I-1, the St. Louis Site in Missouri and the Monticello Vicinity Properties, are privately owned; thus, they are not included on the docket. DOE, however, is responsible for cleanup of these sites as established by Congressional mandate. Both of these facilities are listed on the NPL.

Two DOE facilities are listed differently on Table I-1 than by EPA on the docket.

- Ostrander Substation (BPA) (Oregon) on Table I-1 is listed on the docket as Oregon City (BPA). DOE has notified EPA of the correct name of this facility.
- EPA listed Sandia National Laboratory/Nevada (Tonopah) on the docket on April 11, 1995. DOE has informed EPA that this facility is the Tonopah Test Range (Nevada) and is already on the docket.

Twenty-one of the facilities on Table I-1 are on the NPL. However, DOE's Hanford facility, which is listed once on the docket, has three NPL entries. Each NPL entry covers a discrete contaminated area (i.e., areas 100, 200, and 300).

No DOE facility is currently proposed for the NPL. Two DOE facilities were deleted from the NPL in FY 96: Ross Complex (BPA), Washington and Hanford - 1100 Area, Washington.

The NCP establishes the criteria that EPA uses to delete sites from the NPL. In accordance with Section 300.425(e) of the NCP, 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate. In making a determination to delete a release from the NPL, EPA considers, in consultation with the state, whether any of the following criteria have been met:

- Responsible parties or other parties have implemented all appropriate response actions required;
- All appropriate response under CERCLA has been implemented, and no further action by responsible parties is appropriate; or

- The remedial investigation has shown that the release poses no significant threat to public health or the environment and, therefore, taking of remedial measures is not appropriate.

It is EPA's policy that even if a site is deleted from the NPL, where hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure, a subsequent review of the site will be conducted at least every five years after the initiation of the remedial action at the site to ensure that the site remains protective of public health and the environment.

Ross Complex (BPA) in Washington was placed on the NPL on November 21, 1989. This listing was based on the presence of volatile organic compounds (VOCs), trichloroethane, dichloroethene in water, polychlorinated biphenyls (PCBs) in surface soils, and the Ross Complex's proximity to the City of Vancouver's drinking water supply. BPA conducted a Remedial Investigation/Feasibility Study to determine the nature and extent of contamination at the Ross Complex and to evaluate alternatives for cleanup of contaminated areas.

To facilitate the Superfund investigation process, the site was divided into two Operable Units (OUs), OU A and OU B. The OU A investigation focused on surface soil contamination. The OU B investigation focused on characterization of subsurface soils in two waste units and also included characterization of the shallow perched water table, the deep groundwater aquifer beneath the Ross Complex, and the surface water and sediments in Cold Creek and Burnt Bridge Creek.

EPA believes the remedial actions taken at Ross Complex are protective of human health and the environment and no further remedial action under CERCLA is warranted. However, the OU B Record of Decision (ROD) requires institutional controls for subsurface soils as well as groundwater monitoring at several onsite wells to verify that groundwater conditions remain adequately protective. Ross Complex (BPA), Washington has implemented these requirements and was deleted from the NPL on September 23, 1996.

The Hanford - 1100 Area in Washington was placed on the NPL on October 4, 1989 based on its proximity to groundwater wells used to supply drinking water to Richland, Washington. The Hanford - 1100 Area consists of two non-adjacent areas located in the southern portion of the Hanford site covering less than five square miles.

The majority of the Hanford-1100 Area site, located near Richland, Washington, contains central warehousing, vehicle maintenance, and a transportation distribution center for the entire Hanford site. Waste sites include a landfill, french drains, underground tanks, and a sand pit where up to 15,000 gallons of waste battery acid from vehicle maintenance may have been disposed of. The other portion is located on the Eberhardt Arid Land Ecology Reserve, approximately 15 miles northwest of Richland. This portion is a former NIKE missile base and control center and is now used for the Arid Land Ecology Reserve headquarters. The missile base contained all facilities necessary for missile launching and maintenance, as well as living quarters for personnel.

All remedial actions associated with the Hanford - 1100 Area were completed by December 1995. The final closeout report, signed in July 1996, documents that the objectives of the remedial actions were met. Consistent with EPA guidance, a five-year review of this project is necessary to ensure the continued protection of human health and the environment. The review will be conducted in accordance with OSWER Directive 9355.7-02, "Structure and Components of Five-Year Reviews." The Hanford - 1100 Area, Washington was deleted from the NPL on September 30, 1996.

I.D. Ten Years of CERCLA Section 120 Reporting

DOE's first Annual Report to Congress providing information on the Department's implementation of CERCLA Section 120 activities was published in FY 87, one year after SARA was passed. From 1987 to 1991, DOE established procedures, processes, and systems to comply with CERCLA Section 120 requirements.

CERCLA Section 120 activities during the first four years also focused on developing and negotiating Federal Facility and Interagency Agreements. The first Federal Facility Agreement developed under CERCLA Section 120 was signed between EPA, the state of California, and DOE for the Lawrence Livermore National Laboratory (in Livermore, CA), in November, 1988. Remedial activities at several other DOE facilities were entered into under RCRA and/or CERCLA agreements and consent orders before SARA was passed and were later modified to satisfy the requirements of CERCLA Section 120.

The first EPA docket appeared in the *Federal Register* on February 12, 1988. Since that time there have been nine docket updates. Of the 35 DOE sites listed on the initial docket, most submitted preliminary assessments to EPA by April 1988. During these first years, DOE activities for NPL and docket sites focused on 1) negotiations for Federal Facility and Interagency Agreements, 2) assessments of the environmental and cleanup conditions at the sites, and 3) conduct of some remedial and removal actions.

By FY 90, DOE's focus shifted to the conduct of RI/FS activities and the performance of removal and interim actions at NPL and docket sites.

In FY 93, all DOE sites on the NPL had 1) completed negotiations and signed IAGs developed in accordance with CERCLA Section 120 requirements, and 2) continued or completed RI/FS activities. For those DOE facilities not on the NPL, activities included initiation of investigations and assessments to determine the nature and extent of past waste disposal practices, development of plans and reports necessary for implementing cleanup activities, and continued operation and maintenance of existing remediation projects.

In FY 96, the majority of the RCRA/CERCLA activity conducted at the original 20 DOE sites listed on the NPL involved the performance of remedial or removal activities. Two DOE sites were deleted from the NPL (Ross Complex (BPA) and Hanford - 1100 Area, both in Washington state) as cleanup activities were completed. DOE facilities not on the NPL in FY 96 but listed on the docket continued to conduct many of the same activities as they did in FY 93; however, many of these sites have been classified by EPA as "No Further Remedial Action Planned." As stated earlier, this facility classification is assigned to a facility when it is not likely to be placed on the NPL, and no further involvement by EPA in site assessment or cleanup activities is anticipated. Some DOE sites with this classification, however, continue monitoring environmental activities as part of site operations and maintenance. In FY 94, three DOE sites were added to the NPL. These sites are in the process of negotiating their Federal Facility or Interagency Agreements and have initiated some remedial or removal activities.

During FY 96, DOE reviewed the cleanup of sites throughout the complex and established the goal of cleaning up most sites in ten years. Section II.D. discusses DOE's 2006 Plan for Accelerating Cleanup.

Figure I-2 shows the number of DOE sites on the docket, on the NPL, and for which IAGs or Federal Facility Agreements (FFAs) have been negotiated from FY 88 through FY 96. The information is first presented for FY 88, the year in which the first docket was published. As shown in the figure, 35 DOE sites were on the docket when it was first published in FY 88. The number of sites on the docket doubled in three years and nearly tripled within five years, bringing the total number of DOE sites on the docket to 93 in FY 93. This

increase reflects DOE's initial activities intended to identify sites subject to CERCLA Section 120 and to initiate cleanup activities. Since FY 93, more sites have been removed from the docket than have been added, reflecting the progress of cleanup at DOE sites.

This same trend is also reflected in the activities associated with the DOE sites on the NPL. When the NPL was first published in FY 88, five DOE sites were listed. In two years, the number of DOE sites on the NPL quadrupled with 20 sites listed. The number of DOE sites on the NPL remained stable until FY 94, when three new sites were added. This year, in FY 96, two DOE sites have been deleted from the NPL, reflecting DOE's efforts to complete remediation at these sites.

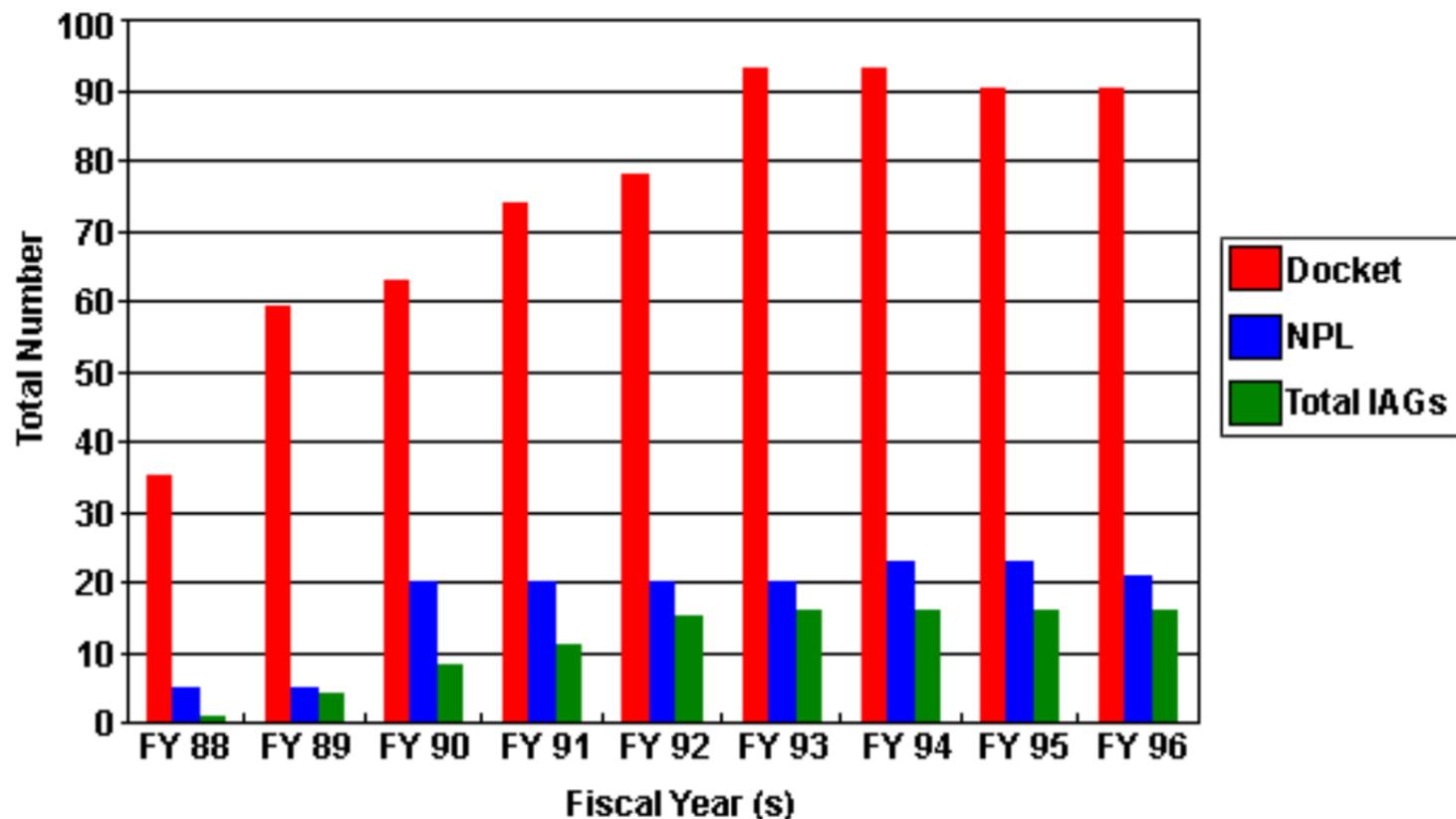


Figure I-2. Number of DOE Facilities on the Docket, NPL, and for Which IAGs Have Been Negotiated.

Each site listed on the NPL is required to enter into an IAG under CERCLA Section 120(e)(4). The number of completed IAGs steadily increased between FY 88 through FY 93, when all sites on the NPL had completed negotiations and executed their IAGs. The number of sites on the NPL and the number of completed IAGs do not coincide for the following reasons:

- There are four NPL listings for Hanford (100 Area, 200 Area, 300 Area, and 1100 Area); however, one IAG applies to the entire Hanford reservation. As of FY 96, there are three NPL listings for Hanford (100 Area, 200 Area, and 300 Area), with one IAG applying to these three sites and to the 1100 Area, which was deleted from the NPL.
- One IAG is applicable to the Monticello Mill Site and Monticello Vicinity Properties, which are listed separately on the NPL.
- In FY 94, three new DOE sites were added to the NPL, (Laboratory for Energy-Health Research, CA; Paducah Gaseous Diffusion Plant, KY; and Pantex Plant, TX). IAGs have not been completed for these three sites.
- The IAG for the Ross Complex is still in effect even though the site has been deleted from the NPL.

