DOE/EM-0330

Tenth Annual Report to Congress

Fiscal Year 1996 Progress in Implementing Section 120 of the

Comprehensive Environmental Response, Compensation, and Liability Act

United States Department of Energy

December 1997

FY 96 Annual Report to Congress on Implementing Section 120 of CERCLA
READER SURVEY

1. For what purpose do you use this report? _____

_____

2. Please rank the portions of the CERCLA Report in terms of their usefulness to you, with #1 being most important.

____ Executive Summary. What do you use it for? _____

_____

____ Chapter I and Table I-1 (Introduction and Site Status Summary Table). What do you use it for? _____

_____

____ Table I-1, only (Site Status Summary Table). What do you use it for? _____

_____

____ Chapter II (DOE CERCLA Compliance Strategy). What do you use it for? _____

_____

____ Chapter III (Status of CERCLA Activities at DOE Sites). What do you use it for?

_____

____ Chapter IV (NPL Site Summaries). What do you use it for?

_____

____ Chapter V (Selected Site Summaries). What do you use it for?

_____

____ Figures/Maps depicting DOE Site locations. What do you use them for? _____

_____

3. Each year DOE reports on a subject of particular interest to the agency in either Chapter I or II. Is there a particular subject related to DOE's CERCLA activities you are interested in reading about? _____

_____

4. What additional CERCLA-related information would you like to see in the Annual Report? _____

_____

5. Is information about CERCLA-related activities easy to find in the report? Yes ☐ No ☐

Any suggestions? _____

USER INFORMATION:

Title/Organization Represented: _____

Do you pass this report along to others? Yes ☐ No ☐ If so, how many others? _____

Once completed, please return this postage-paid survey to U.S. DOE, EM-43, Office of Program Integration, CERCLA 120 Report, 19901 Germantown Road Germantown, MD 20874-7627.

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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.

SECTION I

INTRODUCTION

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.

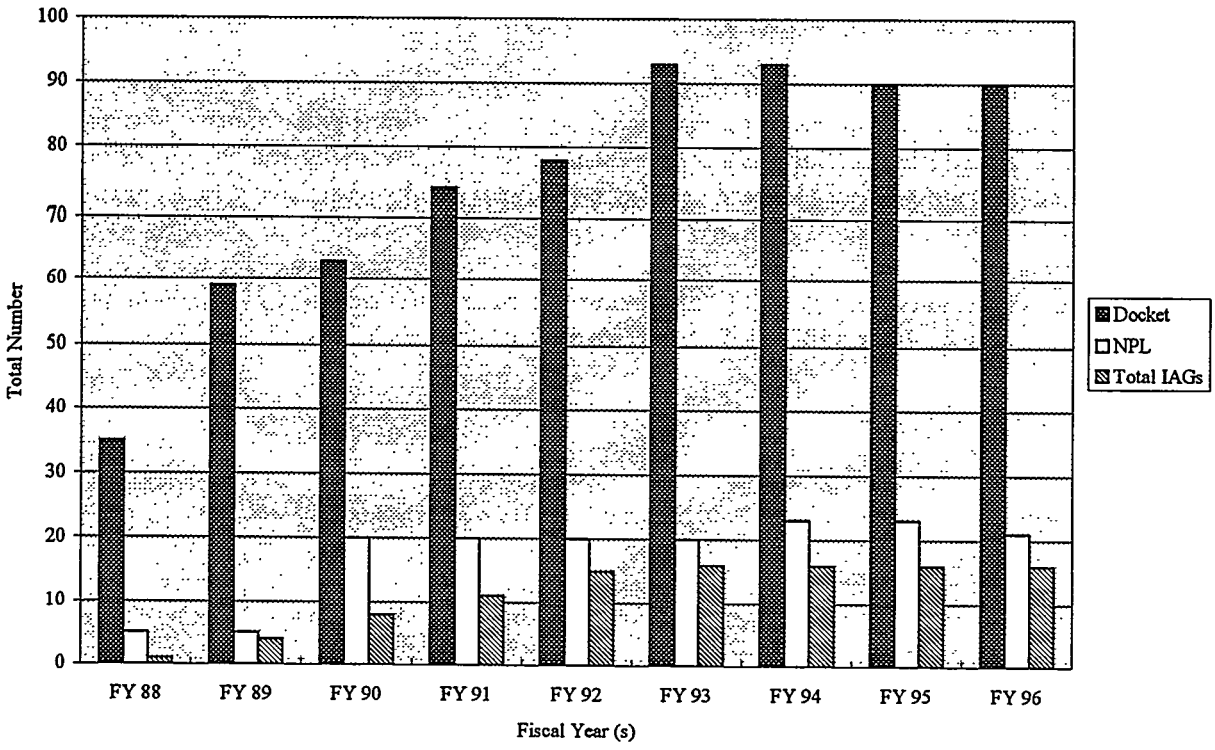

Figure I-2. Number of DOE Facilities on the Docket, NPL, and for Which IAGs Have Been Negotiated.

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.

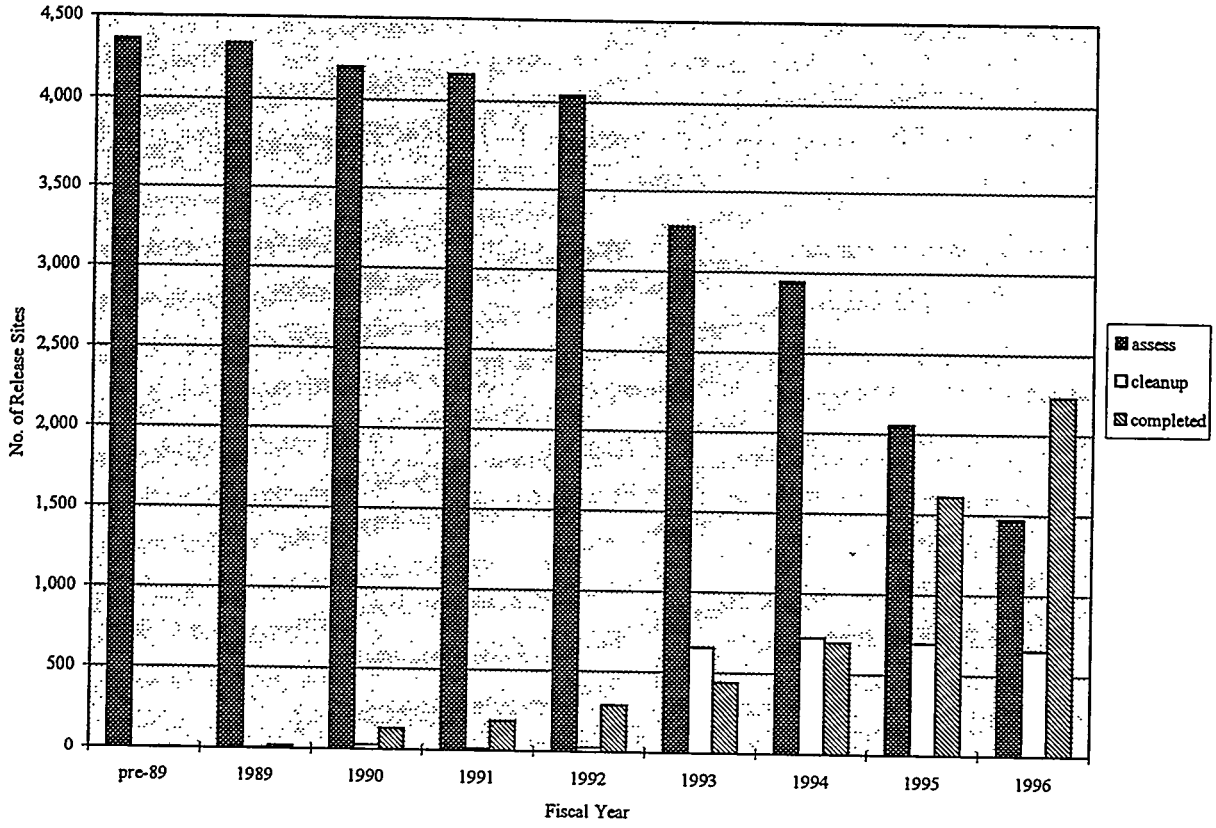

Figure I-3. Number of DOE Release Sites[1] in Different Phases of Remediation.

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).

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[1]DOE 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/FSs, 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.

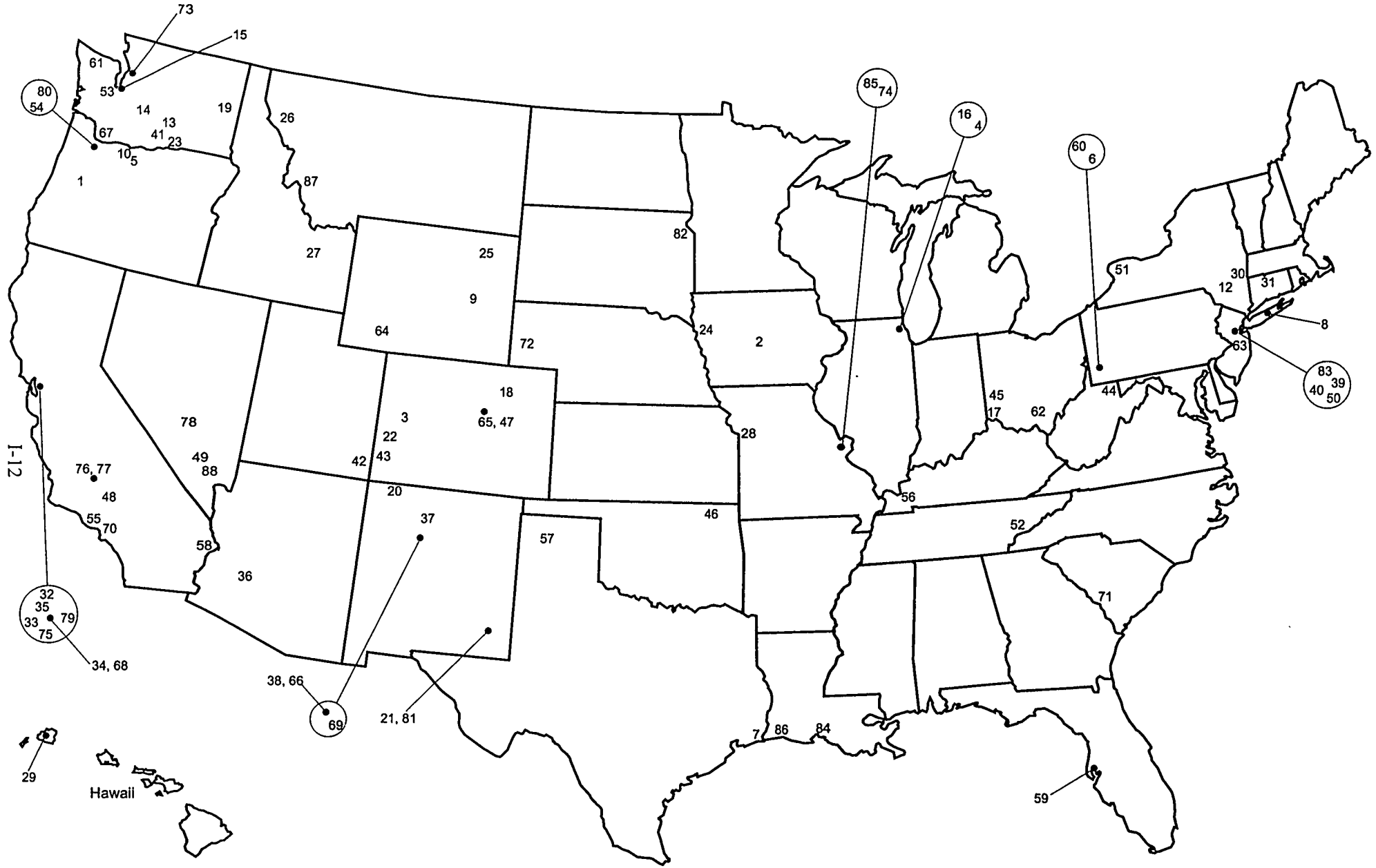

Figure I-1. Locations of All DOE Facilities/Sites Subject to Section 120 of CERCLA.

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

* NPL Site

Figure I-1. Locations of All DOE Facilities/Sites Subject to Section 120 of CERCLA - Key (Continued).

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

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 CERCLA[1] (Continued)

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
California (Continued)	Lawrence Livermore National Laboratory - Site 300	F	Onsite soil and groundwater/chemical, radioactive, and offsite groundwater contamination. 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.
	Naval Petroleum Reserve Nos. 1 and 2	U	Onsite soil/chemical contamination. The site has been characterized as No Further Remedial Action Planned.
	Oxnard Facility	U	Onsite suspected soil and groundwater/chemical contamination. 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.
	Parker Dam Switchyard (WAPA)	U	Onsite soil/chemical contamination. The PA was completed in FY 93. The site is awaiting response from EPA Region IX.
	Sandia National Laboratories/ California	U	Onsite soil and groundwater/chemical contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
California (Continued)	Santa Susana Field Laboratories (Energy Technology Engineering Center)	U	Onsite groundwater and soil/chemical and radioactive contamination; offsite groundwater/chemical and radioactive contamination. 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.
	Stanford Linear Accelerator Center	N	Onsite groundwater and soil/chemical contamination; offsite soil/PCB contamination. 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.
	Texaco Section 8 Central Solid Waste Site	N[2]	Contamination unknown. No further remedial action required.
	Texaco Section 8 Gas Plant	N[2]	Contamination unknown. No further remedial action required.
	Tracy Pump and Substation (WAPA)	U	Onsite soil/chemical contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Colorado	Anvil Points Facility, Naval Oil Shale Reserve No. 3	N	Onsite soil contamination. 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.
	Fort Morgan Substation (WAPA)	N[2]	Onsite soil contamination (oil) with possible groundwater contamination. A PA/SI was submitted in January 1995. The site was assigned No Further Remedial Action Planned status in March 1995.
	Grand Junction Office Remedial Action Project	N	Onsite groundwater/mixed waste contamination and radioactive contamination in buildings. The site has been classified as No Further Remedial Action Planned. Decommissioning of six buildings was completed in FY 96.
	Montrose Power Operations Center (WAPA)	N	Onsite soil/chemical contamination. The site has been classified as No Further Remedial Action Planned.
	National Renewable Energy Laboratory	N	None known. The site has been classified as No Further Remedial Action Planned.
	Rocky Flats Environmental Technology Site (formerly the Rocky Flats Plant)	F	Onsite groundwater, surface water, and soil/chemical, radioactive, mixed contamination; offsite soil/radioactive contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Illinois	Argonne National Laboratory - East	U	Offsite groundwater with volatile organic contamination; onsite groundwater/soil with chemical and radioactive contamination. 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. A draft RCRA Corrective Action Permit is expected to be issued in October 1996.
	Fermi National Accelerator Laboratory	N	Onsite soil and groundwater/chemical contamination and soils contaminated with PCBs. 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.
Iowa	Ames Laboratory	U	Offsite soil and groundwater with radioactive and organic contamination. 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.
	Hinton Hazardous Waste Storage Facility (WAPA)	N	Onsite soil contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Kentucky	Paducah Gaseous Diffusion Plant[3]	F	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. 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.
Louisiana	Weeks Island (SPRO)	N	None known. 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.
	West Hackberry Site (SPRO)	N	None known. 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.
Missouri	Kansas City Plant	U	Onsite soil, groundwater, and air/chemical contamination. 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.
	St. Louis Site (St. Louis Airport Site and Vicinity Properties, and St. Louis Downtown Site, Latty Avenue Properties)	NA[4]	Onsite soil, primarily radioactive with limited chemical contamination; offsite soil and sediments/radioactively contaminated. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Nevada (Continued)	Tonopah Test Range	N[5]	Soil contamination from petroleum hydrocarbons and RCRA constituents; ordnance, scattered depleted uranium, surface soil plutonium contamination. 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.
	Yucca Mountain Site	U	None known. DOE believes this site has mistakenly been placed on the docket and is requesting further review by EPA.
New Jersey	Maywood Site	F	Onsite and offsite soil/radioactive and potential chemical contamination; approximately 54 vicinity properties radioactively contaminated; groundwater contamination beneath the pile; offsite sources. 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.
	Middlesex Sampling Plant	U	Onsite soil/radioactive contamination. 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.
	New Brunswick Laboratory	N	Onsite soil/radioactive contamination. RA planning documents have been issued. Remedial Action was initiated during FY 96. Site completion is expected during FY 97.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA[1] (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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
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.
	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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
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.
	Niagara Falls Storage Site	N	Former radioactive contamination. 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.
Ohio	Fernald Environmental Management Project (formerly Feed Materials Production Center)	F	Onsite and offsite air, sediment, soil, and groundwater/radioactive and chemical contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Ohio (Continued)	Mound Plant	F	Onsite and offsite soil/radioactive contamination; onsite and offsite groundwater/chemical and tritium contamination. 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.
	Portsmouth Uranium Enrichment Complex[3] (also known as Portsmouth Gaseous Diffusion Plant).	U	Onsite soil and groundwater/chemical and radioactive contamination. No CERCLA activities were conducted during FY 96. Portsmouth is currently involved with RCRA corrective action activities.
Oklahoma	National Institute for Petroleum and Energy Research	U	Onsite soil/chemical contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Oregon	Alvey Maintenance Headquarters (BPA)	N	Onsite soil/chemical contamination. The site was characterized by EPA as No Further Remedial Action Planned.
	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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
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.
South Carolina	Savannah River Site	F	Onsite groundwater, soil and air/chemical and radioactive contamination. 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.
South Dakota	Watertown Maintenance Facility (WAPA)	N	Onsite potential soil/chemical contamination. 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.
Tennessee	Oak Ridge Reservation: K-25 Site (Oak Ridge Gaseous Diffusion Plant) Oak Ridge Associated Universities Oak Ridge National Laboratory	F	Onsite groundwater, soil and surface water/chemical and radioactive contamination. 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. Onsite groundwater, soil and surface water/chemical and radioactive contamination. The South Campus Facility ROD was approved in FY 96. Two vicinity properties were completed. Onsite groundwater, soil, and surface water/chemical and radioactive contamination. Three interim actions, three assessments, one decommissioning, and three Remedial Actions were completed.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Tennessee (Continued)	Oak Ridge Reservation (Continued)		
	Y-12 Plant		Onsite groundwater, soil, and surface water/chemical and radioactive contamination. Two Remedial Actions and one Interim Action were completed. Two assessments were completed.
	Offsite		Offsite soil and surface water/chemical and radioactive contamination, mercury and other heavy metals, PCBs, and traces of uranium in floodplain, soils, and sediment. Construction of one Remedial Action has been initiated. One Remedial Action has been completed.
Texas	Big Hill Site (SPRO)	U	None known. 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.
	Pantex Plant	F	Onsite soil and groundwater/chemical and radioactive contamination. 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.