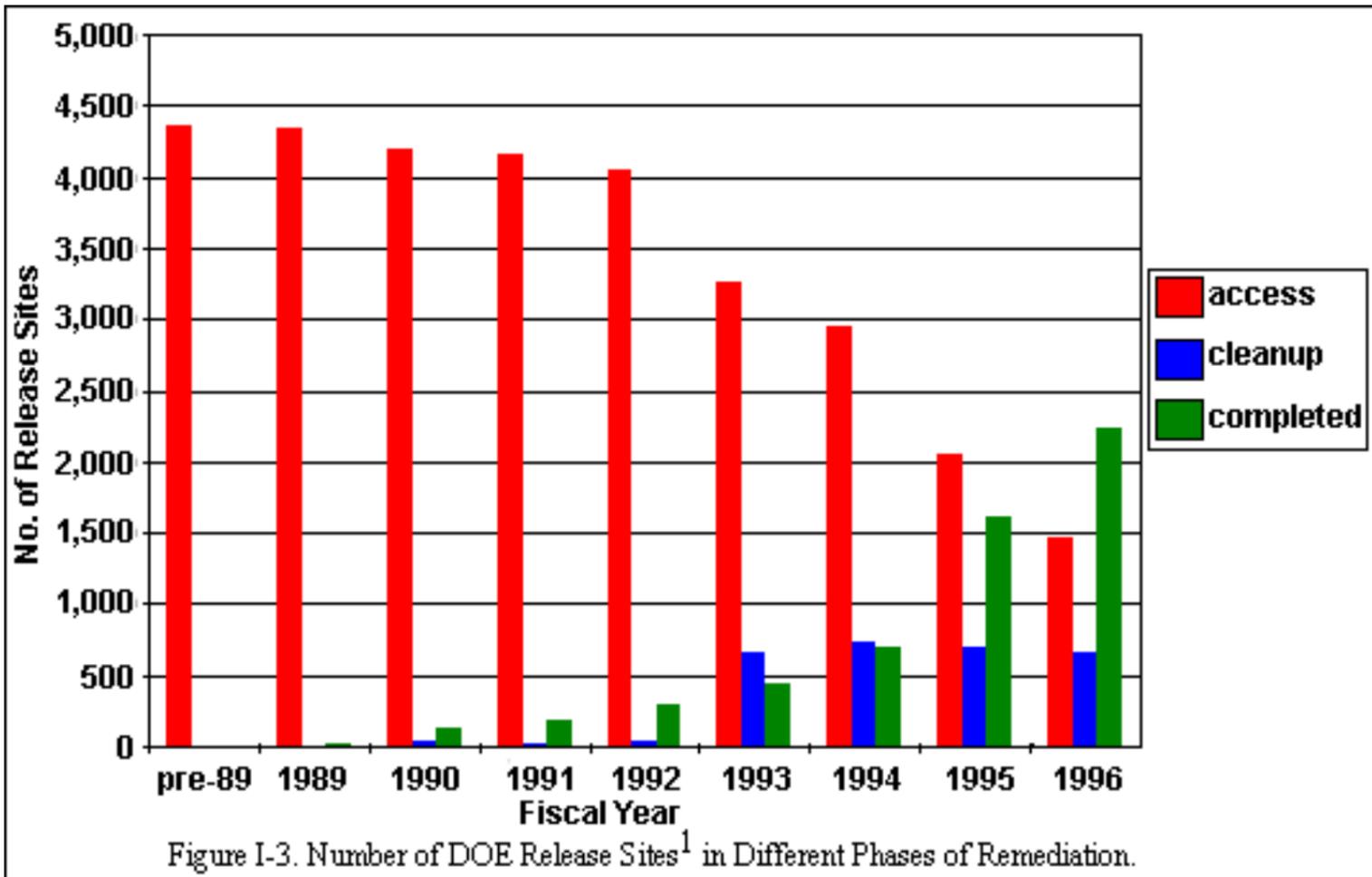
I.E. Remediation Progress at DOE Facilities on the NPL

The Office of Environmental Management (EM) has developed a methodology to measure the progress of remediation at EM facilities on the NPL. For each facility, EM determines the number of release sites/facilities. A release site is defined as a unique location where a hazardous, radioactive, or mixed waste release has occurred or is suspected to have occurred. It is usually associated with an area where wastes or substances contaminated with wastes have been disposed of, treated, stored, and/or used. A release facility is a uniquely identifiable building or structure where a hazardous, radioactive, or mixed waste release has occurred or is suspected to have occurred. Sometimes a facility is a room or a part of a building. Release sites/facilities will hereafter be referred to as release sites.

EM places each release site in one of three remediation phases or categories:

- Assessment - a site undergoing a preliminary assessment or in the study phase. Documents in final form have not been submitted to the regulator for either a remedial action or no response action decision.
- Cleanup - the site is in the final design or remediation phase. This phase includes all cleanup work until documentation has been submitted to the proper authorities for approval. It does not include interim or removal actions unless the removal action is expected to constitute the final action.
- Completed - a response action is considered complete once a no action decision has been made and the documentation sent to the regulators, or physical remediation has been completed and the documentation has been submitted to the regulators.

In June 1996, there were 9,916 release sites identified and for which EM is responsible for cleanup. Figure I-3 displays the current progress of the approximately 4,360 release sites for those DOE facilities on the NPL identified by 1989 through the assessment, cleanup, and completed phases.



As shown on Figure I-3, DOE environmental restoration activities were nearly 100 percent assessment prior to 1989. Of the approximately 4,360 release sites, only three release sites were identified as completed prior to FY 89. Assessment activities continued to be the major focus of DOE activities through FY 95. Through the interim years, however, DOE was progressing toward completion of environmental restoration activities. For example, in FY 93, approximately 3,270 release sites were in the assessment phase, approximately 650 release sites were involved in the cleanup phase, and approximately 440 release sites had completed restoration activities.

By the end of FY 95, the number of release sites in the cleanup and completed phases were greater than the number of release sites in the assessment phase. In FY 95, those release sites completed totaled approximately 1,610, with approximately 690 release sites undergoing cleanup activities, and approximately 2,060 release sites undergoing assessment.

By the end of FY 96, more release sites were in the completed phase (approximately 2,230 release sites) than in the assessment and cleanup phases combined (approximately 2,130 release sites).

¹DOE release sites located at facilities on the NPL.

The above information is also reflected in the amount of funding spent on cleanup versus assessment activities. In FY 93, LLNL - Livermore Site, Monticello Mill Site and Monticello Vicinity Properties, Oak Ridge Reservation, St. Louis Site, and the Weldon Spring Site all were spending more on cleanup activities than on assessment. By the end of FY 96, all the NPL sites except four (Brookhaven National Laboratory, LLNL - Site 300, Rocky Flats Environmental Technology Site, and the Savannah River Site) were spending more on cleanup than assessment.

To determine what phase of restoration (i.e., assessment, cleanup, or completed) a release site is to be assigned for a fiscal year, EM uses the following assumptions:

- If a release site's remedial activities were completed before the end of the fiscal year (September 30th for that year), the release site is determined to be "completed";
- If a release site has completed the assessment phase but has not yet completed the remediation activities within a given fiscal year, the release site has been determined to be in the "cleanup" phase; and
- If a release site has not completed its assessment activities before the end of the fiscal year, the release site has been determined to be in the "assessment" phase.

For those release sites where the assessment phase and completed phase occurred in the same fiscal year, the release site has been not included in the cleanup phase for any fiscal year.

I.F. Contents of the Balance of This Report

This report presents information on contaminated sites at DOE facilities that were placed on the NPL as of September 1996, and on facilities on the docket as of April 11, 1995 (Docket Number 9). These versions of the NPL and docket were the last versions published before FY 96 ended. Information on DOE sites and facilities placed on the NPL or docket after FY 96 ended will be included in subsequent CERCLA reports to Congress. In this section of the report and in subsequent sections, the words "site" and "facility" are used interchangeably.

This report does not contain information on DOE remedial activities at sites that have not been placed on the docket and thus are not subject to the requirements of Section 120 of CERCLA. These sites may include 1) NPL sites that are not owned by DOE (such as the Maxey Flats Disposal Site in Kentucky, where DOE has been named as a Potentially Responsible Party), 2) Uranium Mill Tailings Remedial Action (UMTRA) project sites, 3) sites in the Formerly Utilized Sites Remedial Action Program (FUSRAP), and 4) non-DOE sites that became contaminated as a result of nuclear research and development activities sponsored by DOE and its predecessor agencies.

Section II describes DOE's CERCLA compliance strategy and identifies the:

- DOE organizations responsible for CERCLA compliance,
- Legal context for DOE's remediation activities,
- Causes of environmental contamination at DOE facilities,
- DOE's 2006 Plan for Accelerating Cleanup, and
- Approach to environmental restoration used by other DOE organizations.

CERCLA compliance activities performed by the Western Area Power Administration (WAPA), Pittsburgh Energy Technology Center (now the Federal Energy Technology Center - Pittsburgh), Bonneville Power

Administration (BPA), and the Morgantown Energy Technology Center (now the Federal Energy Technology Center - Morgantown) are also described in this section.

Section III provides a discussion of DOE's overall progress in reaching IAGs and responding to public comments regarding proposed IAGs. It also identifies instances where no IAG has been concluded. Section III further provides highlights on progress in conducting RI/FSSs, remedial actions, and response activities at NPL sites, and in performing cleanup activities at sites not on the NPL.

Section IV provides a detailed description of the status of each NPL facility subject to CERCLA Section 120 on a state-by-state basis. Included in this section is a description of the hazards presented, plans and schedules for initiating and completing response actions, enforcement status (where appropriate), and an explanation of any postponements or failure to complete response action. This section identifies DOE's FY 96 funding, appropriated FY 97 funding, and funding requested in the President's Budget for FY 98 for environmental restoration at each NPL facility.

Section V provides a description of the remediation status of non-NPL facilities (by state) subject to CERCLA Section 120 where 1996 CERCLA funding was more than \$1 million.

Appendix A is a list of the acronyms and abbreviations used in this report.

Appendix B is an alphabetical listing of the facilities discussed in this report by facility name showing the pages in the report on which their primary information is discussed.

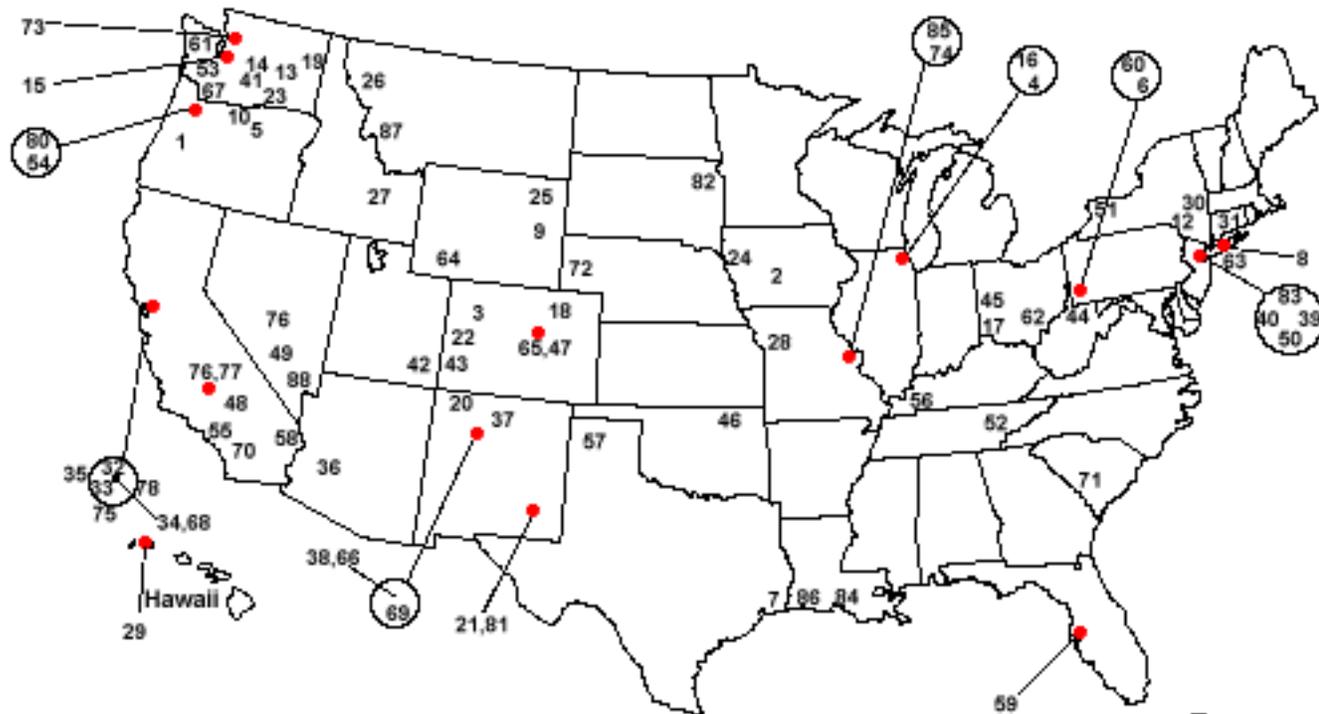


Figure I-1. Locations of All DOE Facilities/Sites Subject to Section 120 of CERCLA. Puerto Rico