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

STATE	DOE FACILITY	DOCKET STATUS	TYPE OF CONTAMINATION/STATUS OF REMEDIATION
Utah	Monticello Mill Site	F	Onsite and offsite groundwater, soil and surface water/chemical and radioactive contamination. 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.
	Monticello Vicinity Properties	NA[4]	Onsite and offsite groundwater, soil, and surface water/chemical and radioactive contamination. 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.
Washington	Columbia Basin Project AEC Zone 2,4-D Site	U	Onsite soil/chemical contamination. Contaminated materials were removed. No Further Action Record of Decision issued in 1996. Deletion from the docket was requested for this site.
	Columbia Substation (BPA)	N	Onsite soil/chemical contamination. The site was characterized by EPA as No Further Remedial Action Planned.

Table I-1. Status of All DOE Facilities/Sites Subject to Section 120 of CERCLA[1] (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 CERCLA[1] (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 CERCLA[1] (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

SECTION II

DOE CERCLA COMPLIANCE STRATEGY

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.

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

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

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

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

Figure II-2. DOE Facilities/Sites Subject to Section 120 of CERCLA and Not in the Nuclear WeaponsComplex - Key (Continued)

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.

SECTION III

STATUS OF CERCLA ACTIVITIES AT DEPARTMENT OF ENERGY SITES

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.

Table III-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.

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.

SECTION IV

SITE SUMMARIES FOR FACILITIES ON THE NPL (BY STATE)

IV. SITE SUMMARIES FOR FACILITIES ON THE NPL (BY STATE)

This section of the Annual Report to Congress provides a detailed description of progress made at each of the 21 U.S. Department of Energy (DOE) facilities currently on the National Priorities List (NPL). The information provided includes each facility's NPL status, background summary information, environmental conditions, and funding information. Each of the applicable Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(e)(5) information requirements is also addressed. Discussion of the Hanford - 1100 Area is retained in this section although this portion of the Hanford Site has been deleted from the NPL. The geographic location of these sites is identified in Figure I-1.

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LABORATORY FOR ENERGY-RELATED HEALTH RESEARCH

Davis, Yolo County, California

Office: Oakland Operations Office

Size: 15 acres (0.02 square mile)

NPL Status: Placed on NPL on May 31, 1994.

Mission: The Laboratory for Energy-Related Health Research (LEHR) facility consists of several DOE-owned buildings located on property leased from the University of California, Davis (UCD). LEHR was established in 1958 by the Atomic Energy Commission to conduct research of health effects on dogs exposed to bone-seeking radionuclides. Full-scale experimental use of radioactive materials, including strontium-90 and radium-226, began at the LEHR site in 1960. DOE is considered a potentially responsible party for LEHR.

Overview of Environmental Conditions: The contaminants are primarily strontium-90 and radium-226 in buildings and tanks and organics, radionuclides, and trace metals in soil and groundwater. Tritium has also been detected. Between the 1940s and 1967, approximately 6 acres of the site were independently operated by UCD as a sanitary landfill and low-level radioactive waste disposal area. Routine laboratory and university refuse, including chemical waste, was disposed of at this site.

CERCLA/RCRA Remediation Funding in FY 96: $3,409,000

Progress in Reaching Interagency Agreement

In 1988, DOE terminated the research program and in 1989 signed a Memorandum of Agreement (MOA) with UCD to begin cleanup of the site. This MOA was amended in 1993 to limit DOE involvement in areas that were the University's responsibility to characterization activities only. DOE, Environmental Protection Agency (EPA) Region IX, and the State of California are currently negotiating a Federal Facility Agreement (FFA) for cleanup of LEHR. The FFA will not be executed until an agreement has been reached between DOE and the University of California delineating each party's responsibility for cleanup. This agreement is expected to be completed in fiscal year (FY) 97. The FFA is also expected to be signed in FY 97.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration at LEHR total $2.6 million of appropriated funding for FY 97 and $4.9 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

An Interagency Agreement (IAG) in the form of an FFA is currently being negotiated and is expected to be completed in FY 97. The neighboring community, special interest groups, local media, and elected officials are concerned about leaking landfills and groundwater contamination from areas of contamination that do not appear to be DOE's responsibility.

Progress in Conducting Remedial Investigations/Feasibility Studies

DOE continues to conduct CERCLA investigations and response actions on soil from landfills and burial trenches. On September 30, 1996, DOE terminated characterization activities in areas for which the University has assumed responsibility as defined in the agreement between DOE and UCD.

Progress in Conducting Remedial Actions

In FY 95, the following activities were accomplished:

- The Imhoff Building, including the ion exchange treatment facility and adjacent laboratory, was demolished;
- The tank trailer was dismantled, compacted, and disposed of; and
- Release surveys and independent verification were completed for the two Animal Hospital Buildings and Specimen Storage Rooms.

In FY 96, the following activities were accomplished:

- Decontamination of the Cobalt-60 Building was completed; and
- Removal of outdoor dog pens was completed.

LAWRENCE LIVERMORE NATIONAL LABORATORY - LIVERMORE SITE

Livermore, Alameda County, California

Office: Oakland Operations Office

Size: 811 acres (1.3 square miles)

NPL Status: Placed on the NPL on July 22, 1987.

Mission: The Lawrence Livermore National Laboratory (LLNL) was established in 1952 to function as a national scientific and technical resource for the nuclear weapons program and other programs of national interest. LLNL performs research, development, and testing associated with the nuclear design aspects of all phases of the nuclear weapon life cycle. The Laboratory, consisting of two noncontiguous parcels (Livermore Site and Site 300), is also involved in the following programs: inertial fusion, magnetic fusion, biomedical and environmental research, isotope separation, and applied energy technology and other research-related activities.

Overview of Environmental Conditions: Contamination of groundwater and soil with tetrachloroethylene, perchloroethylene, and trichloroethylene.

CERCLA/RCRA Remediation Funding in FY 96: $13,399,500

Progress in Reaching Interagency Agreement

DOE entered into an FFA with EPA Region IX and the State of California for cleanup of the LLNL-Livermore Site. This FFA was executed on November 1, 1988 and became effective in February 1989. Significant emphasis was placed on the renegotiation of FFA-enforceable milestone deliverables in FY 95. In June 1994, EPA and the state agencies approved a revised schedule that reprioritized activities to direct the focus on the western and southern perimeters where there is offsite contamination. A treatability study and groundwater facility were added for Trailer 5475 where there are volatile organic compounds and tritium contamination. The Treatment Facility 518 vapor extraction system was also included in the schedule.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration to support the FFA milestones at the LLNL-Livermore Site total $11.7 million of appropriated funding for FY 97 and $11.4 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new comments on the FFA were received in FY 96. An IAG in the form of an FFA became effective in 1989; as a result, a technical assistance group is in place. This group continues to support a community working group to review post Record of Decision (ROD) documents and to provide input into the recent renegotiations and priorities of the site remediation efforts.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Draft Final Feasibility Study (FS) was submitted to the state and EPA in December 1990 and the proposed Remedial Action Plan was submitted in October 1991, in preparation for the November 1991 public hearing on the proposed plan for onsite remediation activities. A responsiveness summary for the public comments and final ROD was approved by DOE in June 1992.

Progress in Conducting Remedial Actions

The ROD for the LLNL-Livermore Site was approved by DOE, EPA, and the State of California in June 1992. The ROD called for cleanup of soil and groundwater using seven treatment facilities and 24 initial extraction locations. Subsequent negotiation with the regulators resulted in streamlining operations and reporting requirements, replacing pipelines, repairing facilities with portable treatment facilities, and increasing the total number of wells and treatment facilities. Currently, seven treatment facilities are in operation. Complete hydraulic capture of the western offsite plume has been established. There has been a dramatic decrease in offsite contaminant concentrations. Additionally, a successful demonstration of the Dynamic Underground Stripping Technology was performed at the Gasoline Spill Area, which resulted in the removal of approximately 10,000 gallons of fuel hydrocarbons.

In FY 96, operations began in the Building 518 Vapor Treatment Facility, Portable Treatment Facilities G-1 and F, and the Treatment Facility C North Pipeline began operation.

LAWRENCE LIVERMORE NATIONAL LABORATORY - SITE 300

Tracy, San Joaquin County, California

Office: Oakland Operations Office

Size: 7,000 acres (10.1 square miles)

NPL Status: Placed on the NPL on August 30, 1990.

Mission: The LLNL was established in 1952 to function as a national scientific and technical resource for the nuclear weapons program and other programs of national interest. LLNL performs research, development, and testing associated with the nuclear design aspects of all phases of the nuclear weapon life cycle. The Laboratory consists of two noncontiguous parcels, the Livermore Site and Site 300. Site 300 is used for high explosives testing.

Overview of Environmental Conditions: Contamination of onsite groundwater and soil with tritium and trichloroethylene and high explosive compounds.

CERCLA/RCRA Remediation Funding in FY 96: $12,100,500

Progress in Reaching Interagency Agreement

An integrated (CERCLA/RCRA) FFA was negotiated and signed between DOE, EPA Region IX, the California EPA's Department of Toxic Substance Control, and the Central Valley Regional Water Quality Control Board on June 29, 1992. In February 1994, a revised Appendix A (schedule of deliverables) to the FFA was approved by EPA.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration to support the milestones in the FFA at the LLNL-Site 300 total $10.4 million of appropriated funding for FY 97 and $8.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

All stakeholders and interested parties have been involved in the development of the FFA and subsequent revisions.

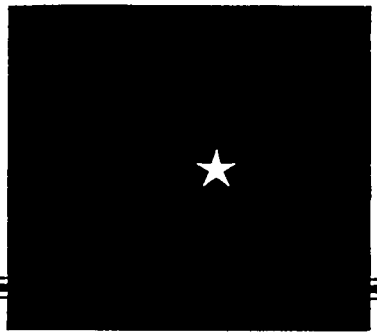
Progress in Conducting Remedial Investigations/Feasibility Studies

Under the terms of the FFA and at the request of the regulatory agencies, the Site 300 Site Wide Remedial Investigation (SWRI) Report was prepared. The final SWRI Report was submitted to the regulators in March 1994. The General Services Area (GSA) Operable Unit (OU) FS was completed in October 1995, the Building 834 OU Proposed Plan (PP) was completed in January 1995, and the Pit 6 OU FS-Engineering Evaluation/Cost Analysis (EE/CA) was completed in November 1994.

DOE, LLNL, and regulatory agency personnel have worked together to "re-engineer" the CERCLA process to expedite cleanup at portions of LLNL-Site 300 that present potential risks to human health and the environment. The areas of highest priority are the GSA, Building 834, and Building 832 Canyon. GSA and Building 834 are going through the standard CERCLA process of FS, PP, Public Meeting, and ROD. At the GSA OU, two interim groundwater treatment facilities continued operation, and a final PP and draft ROD were completed. At the Building 834 OU, an interim groundwater/vapor treatment facility continued operation, and a Title I Design for Surface Water Drainage Project was completed. Building 832 Canyon is in the subsurface investigation phase, and the appropriate CERCLA path will be chosen on completion of the investigation.

Progress in Conducting Remedial Actions

The Interim Groundwater Facilities at the Eastern and Central GSA have continued to operate, and the Interim Soil Vapor Extraction Facility at Building 834 was restarted. At GSA, the offsite plume has been significantly pulled back and offsite contamination has been reduced.



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

Golden, Jefferson County, Colorado

Office: Rocky Flats Operations Office

Size: 6,550 acres (10.2 square miles)

NPL Status: Placed on the NPL on October 4, 1989.

Mission: The mission of the Rocky Flats Environmental Technology Site (RFETS), formerly the Rocky Flats Plant, is to manage waste and materials, and to clean up and convert the site for beneficial use in a manner that is environmentally safe and socially responsible, physically secure, and cost-effective.

Overview of Environmental Conditions: Onsite contamination of soil, groundwater, and surface water by chemical and radioactive materials used at the facility. Offsite soil contamination also has been identified.

CERCLA/RCRA Remediation Funding in FY 96: $71,039,000

Progress in Reaching Interagency Agreement

On July 19, 1996, DOE, EPA Region VIII, and the Colorado Department of Public Health and Environment (CDPHE) signed the Rocky Flats Cleanup Agreement. This document supersedes the IAG among DOE, EPA Region VIII, and the State of Colorado executed on January 22, 1991 that replaced the July 31, 1986 Resource Conservation and Recovery Act/Comprehensive Environmental Response, Compensation, and Liability Act Compliance Agreement executed by the same parties. The Rocky Flats Cleanup Agreement is a legally binding agreement among DOE, EPA Region VIII, and CDPHE to accomplish the required cleanup of radioactive and other hazardous substances contamination at RFETS in a safe, effective, and efficient manner.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration total $51.7 million of appropriated funding for FY 97 and $53.2 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Discussions began in FY 93 between DOE and the regulatory agencies regarding negotiation of the new Rocky Flats Cleanup Agreement. The public was kept abreast of this activity, and a preliminary draft of the agreement was provided for informal comment. On March 14, 1996, the draft of the new cleanup agreement was released for public comment. More than 100 individuals and organizations submitted written comments, which were carefully

reviewed and considered during the preparation of the final agreement. Almost 40 people presented oral statements at three public hearings. A responsiveness summary was prepared.