- | | |
|--|---|
| 1 Alvey Maintenance Headquarters, OR | 45* Mound Plant, OH |
| 2 Ames Laboratory, IA | 46 National Institute for Petroleum and Energy Research, OK |
| 3 Anvil Points Facility, Naval Oil Shale Reserve No. 3, CO | 47 National Renewable Energy Laboratory, CO |
| 4 Argonne National Laboratory - East, IL | 48 Naval Petroleum Reserve Nos. 1 & 2, CA |
| 5 Bake Oven Substation, OR | 49 Nevada Test Site, NV |
| 6 Bettis Atomic Power Laboratory, West Mifflin, PA | 50 New Brunswick Laboratory, NJ |
| 7 Big Hill Site, TX | 51 Niagara Falls Storage Site, NY |
| 8* Brookhaven National Laboratory, NY | 52* Oak Ridge Reservation, TN |
| 9 Casper Field Branch, WY | 53 Olympia Substation, WA |
| 10 Celilo Converter Station, OR | 54 Ostrander Substation, OR (Oregon City, OR) |
| 11 Center for Energy and Environmental Research, PR | 55 Oxnard Facility, CA |
| 12 Colonie Site, NY | 56* Paducah Gaseous Diffusion Plant, KY |
| 13 Columbia Basin Project AEC Zone 2,4-D Site, WA | 57* Pantex Plant, TX |
| 14 Columbia Substation, WA | 58 Parker Dam Switchyard, CA |
| 15 Covington Substation, WA | 59 Pinellas Plant, FL |
| 16 Fermi National Accelerator Laboratory, IL | 60 Pittsburgh Energy Technology Center, PA |
| 17* Fernald Environmental Management Project, OH | 61 Port Angeles, WA |
| 18 Fort Morgan Substation, CO | 62 Portsmouth Uranium Enrichment Complex, OH |
| 19 G.H. Bell Substation and Maintenance Complex, WA | 63 Princeton Plasma Physics Laboratory, NJ |
| 20 Gasbuggy, NM | 64 Rock Springs Oil Shale Retort, WY |
| 21 Gnome-Coach, NM | 65* Rocky Flats Environmental Technology Site, CO |
| 22 Grand Junction Projects Office Remedial Action Project, CO | 66 Ross Aviation, Inc., NM |
| 23* Hanford Site, WA | 67 Ross Complex, WA |
| 24 Hinton Hazardous Waste Storage Facility, IA | 68 Sandia National Laboratories/California, CA |
| 25 Hoe Creek, WY | 69 Sandia National Laboratories/New Mexico, NM |
| 26 Hot Springs Substation TLM Complex, MT | 70 Santa Susana Field Laboratories, CA |
| 27* Idaho National Engineering Laboratory, ID | 71* Savannah River Site, SC |
| 28 Kansas City Plant, MO | 72 Sishc Foundry Site, NE |
| 29 Kauai Test Facility, HI | 73 Snohomish Substation, WA |
| 30 Knolls Atomic Power Laboratory, Niskayuna and West Milton Sites, NY | 74* St. Louis Site, MO |
| 31 Knolls Atomic Power Laboratory, Windsor Site, CT | 75 Stanford Linear Accelerator Center, CA |
| 32* Laboratory for Energy-Related Health Research, CA | 76 Texaco Section 8 Central Solid Waste Site, CA |
| 33 Lawrence Berkeley National Laboratory, CA | 77 Texaco Section 8 Gas Plant, CA |
| 34* Lawrence Livermore National Laboratory - Livermore Site, CA | 78 Tonopah Test Range, NV (Sandia Nat'l Laboratories/Tonopah) |
| 35* Lawrence Livermore National Laboratory - Site 300, CA | 79 Tracy Pump and Substation, CA |
| 36 Liberty Substation, AZ | 80 Troutdale Substation, OR |
| 37 Los Alamos National Laboratory, NM | 81 Waste Isolation Pilot Plant, NM (Carlsbad, NM) |
| 38 Lovelace Inhalation Toxicology Research Institute, NM | 82 Watertown Maintenance Facility, SD |
| 39* Maywood Site, NJ | 83* Wayne Site, NJ |
| 40 Middlesex Sampling Plant, NJ | 84 Weeks Island, LA |
| 41 Midway Substation, WA | 85* Weldon Spring Site Remedial Action Project, MO |
| 42* Monticello Mill Site and Monticello Vicinity Properties, UT | 86* West Hackberry Site, LA |
| 43 Montrose Power Operations Center, CO | 87 Western Environmental Technology Office, MT |
| 44 Morgantown Energy Technology Center, WV | 88 Yucca Mountain Site, NV |

* NPL Site

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Arizona	Liberty Substation (WAPA)	U	Onsite soil/chemical contamination. PA completed in FY 93 and submitted to EPA. The site is awaiting response from EPA Region IX regarding PA.
California	Laboratory for Energy-Related Health Research (LEHR)	F	Onsite soil and potential offsite groundwater/chemical and radioactive contamination. The Federal Facility Agreement is currently being negotiated. The RI/FS Work Plan has been implemented. DOE and the University of California-Davis are negotiating liability and cost-sharing for the non-DOE source areas of contamination (Potentially Responsible Party Agreement).
	Lawrence Berkeley National Laboratory	N	Onsite soil and groundwater/chemical and radioactive contamination. The RCRA Facility Investigation (RFI) Phase I progress report was submitted in November 1994, and the Phase II report was submitted on November 15, 1995. The Phase III report will be submitted in FY 97. The Site Characterization is scheduled for completion in FY 98.
	Lawrence Livermore National Laboratory - Livermore Site	F	Onsite groundwater, soil/chemical, and offsite groundwater contamination. Complete hydraulic capture of the western offsite plumes was achieved. Began operation of the Building 518 Vapor Treatment Facility, Portable Treatment Facilities G-1 and F, and the Treatment Facility C North Pipeline. Seven groundwater/vapor treatment facilities are in operation. Groundwater contamination offsite has been significantly reduced.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
California (Continued)	Lawrence Livermore National Laboratory - Site 300	F	<p>Onsite soil and groundwater/chemical, radioactive, and offsite groundwater contamination.</p> <p>The General Services Area (GSA) OU Draft Record of Decision (ROD) was completed and two interim Remedial Action groundwater treatment facilities continued operation. The Building 834 OU groundwater/vapor treatment facility continued operations. Continued assessment, required document preparation, and streamlining at other OUs.</p>
	Naval Petroleum Reserve Nos. 1 and 2	U	<p>Onsite soil/chemical contamination.</p> <p>The site has been characterized as No Further Remedial Action Planned.</p>
	Oxnard Facility	U	<p>Onsite suspected soil and groundwater/chemical contamination.</p> <p>A Phase II Assessment revealed potential PCB contamination in soils. Final Assessment and Remediation Reports were completed in February 1996 and submitted to the Rocky Flats Office for final facility disposition.</p>
	Parker Dam Switchyard (WAPA)	U	<p>Onsite soil/chemical contamination.</p> <p>The PA was completed in FY 93. The site is awaiting response from EPA Region IX.</p>
	Sandia National Laboratories/ California	U	<p>Onsite soil and groundwater/chemical contamination.</p> <p>The site completed construction of the in-situ bioremediation pilot study at the Fuel Oil Spill Site in FY 95, and the third injection phase of the bioremediation phase began in the summer of 1996. Additional groundwater monitoring continues at the Navy Landfill.</p>
California (Continued)	Santa Susana Field Laboratories (Energy Technology Engineering Center)	U	<p>Onsite groundwater and soil/chemical and radioactive contamination; offsite groundwater/chemical and radioactive contamination.</p> <p>Groundwater investigations are continuing under RCRA and the Regional Water Quality Control Board (RWQCB) authorities. A site-wide RFI is in progress. An RFI Work Plan was submitted in March 1995, and the site is awaiting comments from the state. The RFI schedule will be adjusted as needed, once comments are received.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
	Stanford Linear Accelerator Center	N	<p>Onsite groundwater and soil/chemical contamination; offsite soil/PCB contamination.</p> <p>The Remedial Investigation (RI) is in progress. PCB contamination at Interaction Region 6 and 8 drainage has been removed, and the site has been restored to natural contours. Completed Catch Basin Interim Removal Action Project and completed plans for remaining Release Site remediation.</p>
	Texaco Section 8 Central Solid Waste Site	N ²	<p>Contamination unknown.</p> <p>No further remedial action required.</p>
	Texaco Section 8 Gas Plant	N ²	<p>Contamination unknown.</p> <p>No further remedial action required.</p>
	Tracy Pump and Substation (WAPA)	U	<p>Onsite soil/chemical contamination.</p> <p>The PA/SI was submitted in FY 93. Region IX had indicated in early FY 94 that no further action would be required on the site. No Further Remedial Action Planned status is expected in the next docket update.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Colorado	Anvil Points Facility, Naval Oil Shale Reserve No. 3	N	<p>Onsite soil contamination.</p> <p>Prior to FY 93, the PA was submitted and an SI plan was requested by the state. A PA/SI document was approved by the EPA in June 1994. The site has been classified as No Further Remedial Action Planned; however, the site continues to sample the groundwater at the shale pit and to monitor the results. Results from the groundwater samples show the movement of materials at the site.</p>
	Fort Morgan Substation (WAPA)	N ²	<p>Onsite soil contamination (oil) with possible groundwater contamination.</p> <p>A PA/SI was submitted in January 1995. The site was assigned No Further Remedial Action Planned status in March 1995.</p>
	Grand Junction Office Remedial Action Project	N	<p>Onsite groundwater/mixed waste contamination and radioactive contamination in buildings.</p> <p>The site has been classified as No Further Remedial Action Planned. Decommissioning of six buildings was completed in FY 96.</p>
	Montrose Power Operations Center (WAPA)	N	<p>Onsite soil/chemical contamination.</p> <p>The site has been classified as No Further Remedial Action Planned.</p>
	National Renewable Energy Laboratory	N	<p>None known.</p> <p>The site has been classified as No Further Remedial Action Planned.</p>
	Rocky Flats Environmental Technology Site (formerly the Rocky Flats Plant)	F	<p>Onsite groundwater, surface water, and soil/chemical, radioactive, mixed contamination; offsite soil/radioactive contamination.</p> <p>Three RODs have been completed and approved by the regulatory agencies. Operable units were reorganized, with the Buffer Zone and Industrial Area encompassing most of the site. Separate RODs will still have to be completed for OUs 1, 3, 5, and 6. The OU 1 ROD was submitted for regulatory approval on September 30, 1996. Three final RI reports, one Interim Measure/Interim Remedial Action (IM/IRA), and one proposed action memorandum were completed.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Connecticut	Knolls Atomic Power Laboratory, Windsor Site	N	None known. The site was classified as No Further Remedial Action Planned in FY 90. No further EPA action is expected to be required.
Florida	Pinellas Plant	U	Onsite soil and groundwater and offsite groundwater/chemical contamination. 4.5 Acre State Lead CERCLA Site: One IRA is being implemented in FY 96. CERCLA Potentially Responsible Party Involvement: One de minimis settlement has been executed. One CERCLA Section 104 (e) response has been submitted. One RFI is under preparation. Three IRAs have been implemented.
Hawaii	Kauai Test Facility	U	Elevated metals in soil at the Rocket Launcher Field. The PA Report was submitted in January 1994. The SI was completed in May 1994; the SI Report was begun in June 1994 and was submitted in FY 95. A no further action request that was submitted by DOE is expected to be approved by the EPA early in FY 97.
Idaho	Idaho National Engineering Laboratory (INEL) INEL Argonne National Laboratory - West	F	Onsite groundwater and soil/chemical and radioactive contamination. One final and two draft RI/FS Work Plans, one draft RI/BRA, two draft RI/FS Reports, one Remedial Design/Remedial Action (RD/RA), one Scope of Work, two draft RI/FS Scopes of Work, two draft RD/RA Work Plans, one draft RA Report, and one draft final ROD were submitted. Fifty-four of 81 potential release sites were signed off as "no further action."

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Illinois	Argonne National Laboratory - East	U	<p>Offsite groundwater with volatile organic contamination; onsite groundwater/soil with chemical and radioactive contamination.</p> <p>Remedial actions have continued in FY 96 as voluntary corrective actions in coordination with the state. A substantial majority of the contaminated "units" were determined to require "no further action" in FY 96.</p> <p>A draft RCRA Corrective Action Permit is expected to be issued in October 1996.</p>
	Fermi National Accelerator Laboratory	N	<p>Onsite soil and groundwater/chemical contamination and soils contaminated with PCBs.</p> <p>The PA was submitted to EPA Region V in November 1993. The site has been classified as No Further Remedial Action Planned. A draft RFI Work Plan for the Phase II Investigation at two solid waste management units was submitted to the Illinois EPA on September 8, 1995. The Phase I Sampling Plan for four newly identified solid waste management units was submitted to the Illinois EPA in November 1995.</p>
Iowa	Ames Laboratory	U	<p>Offsite soil and groundwater with radioactive and organic contamination.</p> <p>2,000 cubic yards of soil and debris contaminated with radioactive and hazardous waste were removed and disposed of offsite in FY 95. The source removal action report for the Chemical Disposal Site was submitted to the state in FY 95. A study to characterize groundwater contamination and recommend a final remedy for the Chemical Disposal Site was implemented in FY 96 and will be completed in FY 97.</p>
	Hinton Hazardous Waste Storage Facility (WAPA)	N	<p>Onsite soil contamination.</p> <p>The site was classified as No Further Remedial Action Planned in FY 93. Soil was incinerated and disposed of in November 1993. Closure was completed in February 1995.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Kentucky	Paducah Gaseous Diffusion Plant ³	F	<p>Onsite and offsite soil contamination concerning PCBs, metals, and radionuclides characteristic of the uranium enrichment process. Onsite and offsite groundwater contamination concerning primarily trichloroethylene and technetium-99. There are two major offsite groundwater plumes.</p> <p>Two RODs were submitted in FY 96. The site completed construction of three RCRA closures, one landfill, and one waste facility; and began construction of the NE Plume Interim Remedial Action. Three assessments, one RI Work Plan, and one Removal Action were completed.</p>
Louisiana	Weeks Island (SPRO)	N	<p>None known.</p> <p>A determination was made by EPA Region VI on September 16, 1991 that no PA/SI was required. The site was classified prior to FY 93 as No Further Remedial Action Planned.</p>
	West Hackberry Site (SPRO)	N	<p>None known.</p> <p>A determination was made by EPA Region VI on September 16, 1991 that no PA/SI was required. The site was classified as No Further Remedial Action Planned in FY 93.</p>
Missouri	Kansas City Plant	U	<p>Onsite soil, groundwater, and air/chemical contamination.</p> <p>Assessment for 12 OUs out of 13 have been completed, including one in FY 96. Thirty-four solid waste management units out of 42 have been granted No Further Action Status, including 13 in FY 96.</p>
	St. Louis Site (St. Louis Airport Site and Vicinity Properties, and St. Louis Downtown Site, Latty Avenue Properties)	NA ⁴	<p>Onsite soil, primarily radioactive with limited chemical contamination; offsite soil and sediments/radioactively contaminated.</p> <p>Approval of the FS has been delayed and the ROD has been deferred. Final remedial actions are expected to accommodate the stakeholder recommendations. Remedial action was performed at nine vicinity properties, and one full city block was returned to the public for industrial use.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Missouri (Continued)	Weldon Spring Site Remedial Action Project	F	Onsite and offsite soil and groundwater/chemical and radioactive contamination. The site completed the final design of the onsite disposal facility. The Quarry Bulk Waste Removal effort was completed in October 1995.
Montana	Western Environmental Technology Office (WETO) (formerly Component Development and Integration Facility)	N	No environmental problems have been identified to date based on site characterization studies.
	Hot Springs Substation TLM Complex (BPA)	N	Soil and groundwater chemical contamination. The site was characterized by EPA as No Further Remedial Action Planned in FY 94.
Nebraska	Sishsc Foundry Site (WAPA)	U	Suspected lead contamination. The PA/SI has been completed. The site has been given "non-time-critical removal action" status by EPA Region VIII. A Draft Engineering Evaluation/Cost Analysis (EE/CA) was submitted to the EPA in February 1994 for comment. A Removal Action Memorandum was signed in August 1994. Demolition of the foundry was completed in February 1995.
Nevada	Nevada Test Site	U	Onsite soil and groundwater/radioactive contamination. The Environmental Restoration Sites Inventory was initiated. Progress continued on the Underground Test Area Operable Unit. The FFA and Consent Order was completed in May 1996. Nine underground storage tanks were removed. Six assessments and five remedial actions were completed. The plutonium-contaminated soil removal at the Double Tracks Site on Tonopah Test Range was completed. The regional groundwater model for the Underground Test Area Corrective Action Unit was completed. Fourteen groundwater monitoring wells required to complete site characterization activities at the Salmon Site in Mississippi were installed. All RI field work is expected to be completed in January 1997. The Record of Decision is expected in 1999 with completion of the site expected in the year 2000.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Nevada (Continued)	Tonopah Test Range	N ⁵	<p>Soil contamination from petroleum hydrocarbons and RCRA constituents; ordnance, scattered depleted uranium, surface soil plutonium contamination.</p> <p>The site was classified prior to FY 93 as No Further Remedial Action Planned. Several removal actions were completed in FY 95 and FY 96, and additional removal actions are planned for FY 97. The ongoing cleanup of the ordnance disposal sites, waste oil tanks, and buried depleted uranium sites is being done under the RCRA authority/oversight of the State of Nevada, Division of Environmental Protection. All DOE cleanups at the site are covered by an FFA and Consent Order between DOE and the State of Nevada.</p>
	Yucca Mountain Site	U	<p>None known.</p> <p>DOE believes this site has mistakenly been placed on the docket and is requesting further review by EPA.</p>
New Jersey	Maywood Site	F	<p>Onsite and offsite soil/radioactive and potential chemical contamination; approximately 54 vicinity properties radioactively contaminated; groundwater contamination beneath the pile; offsite sources.</p> <p>DOE and EPA Region II are negotiating a schedule for issuing a Proposed Plan for the site. Remedial action is 75% complete at the Maywood Interim Storage Site pile. Ongoing remedial actions continue at vicinity properties with ten properties completed during FY 96.</p>
	Middlesex Sampling Plant	U	<p>Onsite soil/radioactive contamination.</p> <p>An Engineering Evaluation/Cost Analysis and Action Memorandum were issued in FY 96. Remediation of the Offsite Ditch was completed. A contract was awarded for demolition of the MSP building.</p>
	New Brunswick Laboratory	N	<p>Onsite soil/radioactive contamination.</p> <p>RA planning documents have been issued. Remedial Action was initiated during FY 96. Site completion is expected during FY 97.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
New Jersey (Continued)	Princeton Plasma Physics Laboratory	U	Onsite groundwater and soil contaminated with volatile organic compounds. Removal of contaminated soil was completed in FY 96. A study to characterize soil and groundwater contamination and recommend a final remedy for the "C/D Site" will be completed in FY 98. Payment to Princeton University for remediation of the "A/B Site" was made in FY 96 and will continue in future fiscal years as funds become available.
	Wayne Site	F	Onsite soil/radioactive and potential chemical contamination; groundwater contamination beneath pile; potential offsite sources. DOE and EPA Region II are negotiating a schedule for issuing a Proposed Plan for the site. Cleanup has been completed on all remaining vicinity properties. Remedial action has been initiated on the interim storage pile and is approximately 33% complete.
New Mexico	Gasbuggy	U	Casing of the main monitoring well defective. Initiated the Site Baseline Risk Assessment. Continued long-term hydrogeologic monitoring program.
	Gnome-Coach	U	Groundwater contamination/radioactive contamination. Initiated Site Assessment activities and completed sampling of vent plume. Continued long-term hydrogeologic monitoring program.
	Los Alamos National Laboratory	U	Onsite soil/chemical and radioactive contamination. Fifty-eight remediations were completed and 22 facilities were decommissioned in FY 96.
	Lovelace Inhalation Toxicology Research Institute	N	Onsite soil/chemical and radioactive contamination; groundwater/chemical contamination. Remediation of all sites was completed in FY 96. Groundwater monitoring continues.
New Mexico (Continued)	Ross Aviation, Inc.	U	Onsite soil/chemical contamination. A PA was due June 12, 1993. Contaminated soil was removed, and clean soil was placed in the area in FY 92. The CERCLA site contamination is considered closed.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
	Sandia National Laboratories/New Mexico	U	Onsite soil and groundwater/chemical and radioactive contamination. Two RFI work plans were completed. Fifty-three site closures were completed.
	Waste Isolation Pilot Plant	U ⁵	None known. The Compliance Status Report (191) was submitted to the EPA in March 1994. A PA was submitted in August 1994. A Draft Compliance Application was submitted to the EPA on schedule in March 1995. The final Compliance Certification Application to the EPA relative to the Disposal Decision Plan has been accelerated by 2 months; it is now due to be submitted in October 1996. The EPA is scheduled to complete their rulemaking in October 1997.
New York	Brookhaven National Laboratory	F	Groundwater and soil/chemical and radioactive contamination. The OU II Remedial Investigation/Remedial Action (RI/RA) was submitted in September 1996. The OU IV ROD was submitted in March 1996. The OU V RI/RA was submitted in July 1996. The OU VI Proposed Plan was submitted in September 1996. The "current" landfill cap was completed in November 1995, and the cesspool removals were completed in March 1996.
	Colonie Site	N	Onsite soil and building contamination. An EE/CA for a site building was approved in May 1993. In January 1996, demolition of the process building was completed. An EE/CA for the entire Colonie Site was issued in September 1995. Public comments were addressed early in FY 96.
New York (Continued)	Knolls Atomic Power Laboratory, Niskayuna and West Milton Sites	N	Minor soil and groundwater contamination/chemical and radioactive contamination at both sites. Both sites were classified as No Further Remedial Action Planned in FY 94.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
	Niagara Falls Storage Site	N	<p>Former radioactive contamination.</p> <p>Site remediation was completed in 1986. The DOE/EPA/state are working toward applicable long-term management criteria for onsite radioactive residues. Radioactive wastes were disposed of in an onsite disposal cell. In December 1995, the National Academy of Sciences issued a report recommending a long-term approach addressing the high level (K-65) residues buried in the onsite disposal cell.</p>
Ohio	Fernald Environmental Management Project (formerly Feed Materials Production Center)	F	<p>Onsite and offsite air, sediment, soil, and groundwater/radioactive and chemical contamination.</p> <p>All OU RI/FS activities have been completed. All OU RODs have been approved. All Removal Actions were completed or incorporated into the RD/RA Work Plan. RD/RA Work Plans for OUs 1, 2, 4, and 5 have been approved. Designs for OUs 1, 2, 4, and 5 were initiated or completed in FY 96.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Ohio (Continued)	Mound Plant	F	<p>Onsite and offsite soil/radioactive contamination; onsite and offsite groundwater/chemical and tritium contamination.</p> <p>Field work for the Miami-Erie Canal Removal Action was initiated in FY 96. This included clearing the area of trees and brush, construction of new access roads, installation of a new stormwater runoff channel, and installation of a mobile laboratory. Design of a permanent Air Sparging/Soil Vapor Extraction and High Vacuum Extraction remedial system was initiated for the implementation of the groundwater remedy for the VOCs addressed in the OU 1 ROD. The Area 7 Actinium Removal Action removed and shipped 569 boxes of contaminated soil. Contaminated soils associated with the Fuel Oil Storage Removal Action have been completely removed, and approximately 200 cubic yards of petroleum-contaminated soil have been successfully treated in a bioremediation facility. Seventy-three potential release sites have been determined to require no further assessment, 7 potential release sites require a Response Action, and 43 were determined to require further assessment before a decision is made. Three of the seven removal actions have been initiated; i.e., two have initiated field work (potential release sites 111 and 408) and one has initiated design work (potential release site 266). Approximately 50 potential release sites underwent further assessment prior to the FY 96 decisions. As a result of all of these activities, an additional 86 acres of land have been determined to be protective of human health and the environment and therefore releasable for economic development.</p>
	Portsmouth Uranium Enrichment Complex ³ (also known as Portsmouth Gaseous Diffusion Plant).	U	<p>Onsite soil and groundwater/chemical and radioactive contamination.</p> <p>No CERCLA activities were conducted during FY 96. Portsmouth is currently involved with RCRA corrective action activities.</p>
Oklahoma	National Institute for Petroleum and Energy Research	U	<p>Onsite soil/chemical contamination.</p> <p>The site submitted a PA on August 10, 1994. The Hazard Ranking Score was below 28.5(14); thus, no further actions are planned. EPA has not responded to the PA.</p>
Oregon	Alvey Maintenance Headquarters (BPA)	N	<p>Onsite soil/chemical contamination.</p> <p>The site was characterized by EPA as No Further Remedial Action Planned.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
	Bake Oven Substation (BPA)	U	Potential PCB contamination. PCB cleanup has been completed. The final draft report was sent to EPA Region X. A Memorandum of Agreement (MOA) was completed in August 1994.
	Celilo Converter Station (BPA)	U	Onsite soil/chemical contamination. A PA was submitted in FY 95. An SI report was submitted in FY 96 and is under review by EPA.
	Ostrander Substation (BPA) ⁶	N	Onsite chemical contamination, no contamination of media. A PA was submitted to EPA Region X in October 1993. The site was characterized by EPA as No Further Remedial Action Planned in FY 94.
	Troutdale Substation (BPA)	N	Onsite soil/chemical contamination. The site was characterized by EPA as No Further Remedial Action Planned.
Pennsylvania	Bettis Atomic Power Laboratory, West Mifflin	N	Minor soil and groundwater contamination/chemical and radioactive contamination. This site was characterized as No Further Remedial Action Planned in FY 90. No further EPA action is required.
	Pittsburgh Energy Technology Center ⁷ (now the Federal Energy Technology Center - Pittsburgh)	U	Onsite soil and groundwater contamination. The first round of groundwater monitoring was completed August 7, 1996. Data validation is ongoing. A Health and Ecological Risk Assessment is in progress. The baseline assessment of the old synthane area is complete. The site is awaiting funding for remediation actions to be completed in December 1996.
Puerto Rico	Center for Energy and Environmental Research	N	Onsite soil/radioactive contamination. The El Verde Research Station was transferred to the U.S. Forest Service.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
South Carolina	Savannah River Site	F	<p>Onsite groundwater, soil and air/chemical and radioactive contamination.</p> <p>Thirteen RCRA Facility Investigation/Remedial Investigation (RFI/RI) Plans, 24 Site Evaluation Reports, 21 RFI/RI and Baseline Risk Assessment Reports, and 8 RD/RA Work Plans and Reports, and 1 Treatability Study Work Plan were submitted. One Remedial Action and four Removal Actions were completed. Two RODs were signed.</p>
South Dakota	Watertown Maintenance Facility (WAPA)	N	<p>Onsite potential soil/chemical contamination.</p> <p>A PA was submitted in May 1990, and an SI was submitted in October 1991. The site is awaiting a response from EPA Region VIII. The site was characterized as No Further Remedial Action Planned in October 1994.</p>
Tennessee	<p>Oak Ridge Reservation:</p> <p>K-25 Site (Oak Ridge Gaseous Diffusion Plant)</p> <p>Oak Ridge Associated Universities</p> <p>Oak Ridge National Laboratory</p>	F	<p>Onsite groundwater, soil and surface water/chemical and radioactive contamination.</p> <p>Two Interim Actions and two decommissionings involving 50 structures were completed. 78,000 cubic feet of pond waste raw sludge were shipped to the private sector for treatment and disposal. 308,230 cubic feet of stabilized pond waste were shipped for disposal. 118 infrastructure projects for the landlord were completed.</p> <p>Onsite groundwater, soil and surface water/chemical and radioactive contamination.</p> <p>The South Campus Facility ROD was approved in FY 96. Two vicinity properties were completed.</p> <p>Onsite groundwater, soil, and surface water/chemical and radioactive contamination.</p> <p>Three interim actions, three assessments, one decommissioning, and three Remedial Actions were completed.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Tennessee (Continued)	Oak Ridge Reservation (Continued) Y-12 Plant Offsite		<p>Onsite groundwater, soil, and surface water/chemical and radioactive contamination.</p> <p>Two Remedial Actions and one Interim Action were completed. Two assessments were completed.</p> <p>Offsite soil and surface water/chemical and radioactive contamination, mercury and other heavy metals, PCBs, and traces of uranium in floodplain, soils, and sediment.</p> <p>Construction of one Remedial Action has been initiated. One Remedial Action has been completed.</p>
Texas	Big Hill Site (SPRO)	U	<p>None known.</p> <p>A determination was made by EPA Region VI on September 16, 1991 that no PA/SI was required, and the site was characterized as No Further Remedial Action Planned.</p>
	Pantex Plant	F	<p>Onsite soil and groundwater/chemical and radioactive contamination.</p> <p>The FFA is under negotiation. Forty-six Solid Waste Management Units (SWMUs) were closed in FY 96, including 29 as No Further Action Required and 17 as completed cleanups.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Utah	Monticello Mill Site	F	<p>Onsite and offsite groundwater, soil and surface water/chemical and radioactive contamination.</p> <p>Remedial design and remedial action are continuing at the Mill Site. Offsite drainage control ditches and the liner for Pond 3 have been completed. The wastewater treatment plant has been installed, tested, and operated to treat contaminated runoff. The Mill Site Remediation design (includes onsite repository) was completed, and a subcontract for the Mill Site Remediation was awarded. The repository excavation and liner installation are expected to be completed early in FY 97. Unnecessary groundwater monitoring wells were abandoned at the Mill Site and Repository Site. Remedial action for OU 2 was completed at five peripheral properties. The scope of the OU 3 groundwater modeling effort was concurred on by the regulators. Soil, sediment, surface water, groundwater, and biota sampling for the RI were completed.</p>
	Monticello Vicinity Properties	NA ⁴	<p>Onsite and offsite groundwater, soil, and surface water/chemical and radioactive contamination.</p> <p>Remedial actions were completed on 14 more of the 425 Vicinity Properties in FY 96, bringing the total completed to 389. Remedial design and remedial action for other Monticello Vicinity Properties are continuing.</p>
Washington	Columbia Basin Project AEC Zone 2,4-D Site	U	<p>Onsite soil/chemical contamination.</p> <p>Contaminated materials were removed. No Further Action Record of Decision issued in 1996. Deletion from the docket was requested for this site.</p>
	Columbia Substation (BPA)	N	<p>Onsite soil/chemical contamination.</p> <p>The site was characterized by EPA as No Further Remedial Action Planned.</p>