Progress in Conducting Remedial Investigations/Feasibility Studies

Initial site characterization efforts at RFETS began in July 1986 under the RCRA/CERCLA Compliance Agreement and continue under the IAG executed on January 22, 1991. A comprehensive list of all known and suspected hazardous, radioactive, and mixed waste sources at the site has been compiled, including descriptions of all known release information for 178 individual hazardous substance sites. These sites originally were categorized for further environmental investigation and remediation into 16 OUs based on cleanup priorities, waste type, geographic location, and public input. Since that time, characterization has been completed and no-action RODs have been approved by DOE, EPA, and the CDPHE for three operable units (OUs 11, 15, and 16).

In addition, eight of the remaining OUs have been consolidated to form two OUs that benefit from coordinating the regulatory jurisdictional boundaries with the OU consolidation boundaries, thus reducing administrative and process requirements. These consolidated OUs are known as the Industrial Area (former OUs 4, 8, 9, 12, 13, 14, and part of 10) and the Buffer Zone (OU 2 and the remainder of OU 10). 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.

The 881 Hillside (OU 1) Proposed Plan was submitted for public comment in May 1996, based upon a remedy selection made by the IAG dispute resolution committee. A final Correction Action Decision/Record of Decision (CAD/ROD) was signed by Rocky Flats Field Office and transmitted to the regulators in September 1996.

Under the new cleanup agreement, no Corrective Measures Study/Feasibility Study documents will be prepared. Instead, documents such as Proposed Action Memoranda or Interim Measures/Interim Remedial Actions (IM/IRA) will be used to describe cleanup plans for one or a group of individual hazardous substance sites. These documents will be subject to public comment before approval.

The final draft and final OU 2 Remedial Investigation (RI) Reports were delivered to the regulatory agencies in May and September 1995, respectively. The OU 2 FS began in FY 95 but has been superseded by the new regulatory approach described above. In lieu of the FS, two proposed action memoranda were initiated in FY 96, with additional proposed action memoranda or IM/IRAs being completed in FY 97 and 98. OU 2 is now part of the Buffer Zone OU.

In OU 3, Offsite Areas, the final RI Report was completed and submitted to the regulators in June 1996. This assessment concludes that the risk from offsite contamination is below regulatory concern, and no remedial action is necessary. A proposed plan was submitted for public comment in August 1996. A no-action CAD/ROD is expected to be approved in FY 97.

OU 4, Solar Evaporation Ponds, is now part of the Industrial Area OU.

The Phase I and Phase II RI field work for OU 5 was combined so that only one RI Report was required, the final of which was delivered to the regulatory agencies in April 1996. Two individual hazardous substance sites from OU 5 were transferred to the Industrial Area OU, and a no-action ROD is being considered. A proposed plan is expected to be submitted in FY 97.

RI field work for OU 6 has been completed, and the RI Report was submitted in March 1996. Results indicate that the majority of individual hazardous substance sites in OU 6 do not require cleanup. Two individual hazardous substance sites were transferred to the Industrial Area OU.

The two phases of OU 7 were combined with regulatory agency approval. This, along with use of a presumptive remedy to cap the present landfill, deleted 10 IAG milestones from this subproject. Design of a passive leachate collection system for the OU 7 present landfill was completed. OU 7 field work was completed in FY 95. An IM/IRA decision document was completed in June 1996. Leachate collection began in April 1996, after completion of the Proposed Action Memorandum. Approximately 663,000 gallons were collected and treated.

Instead of continuing with studies in the Industrial Area, an IM/IRA has been implemented. This involves sampling of soil, air, groundwater, and surface water. A report was provided to the regulators in March 1996.

Site-wide characterization efforts were continued including seep flow measurement, 3-dimensional computer modeling of hydrogeology, and monitoring of new and existing monitoring wells at reduced levels (150 wells versus 300 wells in the past). A surface water modeling report was published in September 1996.

The following public involvement activities were completed:

- Informational meetings were conducted and comments solicited on the RFETS 10-Year Plan (now the draft RFETS 2006 Plan).
- Four quarterly public information meetings were held.
- The Technical Review Group continued to meet monthly to provide early public input on draft documents to the regulatory agencies.
- Public comments were solicited on proposed changes to state water quality standards.
- Monthly coordination meetings were held with EPA and CDPHE.
- A site tour was provided for members of the Colorado Water Quality Control Commission.
- All required documents were placed in RFETS public reading rooms and five other repositories.
- Tours, presentations, and briefings on various topics were presented to members of the public including the Rocky Flats Citizens Advisory Board and the Rocky Flats Local Impacts Initiative.
- There were formal public comment periods on various documents as required by CERCLA.
- Public comment periods were held on the Rocky Flats Cleanup Agreement and on the Soil Action Level framework.

Progress in Conducting Remedial Actions

After public comments and regulatory agency design approval, an IRA for OU 1 (a french drain groundwater collection system and Building 891 treatment facility) was constructed and placed into operation in May 1992. The OU 1 IRA treatment facility collected and treated over 4 million gallons of potentially contaminated groundwater through FY 96. Sampling has verified that contamination levels of the water being collected by the OU 1 IRA from the Building 881 footing drain are within acceptable limits, and authorization was granted by the regulatory agencies in 1994 to cease pumping this water to the french drain. This source accounted for 85 to 95 percent of the water treated by the OU 1 IRA. Several small radioactive "hot spots" were removed in September 1994. The primary source of groundwater contamination will be removed by excavation and thermal desorption when funding becomes available.

An IRA for OU 2 which collects, treats, and releases potentially contaminated surface water was completed and placed into operation in April 1992. The OU 2 IRA treatment facility has collected and treated over 24 million gallons of potentially contaminated surface water. Sampling has verified that the contamination level of the water being collected from two of the three surface water sources by the OU 2 IRA, which account for about 90 percent of the surface water collected, is within acceptable limits. Authorization to cease collection and treatment of water from these sources was granted by the regulatory agencies in 1994 for all but one location. The OU 1 and OU 2 water treatment plants were combined in FY 95 and are now used to treat all site groundwater. In FY 96, 278,000 gallons were treated.

A second IRA for OU 2 was mandated by the regulatory agencies in FY 1991. The Phase I design of this IRA, which evaluated conventual vacuum-enhanced vapor extraction technology to extract volatile organics from vadose-zone soils, was approved by the regulatory agencies, and construction was completed in the first quarter of FY 94. Approximately 915 pounds of volatile organic materials have been removed from the ground, processed, and disposed of. This IRA has now been canceled with approval of the regulatory agencies.

The Ryan's Pit removal action near Individual Hazardous Substance Site 109 was completed in FY 95. Approximately 200 cubic yards of contaminated soil were excavated. In FY 96, these soils were thermally desorbed and returned to the trench.

Construction of the Option B offsite water projects funded by DOE through grants to local municipalities continued through 1996. The Standley Lake Protection Project is complete, since the Woman Creek Reservoir became operational in January 1996. The City of Broomfield's new water treatment facility is under construction, with completion expected in the Spring of 1997. Broomfield has also purchased nearly 60 percent of the water needed to firm its primary supply.

The OU 4 Interceptor Trench System was in operation throughout the year, collecting potentially contaminated near-surface groundwater and surface runoff. Approximately 2.7 million gallons were collected, stored in temporary holding tanks, and ultimately processed by two evaporative water treatment facilities located at the site. Due to high operational costs of the evaporator, a new passive water treatment plant to treat this water was proposed. Initiation of the construction and use of the mobile treatment unit are uncertain.

Decommissioning of Building 889 was completed in August. The action included demolition of the building and disposition of all wastes generated during the operation. Two fuel oil tanks, two electrical substations, and several guard shacks also were decommissioned during the fiscal year.

The interim action at Individual Hazardous Substance Site 129 was completed by removal and shipment for incineration of 2,500 gallons of RCRA-contaminated oils and by foaming the tank.

Approximately 3,500 cubic yards of contaminated soils from Trenches T3 and T4 were treated by thermal desorption and 300 cubic yards of debris removed. Most of the soils were returned to the excavation and the area was regraded and reseeded.

Seven PCB "hot spots" were excavated at RFETS, generating 437 cubic yards of Toxic Substances Control Act (TSCA) waste that was shipped to offsite disposal.