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Washington (Continued)	Covington Substation (BPA)	U	Onsite soil/chemical contamination. An Addendum to the SI report is in process. Onsite source control planned for FY 97.
	G.H. Bell Substation and Maintenance Complex (BPA)	N	Onsite soil/chemical contamination. The site has been characterized by EPA as No Further Remedial Action Planned.
	Hanford Site - Area 100	F	Onsite groundwater and soil/chemical and radioactive contamination. One proposed plan and one Focused FS Report were submitted. One treatability test was started. One Limited Field Investigation was submitted.
	Hanford Site - Area 200	F	Onsite groundwater and soil/chemical and radioactive contamination. One proposed plan, one Focused FS Report, and one Limited Field Investigation Report were submitted.
	Hanford Site - Area 300	F	Onsite groundwater and soil/chemical and radioactive contamination. One Proposed Plan and one ROD were submitted. The ROD was signed on July 17, 1996.
	Hanford Site - Area 1100	F ⁸	Onsite groundwater and soil/chemical and radioactive contamination. Cleanup of the area was completed in FY 95. The 1100 Area was deleted from the NPL on September 30, 1996.
	Midway Substation (BPA)	N	Onsite soil/chemical contamination. This site has been characterized by EPA as No Further Remedial Action Planned.
	Olympia Substation (BPA)	N	Onsite soil/chemical contamination. This site was characterized as No Further Remedial Action Planned in FY 94.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Washington (Continued)	Port Angeles (BPA)	N	Onsite chemical contamination. This site was characterized as No Further Remedial Action Planned in FY 95.
	Ross Complex (BPA)	F ⁸	Onsite soil and potential groundwater/chemical contamination. All remediation activities and associated reports were completed either in FY 95 or in FY 96. EPA deleted the Ross Complex from the NPL on September 23, 1996.
	Snohomish Substation (BPA)	N	Onsite soil/chemical contamination. This site was characterized as No Further Remedial Action Planned in FY 94.
West Virginia	Morgantown Energy Technology Center (now the Federal Energy Technology Center - Morgantown)	N	Onsite soil and potential groundwater/chemical contamination. The PA/SI is under review by EPA Region III. A detailed information packet was provided in FY 96 in response to an EPA Deficiency Checklist. In response to a request for additional data from EPA Region III, a response is under preparation for the HRS scoring and will be delivered in FY 97.
Wyoming	Casper Field Branch (WAPA)	N	None known. This site was characterized as No Further Remedial Action Planned on April 11, 1995.
	Hoe Creek	N	Onsite groundwater/chemical contamination. Construction of the final cleanup of the Hoe Creek II Area is expected to be completed in the summer of 1997. The air sparging operation is expected to begin in the fall of 1997 and take one to two years to complete. The demonstration of the Hoe Creek III air sparging and plans for the cleanup and plant construction of the Hoe Creek III Area are expected to be completed in FY 97.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA¹ (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Wyoming (Continued)	Rock Springs Oil Shale Retort	N ²	Onsite groundwater/chemical contamination. The evaluation of potential contamination from four retort sites and of a potable regional aquifer that underlies the Oil Shale Retorts Area is expected to be completed in FY 97. Results from a pump and treat demonstration will be reviewed prior to recommending a cleanup technology and plan to the state.

¹ Acronyms and abbreviations used in this table are found in Appendix A.

² The site was added to the docket on April 11, 1995.

³ The April 11, 1995 docket added the U.S. Enrichment Corporation, located in Piketon, Ohio. The DOE sites at which the U.S. Enrichment Corporation generates hazardous waste as a site operator are the Paducah Gaseous Diffusion Plant in Kentucky and the Portsmouth Uranium Enrichment Complex in Ohio. Refer to Section I.C., "Overview of DOE Facilities Subject to CERCLA Section 120," for more details.

⁴ The St. Louis Site and the Monticello Vicinity Properties are privately owned facilities and are not listed on the docket; they are on the NPL, however, and DOE is responsible for their remediation.

⁵ The Sandia National Laboratory/Tonopah Site in Nevada and the Carlsbad Site in New Mexico were added to the docket on April 11, 1995. EPA has been informed by DOE that these sites are already on the docket as Tonopah Test Range and Waste Isolation Pilot Plant, respectively.

⁶ This site is listed on the docket as "Oregon City (BPA)." EPA has been notified that the docket name is incorrect.

⁷ The responsible agency listed in the docket for the Pittsburgh Energy Technology Center has been changed to the Department of Labor, Mine Safety & Health Administration. DOE believes this is an error.

⁸ The last official publication of the CERCLA Docket was on April 11, 1995. Even though the Hanford Site - 1100 Area and the Ross Complex were deleted from the NPL in FY 96, the Docket Status in this report reflects the status in the last published version of the docket up to the end of FY 96.

Key: NA = Not Applicable
 U = Undetermined
 N = No Further Remedial Action Planned
 F = Currently Final on the NPL
 D = Deleted from the NPL

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II. DOE CERCLA COMPLIANCE STRATEGY

II.A DOE Organizations Responsible for CERCLA Compliance

This report was prepared by the Department of Energy's (DOE's) Office of Environmental Restoration (EM-40) within the Office of Environmental Management (EM). EM was created in 1989 to consolidate responsibility within DOE for environmental management activities at the nuclear weapons complex sites. Additional EM functions related to environmental restoration at the nuclear weapons complex sites include 1) ensuring worker safety and health, 2) managing and planning budgets, 3) resolving legal and compliance issues, 4) implementing public participation programs, 5) safely transporting all DOE materials, and 6) minimizing waste generated.

Within the EM organization, the following offices play an important role in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) compliance activities:

- The Office of Waste Management (EM-30) is responsible for the treatment, storage, and disposal of large volumes of wastes generated by environmental restoration activities.
- The Office of Environmental Restoration (EM-40) is responsible for the cleanup of contamination at DOE nuclear weapons sites and for facility decommissioning.
- The Office of Technology Development (EM-50) is responsible for the development of new and more effective technologies to address contamination and management of wastes at DOE sites.
- The Office of Nuclear Material and Facility Stabilization (EM-60) is responsible for the safe transition of facilities for decommissioning by the Office of Environmental Restoration.

This report also covers CERCLA compliance activities at sites that are not in the nuclear weapons complex. Information on these sites was provided by the following DOE organizations:

- Bonneville Power Administration,
- Western Area Power Administration,
- Office of Energy Research,
- Morgantown Energy Technology Center (now the Federal Energy Technology Center - Morgantown), and
- Pittsburgh Energy Technology Center (now the Federal Energy Technology Center - Pittsburgh).

These DOE organizations are responsible for CERCLA compliance at the sites they own and operate.

DOE's Office of Environmental Policy and Assistance (EH-41) within DOE's Office of Environment, Safety and Health (EH) assists all DOE organizations with CERCLA compliance activities. The mission of the Office of Environmental Policy and Assistance organization is to 1) develop Department-wide environmental protection policies and complex-wide strategies for protecting the public and the environment and for attaining and maintaining environmental compliance with internal and external environmental requirements, and 2) assist program and field offices in averting environmental compliance problems. In addition, the

Office of Environmental Policy and Assistance serves as the CERCLA Docket Coordinator. The Coordinator receives the Environmental Protection Agency's (EPA's) initial letter of proposed listings to the docket and NPL, and is responsible for verifying the accuracy of the proposed listings with the program and field offices in a formal response to EPA.

II.B. Legal Context for DOE's Remediation Activities

DOE's remediation activities are governed by CERCLA, the Resource Conservation and Recovery Act (RCRA), the National Environmental Policy Act (NEPA), and other applicable laws. CERCLA addresses the uncontrolled releases of hazardous substances to the environment and the cleanup of inactive waste sites. RCRA addresses the management of hazardous waste and requires that permits be obtained for DOE facilities that treat, store, or dispose of hazardous or mixed waste. RCRA also requires corrective action to address releases of hazardous waste constituents from operating facilities. NEPA requires that Federal agencies consider the environmental effects of major Federal actions in the decisionmaking process. It is the Department's policy to rely on the CERCLA process for review of actions to be taken under CERCLA and to incorporate, to the extent practicable, NEPA values (such as analysis of cumulative, offsite, ecological, and socioeconomic impacts) into CERCLA documentation. The Department may, however, after consulting with its stakeholders and as a matter of policy, integrate the CERCLA and NEPA processes for specific proposed actions. It is also part of the Department's policy to take steps to ensure opportunities for early public involvement in all CERCLA, RCRA, and NEPA processes.

II.C. Environmental Contamination at DOE Facilities

The CERCLA Annual Report addresses environmental contamination at the following types of DOE facilities:

- Facilities formerly in the nuclear weapons complex (i.e., production facilities, laboratories, and testing facilities);
- Electrical substations and electrical substation support facilities;
- Energy research and development laboratories; and
- Facilities involved in research and testing activities associated with alternative energy technologies.

The Office of Environmental Restoration (ER) is generally responsible for the cleanup of facilities formerly in the nuclear weapons complex as well as other radioactively contaminated sites that Congress has requested DOE to clean up. Figure II-1 shows the locations of DOE facilities subject to CERCLA Section 120 formerly in the nuclear weapons complex.

The Bonneville Power Administration (BPA) and Western Area Power Administration (WAPA) are responsible for the DOE electrical substations and electrical substation support facilities that are subject to CERCLA Section 120. The Office of Energy Research is responsible for energy research and development laboratories subject to CERCLA Section 120. The Morgantown Energy Technology Center (now the Federal Energy Technology Center - Morgantown) and the Pittsburgh Energy Technology Center (now the Federal Energy Technology Center - Pittsburgh) are responsible for the DOE alternative energy technology research and development facilities that are subject to CERCLA Section 120. Figure II-2 shows the locations of DOE facilities subject to CERCLA Section 120 that are not in the nuclear weapons complex.

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Figure II-1. DOE Facilities/Sites Formerly in the Nuclear Weapons Complex and Subject to Section 120 of CERCLA.