The final draft of the Pond Water Management IM/IRA was completed and submitted to CDPHE and EPA on November 23, 1993. The draft was required to be developed under the IAG by the regulatory agencies in 1992, even though there is no imminent hazard to public health or the environment from water on the plant site. The document went to dispute under the IAG; the parties met on April 15, 1994 and came to a resolution on dispute issues. DOE has not agreed with the use of CERCLA in lieu of the Clean Water Act to regulate surface waters; therefore, as part of the resolution, language addressing the designation of the ponds as "waters of the U.S." and preservation of DOE's rights to appeal this issue was included. A new pond operations plan, which will supersede the Pond Water IM/IRA, is being negotiated with the regulators and local communities. A draft will be released for public review in FY 97.

Enforcement Activities

No enforcement actions related to environmental restoration activities occurred in FY 96.

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IDAHO NATIONAL ENGINEERING LABORATORY

Idaho Falls, Bonneville County, Idaho

Office: Idaho Operations Office

Size: 569,600 acres (890 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Idaho National Engineering Laboratory (INEL) was established in 1949 by the U.S. Atomic Energy Commission as an area to build, test, and operate various nuclear reactors, fuel processing plants, and support facilities with maximum safety and isolation. Originally known as the National Reactor Testing Station, the site was renamed the INEL in 1974 to reflect the broad scope of engineering activities now conducted at the site. Prior to its establishment, the site was used as a World War II gunnery range for the U.S. Navy and U.S. Army Air Corps.

Overview of Environmental Conditions: Onsite groundwater and soil contamination from both known and potential sources resulting from past disposal practices. Contaminants of concern include chromium, volatile organic compounds (VOCs), carbon tetrachloride, and radionuclides.

CERCLA/RCRA Remediation Funding in FY 96: $89,326,000

Progress in Reaching Interagency Agreement

The INEL Federal Facility Agreement/Consent Order (FFA/CO) and Action Plan between DOE, EPA Region X, and the State of Idaho was executed on December 9, 1991. The FFA/CO supersedes the RCRA 3008(h) Consent Order and Compliance Agreement (COCA) and covers all CERCLA response requirements as well as RCRA corrective action requirements. All parties agreed to initiate the FFA/CO Action Plan under the COCA in September 1991 while the FFA/CO was being finalized. The FFA/CO also includes Argonne National Laboratory (ANL) - West and the Naval Reactors Facility (NRF), which are located at INEL.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG Action Plan at the INEL total $98.9 million of appropriated funding for FY 97 and $74.4 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Public attention was focused on INEL's FFA/CO when the Governor of Idaho was negotiating a settlement agreement with the Federal government over the shipment of naval spent fuel to the INEL. One of the provisions of the "Settlement Agreement" is that INEL's Environmental Restoration Program, as stated in the FFA/CO Action Plan, will be implemented. Additionally, when DOE-Idaho solicited public comments on the draft INEL Environmental Management Ten-Year Plan (now the draft INEL 2006 Plan), citizens had two principal

concerns: 1) the Ten-Year Plan (draft INEL 2006 Plan) be reconciled to the FFA/CO without weakening the FFA/CO; and 2) the FFA/CO continue to receive funding necessary to comply with required cleanup actions that resulted from agency decisions following public comment periods on cleanup plans.

The agencies also initiated plans in FY 96 to host a citizens "focus group" in early FY 97 to identify ideas and suggestions for improving how the public gets involved in DOE-Idaho's cleanup decision-making process. This effort was undertaken to possibly update the INEL's Community Relations Plan to meet the changing public involvement needs of the community.

Progress in Conducting Remedial Investigations/Feasibility Studies

INEL

Major documents submitted to EPA and the State of Idaho during FY 96 were:

- Test Area North draft Comprehensive RI/FS Work Plan (OU 1-10);
- Test Area North Groundwater draft Remedial Design/Remedial Action (RD/RA) Scope of Work (OU 1-07B);
- Test Reactor Area draft Comprehensive Remedial Investigation/Baseline Risk Assessment (RI/BRA) and draft RI/FS Report (OU 2-10);
- Idaho Chemical Processing Plant draft Comprehensive RI/FS (OU 3-13);
- Central Facilities Area draft Comprehensive RI/FS Statement of Work (OU 3-13);
- Central Facilities Area Landfills draft RD/RA Work Plan (OU 4-12);
- Power Burst Facility/Auxiliary Reactor Area draft Comprehensive RI/FS Statement of Work (OU 5-12);
- Stationary Low Power-1/Boiling Water Reactor Experiment Reactor (SL-1/BORAX-1) Reactor Burial Grounds draft final Record of Decision (OU 5-05/6-01);
- Radioactive Waste Management Complex Pits and Trenches draft final RI/FS Work Plan (OU 7-13/14);
- Organic Contamination of the Vadose Zone at Radioactive Waste Management Complex draft final RD/RA Work Plan (OU 7-08);
- Pit 9 (Radioactive Waste Management Complex) 90 percent design of support facilities (OU 7-10);
- NRF Inactive Landfills draft RA Report (OU 8-05/06); and
- Final Work Plan for the Comprehensive RI/FS (OU 8-08).

ANL-West

The RI/FS Work Plan for ANL-West was completed in FY 96.

The following are documents that were developed and submitted to EPA and the State of Idaho during FY 96 for ANL-West, plus associated activities:

- Draft RI Report (OU 9-04); and
- Draft RI Work Plan.

Progress in Conducting Remedial Actions

No Further Action determinations were approved for 23 potential release sites following the guidance outlined in the FFA/CO.

INEL

The following activities were accomplished through FY 96 at the INEL.

Assessment

- 13 of 20 RODs complete.
- 152 of 169 Track 1 scoping investigations complete.
- 33 of 38 Track 2 scoping investigations complete.
- Sampling of Test Area North mixed-waste underground storage tank (V-Tank) contents for treatability studies and Work Plan submittal and field implementation for the Comprehensive RI/FS.
- Completion of the Test Reactor Area Draft Comprehensive RI/FS and Baseline Risk Assessment reports.
- Completion of the Idaho Chemical Processing Plant Draft Comprehensive RI/FS report.
- Completion of the final ROD for Central Facilities Area Landfills I, II, and III; and completion of the Draft Central Facilities Area Comprehensive RI/FS Scope of Work.
- Completion of the Final ROD for the SL-1 and BORAX-1 reactor burial grounds contents and completion of Power Burst Facility/Auxiliary Reactor Area Comprehensive RI/FS Draft Scope of Work.
- Completion of the Radioactive Waste Management Complex Transuranic Waste Pits and Trenches RI/FS field work.
- Cost-saving consolidation of the Radioactively Contaminated Soils RI/FS into the INEL-wide Comprehensive RI/FS, and preliminary scoping discussions with regulatory agencies for the WAG 10 Comprehensive RI/FS.

Cleanup

- Resumption of Test Area North Groundwater Treatment Facility operation using a new re-injection well, treatment of 1.1 million gallons of water, and negotiation with regulatory agencies to achieve a more cost-effective approach to groundwater treatability studies and groundwater pumping strategy.

- Completion of soil treatment for Central Facilities Area Calcine Pit Removal Action; initiation of the French Drains Removal Action of heavy metal and radionuclide-contaminated soil; completion of lead-contaminated soil removal action; initiation of petroleum-contaminated soil removal action; and completion of the RD/RA Scope of Work and initiation of soil cover installation remediation for Central Facilities Area Landfills I, II, and III.

- Excavation and contaminated soil consolidation at SL-1 and BORAX-1; initiated placement of rip-rap cap for SL-1 and BORAX-1; and initiation of Auxiliary Reactor Area-02 removal action to remove septic tank mixed waste.

- Initiation of the Radioactive Waste Management Complex Vapor Vacuum Extraction Phase I RA, which removed 15,500 pounds of volatile organic compounds from the vadose zone; and completion of 80 percent of the Pit 9 treatment building construction, 40 percent of the retrieval building construction, and 80 percent of the administration area and offsite construction.

- Completion of the 22-acre Naval Ordnance Disposal Area removal action; continuation of area-wide ordnance removal action; and completion of Rad Contaminated Soils removal action.

- Three inactive landfill areas at the NRF (OU 8-05/06) were capped with native soil covers.

ANL-West

The following activities were accomplished in FY 96 at ANL-West:

Assessment

- 37 of 40 potential release sites signed off as "No Further Action."