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|----|--|----|---|
| 1 | Colonie Site, NY | 19 | New Brunswick Laboratory, NJ |
| 2 | Fernald Environmental Management Project, OH | 20 | Oak Ridge Reservation, TN (excluding Oak Ridge National Laboratory) |
| 3 | Gasbuggy, NM | 21 | Oxnard Facility, CA |
| 4 | Gnome-Coach, NM | 22 | Paducah Gaseous Diffusion Plant, KY |
| 5 | Grand Junction Projects Office Remedial Action Project, CO | 23 | Pantex Plant, TX |
| 6 | Hanford Site, WA (excluding Pacific Northwest National Laboratory) | 24 | Pinellas Plant, FL |
| 7 | Idaho National Engineering Laboratory, ID | 25 | Portsmouth Uranium Enrichment Complex, OH |
| 8 | Kansas City Plant, MO | 26 | Rocky Flats Environmental Technology Site, CO |
| 9 | Kauai Test Facility, HI | 27 | Sandia National Laboratories/California, CA |
| 10 | Laboratory for Energy-Related Health Research, CA | 28 | Sandia National Laboratories/New Mexico, NM |
| 11 | Lawrence Livermore National Laboratory - Livermore Site, CA | 29 | Santa Susana Field Laboratories, CA |
| 12 | Lawrence Livermore National Laboratory - Site 300, CA | 30 | Savannah River Site, SC |
| 13 | Los Alamos National Laboratory, NM | 31 | St. Louis Site, MO |
| 14 | Maywood Site, NJ | 32 | Tonopah Test Range, NV (Sandia National Laboratories/Tonopah) |
| 15 | Middlesex Sampling Plant, NJ | 33 | Waste Isolation Pilot Plant, NM (Carlsbad, NM) |
| 16 | Monticello Mill Site and Monticello Vicinity Properties, UT | 34 | Wayne Site, NJ |
| 17 | Mound Plant, OH | 35 | Weldon Spring Site Remedial Action Project, MO |
| 18 | Nevada Test Site, NV | 36 | Niagara Falls Storage Site, NY |

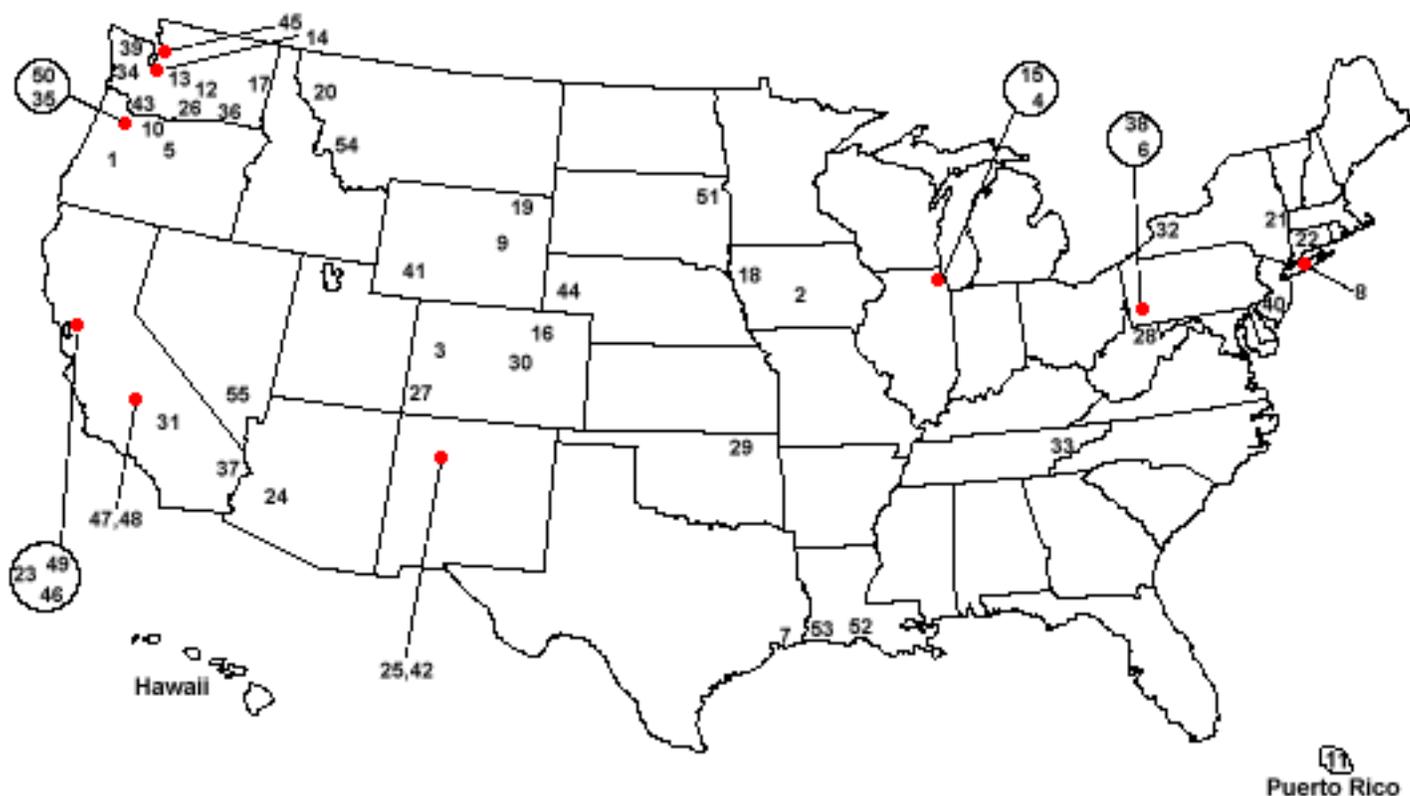


Figure II-2. DOE Facilities/Sites Subject to Section 120 of CERCLA and Not in the Nuclear Weapons Complex.

- | | |
|--|---|
| 1 Alvey Maintenance Headquarters, OR | 31 Naval Petroleum Reserve Nos. 1 & 2, CA |
| 2 Ames Laboratory, IA | 32 Niagara Falls Storage Site, NY |
| 3 Anvil Points Facility, Naval Oil Shale Reserve No. 3, CO | 33 Oak Ridge National Laboratory, TN (at Oak Ridge Reservation) |
| 4 Argonne National Laboratory - East, IL | 34 Olympia Substation, WA |
| 5 Bake Oven Substation, OR | 35 Ostrander Substation, OR (Oregon City, OR) |
| 6 Bettis Atomic Power Laboratory, West Mifflin, PA | 36 Pacific Northwest National Laboratory, WA (at Hanford Site) |
| 7 Big Hill Site, TX | 37 Parker Dam, Switchyard, CA |
| 8 Brookhaven National Laboratory, NY | 38 Pittsburgh Energy Technology Center, PA |
| 9 Casper Field Branch, WY | 39 Port Angeles, WA |
| 10 Celilo Converter Station, OR | 40 Princeton Plasma Physics Laboratory, NJ |
| 11 Center for Energy and Environmental Research, PR | 41 Rock Springs Oil Shale Retort, WY |
| 12 Columbia Basin Project AEC Zone 2,4-D Site, WA | 42 Ross Aviation, Inc., NM |
| 13 Columbia Substation, WA | 43 Ross Complex, WA |
| 14 Covington Substation, WA | 44 Sishc Foundry Site, NE |
| 15 Fermi National Accelerator Laboratory, IL | 45 Snohomish Substation, WA |
| 16 Fort Morgan Substation, CO | 46 Stanford Linear Accelerator Center, CA |
| 17 G.H. Bell Substation and Maintenance Complex, WA | 47 Texaco Section 8 Central Solid Waste Site, CA |
| 18 Hinton Hazardous Waste Storage Facility, IA | 48 Texaco Section 8 Gas Plant, CA |
| 19 Hoe Creek, WY | 49 Tracy Pump and Substation, CA |
| 20 Hot Springs Substation TLM Complex, MT | 50 Troutdale Substation, OR |
| 21 Knolls Atomic Power Laboratory, Niskayuna and West Milton Sites, NY | 51 Watertown Maintenance Facility, SD |
| 22 Knolls Atomic Power Laboratory, Windsor Site, CT | 52 Weeks Island, LA |
| 23 Lawrence Berkeley National Laboratory, CA | 53 West Hackberry Site, LA |
| 24 Liberty Substation, AZ | 54 Western Environmental Technology Office, MT |
| 25 Lovelace Inhalation Toxicology Research Institute, NM | 55 Yucca Mountain Site, NV |
| 26 Midway Substation, WA | |
| 27 Montrose Power Operations Center, CO | |
| 28 Morgantown Energy Technology Center, WV | |
| 29 National Institute for Petroleum and Energy Research, OK | |
| 30 National Renewable Energy Laboratory, CO | |

DOE Facilities Formerly in the Nuclear Weapons Complex

The environmental contamination problems at facilities formerly in the nuclear weapons complex are unlike those associated with facilities in other industries. These problems include unique radiation hazards, unprecedented volumes of contaminated water and soil, and a vast number of contaminated structures including reactors and chemical plants. Major environmental contamination problems associated with steps in the nuclear weapons production process are briefly described below.

- Uranium mining and milling produced large volumes of mill tailings which contain toxic heavy metals and radioactive radium and thorium.
- Uranium enrichment operations caused extensive contamination of the environment with radioactive materials, solvents, polychlorinated biphenyls, heavy metals, and other toxic substances.
- Fuel and target fabrication resulted in releases of uranium dust, landfills contaminated with chemicals, and contaminated facilities.
- Reactor irradiation produced highly radioactive spent fuel and contaminated facilities.
- Chemical separations produced highly radioactive and hazardous chemical waste, as well as wastewater that contained small amounts of radionuclides and chemicals. Discharge of some of this wastewater directly to the ground caused widespread contamination. Chemical separation processes also produced contaminated facilities.
- Fabrication of weapons components produced plutonium-contaminated waste and facilities.
- Weapons assembly and maintenance resulted in soil contaminated with high-explosive waste, fuel and oil leaks, and discharge of solvents to the environment.
- Research, development, and testing activities resulted in highly radioactive underground craters and soils and debris contaminated with low-level waste.

In most cases, the environmental contamination caused by nuclear weapons production activities resulted from materials production and waste management practices that would be considered inadequate by today's standards. Additional information on the environmental contamination resulting from nuclear weapons production is available in the following DOE publications:

- *Closing the Circle on the Splitting of the Atom: The Environmental Legacy of Nuclear Weapons Production in the United States and What the Department of Energy Is Doing About It*, January 1996 (second printing);
- *Taking Stock: A Look at the Opportunities and Challenges Posed by Inventories from the Cold War Era*, January 1996;
- *Charting the Course: The Future Use Report*, April 1996;

- *The 1996 Baseline Environmental Management Report*, June 1996 (DOE/EM-0290); and
- *Estimating the Cold War Mortgage: The 1995 Baseline Environmental Management Report*, March 1995 (DOE/EM-0232).

These publications may be ordered from the Environmental Management Information Center at 1-800-7EM-DATA.

Other Facilities

Other facilities in the DOE complex include electrical substations; facilities supporting electrical power distribution; petroleum and oil shale reserve facilities; and petroleum, coal, oil shale, and energy research facilities. Environmental contamination problems at these types of facilities are generally similar to those found at these types of facilities in the private sector. These problems resulted primarily from spills and leaks, and from past materials and waste management practices that would generally be considered inadequate by today's standards.

II.D DOE's 2006 Plan for Accelerating Cleanup

In July of 1996, the Assistant Secretary for Environmental Management developed the Environmental Management Vision. It states,

Within a decade, the EM program will complete cleanup at most sites. At a small number of sites, treatment will continue for the few remaining legacy waste streams. This unifying vision will drive budget decisions, sequencing of projects, and actions taken to meet program objectives. The vision will be implemented in collaboration with regulators, Tribal Nations, and stakeholders.

To achieve the vision, seven guiding principles were also developed:

- Eliminate the most urgent risks.
- Increase savings that support costs to free up funds for further risk reduction.
- Protect worker health and safety.
- Reduce the generation of waste.
- Create a collaborative relationship between DOE and its regulators and stakeholders.
- Focus technology development on cost and risk reduction.
- Integrate waste treatment and disposal across sites.

To help achieve the vision, each site was instructed to prepare a draft Site Ten-Year Plan (now called the *Site Plan for Accelerating Cleanup: Focus on 2006, Discussion Draft*). In order to meet the vision objectives, the site plans are incorporating mechanisms that will:

- Accelerate cleanup activities that will result in savings.
- Privatize where advantageous.
- Integrate programs and sites to optimize use of treatment/storage and disposal capacity.
- Use innovative technologies that are cost-efficient.
- Reuse and recycle buildings and materials.

There are several fundamental improvements in DOE's approach to cleanup as a result of this vision. EM is placing all work into discrete projects. As of February 24, 1997, 394 separate projects had been identified by

the 11 site plans submitted at that time. Assigning the project management responsibility and accountability to the field offices places the management aspect of the project closest to where the work is being performed. This enables DOE-Headquarters management to focus on planning, policy coordination, and analysis of the issues cutting across the DOE complex.

The ten-year strategic planning process focuses accountability and commitment on the project's desired end-state and outcome for DOE's excess nuclear materials, surplus nuclear facilities, and environmental restoration activities through the use of the Integrated Strategic Planning, Budgeting, and Management System. To optimize projects across the DOE complex, this systems engineering approach is being applied enabling each project to 1) be geographically centered, 2) have a defined start and end date, 3) demonstrate interim progress, 4) identify baselines for cost, schedule, and scope, and 5) use performance measures for project activities. As a result of these activities, the financial management process is being streamlined and the role of the corporate decision-making body is being redefined.

Public participation has been considered a pivotal part in the development of the strategic plan throughout the DOE complex. The original guidance developed for the strategic planning process required each site to involve stakeholders as part of the development of the draft Site Ten-Year Plans (now called the *Site Plan for Accelerating Cleanup: Focus on 2006, Discussion Draft*). This original guidance also required DOE-Headquarters to continue ongoing discussions with the states (through the National Governors' Association) and the members of the Environmental Management Advisory Board. The issues and comments on the draft plans from the stakeholders were expected to be resolved throughout the development of the strategic planning process. In some cases, action plans may be required to resolve major issues identified by the various stakeholders. Issues considered site-specific are to be resolved at the site. National issues, to be resolved at Headquarters, include those issues 1) involving more than one site, 2) having a national policy implication, 3) involving other agencies, and 4) involving other DOE program offices.

The preliminary draft plans were prepared by the sites in July 1996. These preliminary draft plans represented an approach for each site to help accomplish the EM vision. Many creative and sometimes controversial ideas were described in these first draft plans. As a result of the initial efforts and input from stakeholders, additional guidance was developed and released to the sites providing specific direction for revising the site plans and involving stakeholders in the decisionmaking process. Stakeholders include the Tribal Nations, local and state governments, Site Specific Advisory Boards, grass roots citizens groups, and other concerned citizens. The guidance instructed the sites to develop draft plans and submit these to Headquarters for use in preparing a discussion draft for submittal to Congress.

A discussion draft entitled, *Accelerating Cleanup: Focus on 2006, Discussion Draft*, has been developed to obtain the views of the Tribal Nations and stakeholders, even though EM recognizes there are certain data gaps and inconsistencies between the National and Site Discussion Plans. The discussion draft will reflect what can be done to complete the work at as many sites as possible by 2006, while acknowledging that cleanup will continue at some sites after 2006. EM plans to develop the draft National and Site 2006 Plans later in 1997. The 2006 Plan is expected to be a changing document, evolving to reflect revised assumptions, changes in funding, viewpoints expressed by Tribal Nations and stakeholders, and newly obtained information.

The National and Site Discussion Draft 2006 Plans, and information about the DOE accelerated cleanup process, are available through the Center for Environmental Management Information (1-800-736-3282 or 202-863-5084), at DOE's public reading rooms, and through the World Wide Web. The Internet address for the DOE *Accelerating Cleanup: Focus on 2006, Discussion Draft* home page is: <http://www.em.doe.gov/acc2006/>. The home page is updated regularly.

II.E. Approach to Environmental Restoration Used by Other DOE Organizations

Bonneville Power Administration

The BPA markets and transmits power from 29 Federal dams and one non-Federal nuclear plant in the Pacific Northwest. BPA has built one of the largest and most reliable transmission systems in the United States. Bonneville owns and operates 363 electrical substations and maintains 15,012 circuit miles of transmission lines.

BPA currently has 13 sites on the docket. As mentioned earlier, one of these sites, Ross Complex, was placed on the NPL in November 1989 and deleted from the NPL in September 1996. Of the other docket sites, two, Covington Substation and Celilo Converter Station, are currently undergoing site inspections under CERCLA. Contaminant concerns at Covington include polynuclear aromatic hydrocarbons and polychlorinated biphenyls (PCBs). Celilo is a unique facility within the Bonneville system because power is converted from alternating current (AC) to direct current (DC) and vice versa, utilizing mercury arc valves. Mercury-contaminated soils have been identified as a result of past maintenance practices associated with this equipment.

The majority of environmental restoration activities at BPA are voluntary cleanups conducted under state authority. The most common contaminant encountered at these sites is non-PCB mineral oil. The contamination is usually contained within the soils immediately surrounding oil-filled equipment. These sites are commonly identified when construction projects or major site modifications involve soil disturbance.

BPA also is in the midst of a long-range multiyear voluntary PCB capacitor replacement program. The purpose of the program is to replace PCB-containing electrical capacitors (which routinely fail, resulting in reportable PCB releases and localized soil contamination) with non-PCB capacitors. This involves taking the substation out of service, removing the old capacitor yard equipment (including metal support racks), excavating soil contaminated in the past with PCBs, and constructing a new non-PCB capacitor yard. In some cases a new yard must be constructed first and brought on line to avoid shutting down a crucial substation; then the old yard can be removed and cleanup initiated. This program is very expensive, not because of soil remediation costs as much as costs associated with purchasing new capacitors and properly incinerating old PCB capacitors. Due to budgetary constraints and operational issues, several substations are prioritized for capacitor replacement each year. Originally, about one-fourth (90 to 100) of BPA's 363 substations had electrical equipment that contained PCBs.

Western Area Power Administration

WAPA is responsible for the Federal electric power marketing and transmission functions in 15 central and western states encompassing a 1.3 million-square-mile geographic area. WAPA provides power to more than 600 wholesale power customers. These wholesale power customers, in turn, provide service to millions of retail consumers in the States of California, Nevada, Montana, Arizona, Utah, New Mexico, Texas, North Dakota, South Dakota, Iowa, Colorado, Wyoming, Minnesota, Nebraska, and Kansas.

WAPA has nine sites listed on the docket and does not have any sites currently listed on the NPL. The Administration has taken a proactive role by implementing a Facility Evaluation Program. The purpose of this program is to evaluate all WAPA facilities for sources of oil, hazardous substances, pollutants, or contaminants and suspected releases into the environment. WAPA has also proactively conducted PA/SIs at sites that are potentially contaminated. The Montrose Power Operations Center, located in Montrose,

Colorado, notified EPA of hazardous waste storage activities in the early 1980s, as did the Watertown Substation in Watertown, South Dakota, and Casper Maintenance Yard in Casper, Wyoming. None of these sites are RCRA hazardous waste treatment, storage, or disposal facilities, but because they have facilities for storage of PCB wastes, the sites were listed on the docket. Preliminary Assessments (PAs) and screening Site Investigation (SI) final reports have been completed and submitted to EPA.

Morgantown Energy Technology Center (now the Federal Energy Technology Center - Morgantown)

Morgantown Energy Technology Center is owned and operated by DOE as a research and development center and is listed on the docket. During 1992 and 1993, it was DOE's lead research center for local gasification, fluidized-bed combustion, unconventional gas recovery, gas stream cleanup, heat engines, fuel cells, underground coal gasification, oil shale retorting, combined-cycle component integration, and instrumentation and control technologies.

The environmental management program at the DOE Morgantown Energy Technology Center addresses all areas of environmental concern, including surface water and groundwater quality, air quality, and solid and hazardous waste disposal. The program focuses primarily on the treatment and disposal of industrial, contaminated, and sanitary wastewaters; the disposal of solid and hazardous wastes; the minimization of air pollutant emissions; the monitoring of surface water, groundwater, and air quality at the Morgantown Energy Technology Center site and in the surrounding area; the decommissioning, decontamination, and disposal of onsite research facilities no longer in use; and the identification, characterization, and cleanup of offsite property where Morgantown Energy Technology Center sponsored research and development activities.

Pittsburgh Energy Technology Center (now the Federal Energy Technology Center - Pittsburgh)

The Pittsburgh Energy Technology Center is the Federal government's most comprehensive coal technology research center and performs a major role in the Department of Energy's mission to ensure an adequate supply of clean energy from coal. The research programs at Pittsburgh Energy Technology Center emphasize new technologies that hold promise for increasing the industrial use of clean coal in the long term.

The Pittsburgh Energy Technology Center, which is listed on the docket, has developed and implemented a program to identify and evaluate inactive hazardous waste disposal sites to determine the necessity of remediation. This program included a Phase I Site Sampling and Analysis Investigation, whose scope included reviewing present and historical operations of DOE facilities at Pittsburgh Energy Technology Center, particularly as they related to hazardous material use, storage, disposal, and handling. Additionally, previous environmental investigations at the site were reviewed. The previous environmental work was supplemented by the Sampling and Analysis Investigation, and a comprehensive database for the DOE facilities has been compiled.

The Sampling and Analysis Investigation investigated soils, surface water, stream sediments, and groundwater throughout all the areas at the Pittsburgh Energy Technology Center that are occupied or potentially impacted by DOE operations. The work plans included a Sampling and Analysis Plan for the investigation of soils, surface waters, and stream sediments, and a Comprehensive Groundwater Protection Management Plan for the investigation of groundwater. An additional component of the Sampling and Analysis Investigation was an Underground Storage Tank Management Plan, which reviewed the compliance status of DOE-managed underground storage tanks, sought to confirm the uncertain disposition or existence of a number of tanks, and investigated the potential for residual contamination due to the operation or removal of these tanks.

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III. STATUS OF CERCLA ACTIVITIES AT DEPARTMENT OF ENERGY SITES

This section of the report provides information on the U.S. Department of Energy's (DOE's) progress in reaching Interagency Agreements (IAGs); public comments regarding proposed IAGs; instances in which no IAG has yet been reached; progress in conducting Remedial Investigations/Feasibility Studies (RI/FSs); progress in conducting remedial actions and response activities at National Priorities List (NPL) sites; and progress in conducting remedial actions at non-NPL sites.

Identification of NPL and Non-NPL Sites

There are currently 21 DOE sites on the NPL. These sites are presented by state on Table III-1. Table III-1 also includes information relating to when each site was placed on the NPL and the status of the IAG for the site. Figure I-1 shows the location of these facilities. The Hanford Site is presented as one site on the figure; however, three sites (Areas 100, 200, and 300) are listed separately on the NPL.

III.A. Progress in Reaching Interagency Agreements

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(e)(2) requires that within 180 days after the U.S. Environmental Protection Agency's (EPA's) review of an RI/FS, the Federal facility must enter into an IAG (i.e., an agreement between DOE, EPA, and often the affected state) for the expeditious completion of all necessary remedial action. It is DOE policy, however, to enter into IAGs addressing both the RI/FS and the implementation of remedial action before the RI/FS is completed. IAGs are revised as necessary to incorporate new information, adjust schedules, and address changing conditions.

IAGs are known by different names at different sites. DOE has entered into the following types of IAGs addressing CERCLA remediation: Federal Facility Agreements (FFAs), Federal Facility Consent Agreements, and a Tri-Party Agreement. The names of the IAGs used by the site are those cited in this report.

As shown on Table III-1, DOE has entered into IAGs at 18 of the 21 facilities on the NPL. On July 19, 1996, DOE, EPA Region VIII, and the Colorado Department of Public Health and Environment signed the Rocky Flats Cleanup Agreement. This document supersedes the IAG executed on January 22, 1991 and is an agreement established to accomplish the required cleanup of radioactive and other hazardous substances contamination at the Rocky Flats Environmental Technology Site (RFETS) in a safe, effective, and efficient manner.

The three sites for which IAGs have not yet been concluded (Laboratory for Energy-Related Health Research, CA; Paducah Gaseous Diffusion Plant, KY; and Pantex Plant, TX) were added to the NPL during fiscal year 1994 (FY 94). IAGs are currently being negotiated at these sites. DOE has not experienced any failure to conclude an IAG within 180 days after EPA review of an RI/FS.

III.B. Specific Cost Estimates and Budgetary Proposals To Support Environmental Restoration Activities Required by the IAG

The site summaries presented in Sections IV and V contain dollar amounts that support the environmental restoration activities that are being performed pursuant to CERCLA and/or the Resource Conservation and Recovery Act (RCRA) as specified in the IAGs. Consequently, these dollar amounts may not represent the entire environmental restoration budget for the site.

Table III-1. U.S. Department of Energy Facilities on the National Priorities List

STATE	SITE NAME	DATE OF FR ¹ NOTICE OF NPL LISTING	INTERAGENCY AGREEMENT (IAG) STATUS
California	Laboratory for Energy-Related Health Research (LEHR)	05/31/94	Memorandum of Agreement with University of California, Davis, signed in 1989, revised 1993; Federal Facility Agreement and the Potentially Responsible Party Agreement are currently being negotiated.
	Lawrence Livermore National Laboratory - Livermore Site	07/22/87	Federal Facility Agreement executed on November 1, 1988.
	Lawrence Livermore National Laboratory - Site 300	08/30/90	Federal Facility Agreement signed on June 29, 1992.
Colorado	Rocky Flats Environmental Technology Site (formerly the Rocky Flats Plant)	10/04/89	On July 19, 1996, the Rocky Flats Cleanup Agreement was signed by DOE, EPA Region VIII, and the Colorado Department of Public Health and Environment.
Idaho	Idaho National Engineering Laboratory (includes Argonne National Laboratory - West)	11/21/89	Federal Facility Agreement/Consent Order executed on December 9, 1991.
Kentucky	Paducah Gaseous Diffusion Plant	05/31/94	IAG under negotiation.
Missouri	St. Louis Site (includes St. Louis Airport Site and Vicinity Properties, Latty Avenue Properties) ²	10/04/89	Federal Facility Agreement signed on June 26, 1990.
	Weldon Spring Site Remedial Action Project (formerly referred to as Weldon Spring Quarry and Feed Materials Plant and Raffinate Pits Site)	07/22/87, 03/13/89 ³	Federal Facility Agreement signed on August 22, 1986; amended June 30, 1992.
New Jersey	Maywood Site ²	09/08/83	Federal Facility Agreement signed on July 23, 1990, and made effective in April 1991.
	Wayne Site ²	09/21/84	Federal Facility Agreement signed on July 23, 1990, and made effective in April 1991.
New York	Brookhaven National Laboratory	11/21/89	IAG executed on February 28, 1992, and made effective May 27, 1992.