PADUCAH GASEOUS DIFFUSION PLANT

Paducah, McCracken County, Kentucky

Office: Oak Ridge Operations Office

Size: 3,423 acres (5.3 square miles)

NPL Status: Placed on the NPL on May 31, 1994.

Mission: The Paducah Gaseous Diffusion Plant, established in 1950 on the grounds of the old Kentucky Ordnance Works Trinitrotoluene Plant, is actively engaged in the enrichment of uranium using gaseous diffusion technology. Most of the uranium output from the plant is designated for the commercial sector. In July 1993, DOE officially transferred responsibility for site operations to the U.S. Enrichment Corporation in accordance with the Energy Policy Act of 1992.

Overview of Environmental Conditions: The site consists of 204 Solid Waste Management Units (SWMUs) and areas of concern, which have been divided into 30 Waste Area Groups (WAGs). Onsite chemical contamination of soils was identified. Offsite groundwater contamination consists of trichloroethylene and technetium-99; offsite creek sediment contamination consists of PCBs.

CERCLA/RCRA Remediation Funding in FY 96: $45,031,000

Progress in Reaching Interagency Agreement

Although Paducah Gaseous Diffusion Plant is listed on the NPL, remediation is currently being addressed under authority of a RCRA 3008(h) Administrative Consent Order that was signed November 4, 1988, and a RCRA Part B Permit (referred to as a Hazardous and Solid Waste Amendments permit) that was jointly issued by EPA and the State of Kentucky on July 16, 1991. DOE is working with EPA and the state to develop an IAG; while negotiations are still underway, DOE expects the agreement to be signed in 1996.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration at Paducah Gaseous Diffusion Plant total $39.3 million of appropriated funding for FY 97 and $44.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

During FY 96, the FFA is under development and thus the public has not commented on it. The FFA is expected to be released for comment during FY 97.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Administrative Consent Order for Paducah Gaseous Diffusion Plant was executed by DOE and EPA on November 4, 1988. The Resource Conservation and Recovery Act (RCRA) Part B Permit with EPA and the State of Kentucky was

executed on July 16, 1991. During FY 96, work completed or underway at Paducah Gaseous Diffusion Plant was as follows:

- Completed RODs for WAG 1 and 7, and WAG 23;
- Completed the WAG 22 (SWMUs 2 and 3) Design Sampling and WAG 22 (SWMUs 7 and 30) Assessment;
- Continued the water policy of making drinking water available to people whose wells were contaminated. In addition, a covenant was signed with these individuals whereby they agreed not to use the wells in the future;
- Continued sampling of approximately 140 groundwater monitoring wells and 30 residential wells;
- Continued negotiation of the FFA, to direct overall remedial work.
- Continued development of the waste management strategy and site treatment plan;
- Completed the WAG 6 Preliminary Assessment and RI Work Plan; and
- Completed construction of the cap at the Closed Landfill.

Progress in Conducting Remedial Actions

During FY 96, the following work was completed or underway at Paducah Gaseous Diffusion Plant:

- Completed construction of the Phase I Waste Storage Facility, which is intended to store remedial waste.
- Completed construction of the New Site Landfill, which is intended to support remedial actions.
- Began construction of the NE Plume Interim Remedial Action.
- Continued development of dense nonaqueous phase liquid technology and completed construction of a decontamination pad and field support laboratory to support all remedial action projects.
- Completed closure of C-409 and C-400-C under RCRA.
- Completed the WAG 17 Removal Action and Assessment.

Work is being conducted under individual RODs.

ST. LOUIS SITE
(St. Louis Airport Site and Vicinity Properties, Latty Avenue Properties, and St. Louis Downtown Site)
Hazelwood, St. Louis County, Missouri

Office: Oak Ridge Operations Office

Size: 21.7 acres (0.03 square mile)

NPL Status: Placed on the NPL on October 4, 1989, except St. Louis Downtown Site, which is not an NPL site.

Mission: The St. Louis Site, established as a storage site in 1946, stored radioactive residues, contaminated scrap, and equipment generated by processing plants in St. Louis from 1946 to 1969. Cleanup authority at the site was acquired by DOE under a Congressional mandate and is managed by DOE under its Formerly Utilized Sites Remedial Action Program (FUSRAP). FUSRAP sites comprise sites formerly associated with the Manhattan Engineer District Project and the Atomic Energy Commission. Because these sites are not owned or operated by DOE, they do not appear on the docket.

Overview of Environmental Conditions: Onsite soil and groundwater contamination by radioactive constituents. Offsite soil and sediment contamination also identified.

CERCLA/RCRA Remediation Funding in FY 96: $15,261,000

Progress in Reaching Interagency Agreement

DOE and EPA Region VII executed an FFA for the St. Louis Site on June 26, 1990. The St. Louis Site consists of the St. Louis Airport Site and Vicinity Properties, and Latty Avenue Properties, all of which were added to EPA's NPL in October 1989. An additional site, not included in the original 1989 NPL, is being addressed in accordance with requirements stipulated in the FFA to make the remediation process more efficient. This site, identified as the St. Louis Downtown Site, is now part of DOE's FUSRAP program.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $23.4 million of appropriated funding for FY 97 and $41.0 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new public comments regarding the FFA were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

The RI/FS work plan for the St. Louis Site was approved by EPA Region VII in calendar year 1991. A public scoping meeting for the preparation of an RI/FS was held in January 1992. An RI report was approved by EPA Region VII in 1992. Some limited additional field investigation was performed in FY 92 to supplement the existing characterization data. The Initial Screening of Alternatives was approved by

EPA Region VII in FY 92. Based on the results of the Initial Screening of Alternatives, an FS was prepared and issued for review to EPA Region VII and the State of Missouri in FY 93.

The FS was completed and submitted to EPA and the State of Missouri for review. EPA has delayed final approval of the FS, and DOE has agreed to reconsider the remedy selection proposed in the draft proposed plan. EPA and DOE have agreed to postpone the submittal of the PP and defer the ROD in order to solicit input from a St. Louis stakeholder group. This group, named the St. Louis Site Citizens Remediation Task Force, was established in September 1994. It consists of elected officials, state and Federal regulators, public health officials, utility and business representatives, and interested citizens. The PP will be released for public comment in FY 97.

Progress in Conducting Remedial Actions

Remedial action was performed at nine vicinity properties in FY 96. One full city block was remediated and returned to the public for industrial use at the Downtown Site. Final remedial action will be implemented following signing of the ROD. Proposals for interim cleanup measures have been made for properties in the vicinity of the St. Louis Airport Site, the Latty Avenue Site, and the St. Louis Downtown Site.

WELDON SPRING SITE REMEDIAL ACTION PROJECT

St. Charles County, Missouri

Office: Oak Ridge Operations Office

Size: 226 acres (0.4 square mile)

NPL Status: Quarry placed on the NPL on July 22, 1987 and Chemical Plant and Raffinate Pits placed on the NPL on March 13, 1989.

Mission: The Weldon Spring Site was developed by the U.S. Army for explosives production during World War II, and was operated by the Atomic Energy Commission from 1955 to 1966 as a uranium processing plant.

Overview of Environmental Conditions: Soil, surface water, groundwater, and building rubble contamination resulting from the handling and disposal of uranium ore concentrates and scrap.

CERCLA/RCRA Remediation Funding in FY 96: $53,085,000

Progress in Reaching Interagency Agreement

DOE and EPA Region VII entered into an FFA, signed on August 12, 1986. An amended FFA was signed on June 30, 1992.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA at the site total $65.9 million of appropriated funding for FY 97 and $67.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

The public comment period for the FFA began on March 22, 1992 and remained open for 45 days. No comments were received during this period.

Progress in Conducting Remedial Investigations/Feasibility Studies

Initial work was started under a CERCLA/National Environmental Policy Act (NEPA) Federal Facility Compliance Agreement executed in 1986. Subsequently, the site was placed on the NPL in July 1987. The Weldon Spring Site project issued a work plan in August 1988 which presented the overall strategy for accomplishing remedial actions. That strategy included the development of an umbrella RI/FS for the Chemical Plant Area, an RI/FS for Quarry bulk wastes, an RI/FS for Quarry residuals, and several interim response actions. A need was subsequently identified to specifically address groundwater at the Chemical Plant Area through an additional RI/FS.