The fiscal year (FY) 96 amount in each summary box represents actual dollars spent in FY 96. The FY 97 amount is the appropriated funding, and the FY 98 amount is the request in the President's Budget.

III.C. Public Comments Regarding Proposed Interagency Agreements

During FY 96, no new IAGs were proposed. Consequently, there were no public comments regarding proposed IAGs.

Discussions began in FY 93 between DOE and regulatory agencies regarding amendments to the IAG at RFETS. The public has been kept abreast of this activity, and a preliminary draft of the amended IAG was made available for informal public comment in FY 95. Negotiations on the amended IAG were completed in FY 96, and the 60-day public comment period ended in FY 96. On July 19, 1996, the DOE, EPA Region VIII, and Colorado Department of Public Health and Environment signed the Rocky Flats Cleanup Agreement.

Amendment 6 of the Hanford Tri-Party Agreement was signed in February 1996. This amendment primarily addresses ways of becoming more efficient and cost-effective within the framework of the Tri-Party Agreement.

III.D. Instances in Which No Interagency Agreement Was Reached

There is no instance where DOE has failed to reach an IAG within 180 days of the completion of EPA's review of an RI/FS. As mentioned earlier, the three NPL sites where DOE has not yet entered into IAGs—the Laboratory for Energy-Related Health Research (LEHR), CA; Paducah Gaseous Diffusion Plant, KY; and Pantex Plant, TX—were placed on the NPL in FY 94. DOE expects to sign IAGs for these facilities before the RI/FSs for these facilities are completed.

III.E. Progress in Conducting Remedial Investigations/Feasibility Studies at NPL Sites

CERCLA Section 120(e)(1) specifies that RI/FS work must be initiated within 6 months after a site is listed on the NPL. RI/FS work was initiated within this statutory time frame at all 21 DOE facilities on the NPL.

Highlights of FY 96 RI/FS accomplishments are listed below.

Brookhaven National Laboratory - Two Remedial Investigations/Remedial Actions (RI/RAs), one Proposed Plan (PP), and one Record of Decision (ROD) were submitted to the EPA and State of New York. One ROD was issued.

Fernald Environmental Management Project - RI/FS activities are complete at all of the five Operable Units (OUs).

Hanford Site (Areas 100, 200, 300, and 1100) - Three PPs, two Feasibility Study (FS) Reports, and two Limited Field Investigation Reports were submitted. One ROD was drafted and one ROD was signed.

Idaho National Engineering Laboratory - RI/FS activities are complete or underway at all of the ten waste area groups (WAGs).

Lawrence Livermore National Laboratory - Site 300 - General Services Area (GSA) OU FS, PP, and Draft ROD have been completed. Building 834 OU Title I Design for Surface Water Drainage Project was completed. Pit 6 OU's FS was accepted as an Engineering Evaluation/Cost Analysis (EE/CA) and the Title I Design of Cap completed.

Maywood Site - DOE and EPA Region II are negotiating a schedule for issuing a Proposed Plan for the site. Comments on the PP were provided in September 1995, and it will be released for public comment in FY 98, after resolution with EPA.

Monticello Mill Site - The scope of the OU 3 groundwater modeling effort was concurred upon by the regulatory agencies. Soil, sediment, surface water, groundwater, and biota sampling in support of the RI is expected to be completed in early FY 97.

Mound Plant - In FY 96, EPA, the Ohio Environmental Protection Agency and DOE determined that 73 potential release sites required no further assessment, 7 potential release sites required a response action, and 43 were determined to require further assessment before a decision could be made about the Plant. Approximately 50 potential release sites underwent assessment. As a result of all of these activities, an additional 86 acres of land have been determined to be protective of human health and the environment and therefore releasable for economic development. Additionally, Surface Water and Sediment, Regional Soils, Residential, Municipal and Industrial Well, and Hydrogeologic Investigations were completed for OU 9.

Oak Ridge Reservation - Two RODs and three Action Memorandums were accomplished in FY 96.

Paducah Gaseous Diffusion Plant - Two RODs were approved. Three Assessments, one RI Work Plan, and one Removal Action were completed. Construction of one interim Remedial Action (RA) began, and five other construction projects were completed.

Pantex Plant - In FY 96, the assessment phase for four projects was completed.

Rocky Flats Environmental Technology Site - One ROD was completed and submitted for regulatory agency approval in FY 96. Three Final Phase I RI Reports, one Interim Measure/Interim Remedial Action (IM/IRA) decision document, and two proposed action memorandums were submitted.

Savannah River Site - Thirteen RCRA Facility Investigation/Remedial Investigation (RFI/RI) Plans, 21 RFI/RI and Baseline Risk Assessments, 8 Remedial Design/Remedial Action (RD/RA) Work Plans, 10 Corrective Measures Studies/FS Reports, and 24 Site Evaluation Reports were submitted. Two remedial RODs were signed. One Treatability Study Work Plan was submitted. Field starts at 10 units were initiated. The M-1 air stripper offgas construction unit was completed. The Dense Non-Aqueous Phased Liquid remediation at M-Basin was initiated. Two of 12 recirculation wells at the Southern Sector were installed.

St. Louis Site - The FS was completed and submitted to EPA and the State of Missouri for review. EPA and DOE have agreed to postpone the submittal of the PP to accommodate recommendations from the St. Louis Citizens Remediation Task Force on a selected remedy. The PP will be released for public comment when completed.

Wayne Site - The PP for the site was developed, EPA Region II provided comments on the Plan in September 1995, and it will be released for public comment in FY 98 after resolution with EPA. DOE and EPA Region II are negotiating a schedule for issuing a PP for the site.

Weldon Spring Site Remedial Action Project - The Site Groundwater draft Remedial Investigation/Baseline Risk Assessment (RI/BRA) was submitted to EPA for approval in September 1996.

III.F. Progress in Conducting Remedial Actions at NPL Sites

CERCLA Section 120(e)(2) requires that substantial, continuous, physical, onsite remedial action commence at each facility not later than 15 months after completion of the RI/FS. During FY 96, several sites made significant progress in their remedial actions. Highlights of some of the activities that occurred in FY 96 are listed below.

Brookhaven National Laboratory - Design of the OU IV remedy was initiated.

Fernald Environmental Management Project - Design of the Onsite Disposal Facility was completed. Over 210 million gallons of uranium-contaminated wastewater were treated. At OU 5, approximately 140 off-property groundwater users were connected to public water supplies in the spring and summer of 1996. This project was partially funded by DOE.

Hanford Site (Areas 100, 200, 300, and 1100) - Cleanup was completed in the 1100 Area. More than 11 million gallons of groundwater have been treated, and operations were started at the past-practice disposal facility (the Environmental Restoration Disposal Facility). The 1100 Area was deleted from the NPL on September 30, 1996.

Idaho National Engineering Laboratory - No Further Action determinations were approved for 23 potential release sites following the guidance as outlined in the FFA/Consent Order.

Lawrence Livermore National Laboratory - Livermore Site - Currently, seven groundwater/vapor treatment facilities are operating. Hydraulic capture of the western offsite plume was established, and contaminant concentrations were dramatically reduced.

Maywood Site - Remedial action of an additional 10 vicinity properties was completed during FY 96. In FY 96, approximately 75 percent of the Maywood Storage Pile was removed and disposed of.

Mound Plant - Design of a permanent Air Sparging/Soil Vapor Extraction and High Vacuum Extraction remedial system was initiated for the implementation of the groundwater remedy for the volatile organic compounds (VOCs) addressed in the OU 1 ROD.

Monticello Mill Site - At the Mill Site OU 1, repository excavation and liner installation are expected to be completed early in FY 97. Construction of Pond 4, which is used to manage leachate from the repository, was completed. At the Mill Site OU 2, remedial action began and was completed on five properties in FY 96.

Monticello Vicinity Properties - Remedial actions were completed for 14 Monticello Vicinity Properties in FY 96. Remedial actions on 389 vicinity properties out of a project total of 425 properties have been completed through FY 96.

Oak Ridge Reservation - Five interim actions were completed and two remedial actions proceeded to the construction phase. A Phase I Remedial Action was completed.

Rocky Flats Environmental Technology Site - Under the Rocky Flats Cleanup Agreement, cleanup actions will be undertaken as removal or interim actions.

Savannah River Site - Eleven remedial actions were initiated and one remedial action was completed. 80,000 pounds of solvent were removed from the A/M Area.

Weldon Spring Site Remedial Action Project - Design of the Onsite Disposal Facility was completed in June 1996, and site preparation work (e.g., staging areas, drainage facilities, and hauling) was completed in September 1996. Nineteen of 27 building foundations and 177,000 cubic feet of contaminated soil were removed by September 1996.

III.G. Progress in Conducting Removal and Interim Actions at NPL Sites

Response actions other than remedial action activities were taken during FY 96. These were primarily removal or interim actions designed to provide prompt or immediate response to actual or potential threats of a release of hazardous substances to the environment. Highlights of some of the activities that occurred in FY 96 are listed below.

Brookhaven National Laboratory - The “current” landfill capping was completed. Public water was provided to over 500 residences. The cesspool removal action was completed. Construction of the OU I/III groundwater treatment was initiated. Capping of the “former” landfill was initiated.

Fernald Environmental Management Project - All the remaining Removal Actions were either completed or incorporated into RD/RA Work Plans.

Hanford Site (Areas 100, 200, 300, and 1100) - The 100 Area soil excavation began as an expedited response action. Operations continued at the N-Springs groundwater treatment system, the pump and treat at 200 ZP-1 and 200 UP-1 OUs and the 200 ZP-2 OU carbon tetrachloride vapor extraction systems.

Idaho National Engineering Laboratory - Activities are continuing on five removal actions. Two interim actions were completed and activities continued on three other interim actions.

Lawrence Livermore National Laboratory - Site 300 - Three interim groundwater/vapor treatment facilities continued operations.

Maywood Site - Maywood Interim Storage Site Pile removal operations began in FY 95. Approximately 75 percent of the waste has been removed.

Mound Plant - Field work for the Miami-Erie Canal Removal Action was initiated in FY 96. This included clearing the area of trees and brush, constructing new access roads, installing a new stormwater runoff channel, and installing a mobile laboratory. The Area 7 Actinium Removal Action removed and shipped 569 boxes of contaminated soil. Contaminated soils associated with the Fuel Oil Storage Removal Action have been completely removed, and approximately 200 cubic yards of petroleum-contaminated soil have been successfully treated in a bioremediation facility. Three of the seven removal actions have been initiated, while two have initiated field work (potential release sites 111 and 408) and one has initiated design work (potential release site 266).

Oak Ridge Reservation - Three Action Memorandums were completed.

Paducah Gaseous Diffusion Plant - One Removal Action Memorandum was completed. One Action Memorandum was completed.

Pantex Plant - Forty-six release sites were closed out in FY 96, well ahead of schedule. A high-explosive-contaminated groundwater treatment system continued operation in FY 96.

Rocky Flats Environmental Technology Site - A groundwater collection and treatment Interim Remedial Action (IRA) facility at OU 1, a surface water collection and treatment IRA at OU 2, and the seep water collection and treatment for OU 7 continued operation throughout FY 96. Work continued in FY 96 on Option B Offsite Water Projects to replace the drinking-water supply for the city of Broomfield, Colorado. The Woman Creek Reservoir, the last component of the Standley Lake Protection Project, was completed and placed in operation. The Broomfield Water Treatment Plant and treated water pipeline are under construction. Accelerated actions were completed for two trenches, six tanks, seven PCB hot spots, and one additional release site.

Savannah River Site - Four Removal Actions were initiated and two were completed. Soil cover at the Old Radioactive Waste Burial Ground was initiated. Over 340,000 pounds of contaminated vegetation were removed from H-Area.

St. Louis Site - Remedial action was performed at nine vicinity properties in FY 96. One full city block was remediated and returned for industrial use at the Downtown Site.

Wayne Site - A non-time-critical removal action was initiated in FY 95 to dispose of contaminated material from the interim storage pile. The waste was disposed of at a commercial disposal facility in Utah. Approximately 33 percent of the storage pile has been removed in FY 96.

Weldon Spring Site Remedial Action Project - Twenty removal actions were completed in FY 96.

Additional information on cleanup initiatives undertaken at DOE NPL facilities is provided in the detailed narratives found in Section IV of this report.

III.H. Progress in Performing Cleanup Activities at Facilities Not on the NPL

Many DOE facilities that are not listed on the NPL are conducting cleanup activities. Additional information on cleanup initiatives undertaken at facilities not listed on the NPL is provided in the detailed narratives found in Section V of this report. Highlights of some of the activities that occurred in FY 96 are presented below.

Nevada Test Site - The Underground Test Area regional groundwater modeling effort was completed in September 1996. Evaluation of model results is continuing. Corrective Action Unit - Specific Groundwater Modeling will begin in FY 97 with Frenchman Flats.

Ross Complex - Cleanup of the Capacitor Test Lab, initiated in January 1994, is now complete. Installation of a multilayer cap over the Fog Chamber Dump was completed in October 1994. Soil treatments for the contaminated soil excavated from the Wood Pole Storage Yard were completed on January 8, 1996. Cleanup of the substation capacitor yard, including the replacement of PCB equipment, was completed on October 23, 1995. This PCB removal is the last remediation activity initiated under the RODs. Groundwater monitoring will be required as part of EPA's five-year follow-up program.