Major accomplishments in FY 96 include:

- Submitted the Draft RI/BRA for Site Groundwater OU to EPA in September 1996.

Progress in Conducting Remedial Actions

Remedial actions accomplished during FY 96 include:

- 60 percent of the design of the Full-Scale Sludge Processing Facility was completed by September 1996.
- To date, 43 of the 44 buildings have been demolished.
- As of September 1996, 47 million gallons of water were treated during FY 96, and a total of 148 million gallons of water have been treated at the Quarry Water Treatment Plant and Site Water Treatment Plant.
- Completed construction and began operation of Train 2 at the Site Water Treatment Plant.
- Completed excavation approximately 7,000 cubic yards in the Quarry bulk waste removal effort in September 1995 for a cumulative excavated volume of 126,000 cubic yards. Completed the bulk waste removal at the Quarry in October 1995.
- Completed the excavation and removal of 19 of 27 building foundations and 177,000 cubic yards of contaminated soil in September 1996.
- Completed the remediation of Vicinity Property Number 9 in February 1996.
- Completed the site preparation for the construction of the On-Site Disposal Facility in September 1996 by developing the soil borrow area, the site drainage facilities, construction material staging area, soil borrow haul road, and the underpass and realignment of Highway 94.
- Completed 100 percent of the design of the Disposal Facility in June 1996.

MAYWOOD SITE

Maywood/Rochelle Park/ Lodi, Bergen County, New Jersey

Office: Oak Ridge Operations Office

Size: 12 acres (0.02 square mile)

NPL Status: Placed on the NPL on September 8, 1983.

Mission: The Maywood Site, a privately owned site previously used for thorium extraction, was acquired by DOE in 1984. DOE is cleaning up the site under direction from Congress, as the site is managed by DOE under FUSRAP. The Maywood Site is used specifically for storage of radiologically contaminated materials resulting from remedial activities conducted on properties in the vicinity of the Maywood Site.

Overview of Environmental Conditions: Onsite and offsite soil has been contaminated with radiological contaminants and associated chemicals. Approximately 54 remaining vicinity properties are radiologically contaminated.

CERCLA/RCRA Remediation Funding in FY 96: $17,015,000

Progress in Reaching Interagency Agreement

An FFA for the Maywood Site, signed by EPA Region II and DOE on July 23, 1990, became effective in April 1991. Schedules were subsequently negotiated for the DOE submittal of the RI, the baseline risk assessment, and the FS. EPA Region II reviewed and approved the schedules on November 25, 1991.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $14.8 million of appropriated funding for FY 97. The FY 98 funding level will be determined after final congressional action.

Public Comments Regarding Interagency Agreements

No new public comments regarding the FFA were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

Significant progress was made in FY 96 on the completion of RI/FS activities at the site. DOE and EPA Region II are negotiating a schedule for issuing the PP for the site. Comments on the PP were provided in September 1995, and the plan will be released for public comment in FY 97, after resolution with EPA.

Progress in Conducting Remedial Actions

Substantial progress has been made using removal actions. The site consists of the DOE-owned

Maywood Interim Storage Site and vicinity properties, all of which are contaminated. As of May 1986, 25 of the vicinity properties were cleaned up using removal actions, and the resulting waste was placed in storage in the engineered cell at the Maywood Interim Storage Site. During FY 94, a dispute with EPA over cleanup criteria was resolved and agreement was reached with the State of New Jersey on the cleanup criteria for residential properties. Removal of the Maywood Interim Storage Site Pile began in 1995. As of September 1996, approximately 75 percent of the pile had been removed. Completion of the Maywood pile removal is scheduled for December 1996. Remedial action continued at selected vicinity properties. Ten contaminated vicinity properties were released back to the landowner for unrestricted use during FY 96. Remedial actions will continue at vicinity properties in FY 97.

WAYNE SITE

Wayne and Pequannock Townships, New Jersey

Office: Oak Ridge Operations Office

Size: 7 acres (0.01 square mile)

NPL Status: Placed on the NPL on September 21, 1984.

Mission: The Wayne Site, a privately owned site previously used for thorium extraction, was acquired by DOE in 1984. DOE is cleaning up the Wayne Site under the direction of Congress, as the site is managed by DOE under FUSRAP. The Wayne Site is used specifically as an interim storage site for contaminated material removed during cleanup of the site and several vicinity properties.

Overview of Environmental Conditions: Onsite soil contaminated by radiological and possible chemical constituents.

CERCLA/RCRA Remediation Funding in FY 96: $6,100,000

Progress in Reaching Interagency Agreement

An FFA for the Wayne Site, signed by EPA on July 17, 1990 and by DOE on July 23, 1990, became effective in April 1991. Schedules were subsequently negotiated for the submittal of the RI, the baseline risk assessment, and the FS reports. EPA Region II reviewed and approved the schedules on November 25, 1991.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $5.5 million of appropriated funding for FY 97. The FY 98 funding level will be determined after final congressional action.

Public Comments Regarding Interagency Agreements

No new public comments regarding the FFA were received in FY 95.

Progress in Conducting Remedial Investigations/Feasibility Studies

Significant progress was made during FY 95 on the completion of RI/FS activities at the site. To date, DOE has met all RI/FS milestones specified in the FFA. DOE continues to operate a public information center at the site to provide information on RI/FS progress.

The RI report for the Wayne Site was issued in October 1993. The Baseline Risk Assessment Report was finalized in January 1994. The EPA Final Draft

FS Report was issued in March 1994. The PP for the site was developed, EPA Region II provided comments on the plan in September 1995, and the plan will be released for public comment in FY 98 after issues related to site cleanup are resolved with EPA Region II.

Progress in Conducting Remedial Actions

Earlier removal actions at the site entailed removing waste from the vicinity properties and storing it in an engineered waste storage pile at the Wayne Interim Storage Site. In FY 94, all remaining vicinity properties at the Wayne Site were remediated. A non-time-critical removal action was initiated in FY 95 to ship contaminated material from the interim storage pile to a commercial disposal facility in Utah. During FY 96, approximately 10,000 cubic yards were removed from the storage pile and shipped to the disposal site. Pile removal is approximately 33 percent complete as of September 1996.

BROOKHAVEN NATIONAL LABORATORY

Upton, Suffolk County, New York

Office: Chicago Operations Office

Size: 5,300 acres (8.3 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: Historically, the site was used by the U.S. Army as a post (called Camp Upton) during the First and Second World Wars. The Atomic Energy Commission was given title to the property in 1947.

Brookhaven National Laboratory functions as a design, construction, and operations center for large research facilities such as particle accelerators, nuclear reactors, and synchrotron storage rings for research in high-energy and nuclear physics, chemistry, biology, and energy-related life and environmental sciences.

Overview of Environmental Conditions: Groundwater and soil contamination.

CERCLA/RCRA Remediation Funding in FY 96: $20,426,000*

*An additional $4,470,000 of prior year unobligated funds was provided to Brookhaven National Laboratory.

Progress in Reaching Interagency Agreement

DOE, EPA Region II, and the State of New York executed the IAG for Brookhaven National Laboratory on February 28, 1992. The effective date of the agreement was May 27, 1992. The IAG integrates both corrective action requirements under RCRA and response action requirements under CERCLA.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG at the Brookhaven National Laboratory total $18.4 million of appropriated funding for FY 97 ($3.3 million was from prior year unobligated funds) and $22.0 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new public comments regarding the IAG were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

In FY 95, the following major documents were submitted to EPA and the State of New York:

- OU I RI/RA;
- OU II/VII RI/FS Work Plan;
- OU IV FS, draft PP, and draft ROD; and
- Groundwater removal action draft EE/CA and Action Memorandum.

In FY 96, the following major documents were submitted to EPA and the State of New York:

- OU II RI/RA (September 1996);
- OU IV Final ROD (March 1996);
- OU V RI/RA (July 1996); and
- OU VI PP (September 1996).

Progress in Conducting Remedial Actions

Four underground storage tanks were removed at Building 650 in August 1994, and a draft Completion Report was prepared. Characterization work for the Landfills Removal Action was completed, and a draft EE/CA was submitted to EPA Region II and the State of New York on July 28, 1994. Preparation of the design for the Current Landfills Cap began in FY 94, and the draft Design/Closure Report was submitted on July 25, 1994. A contractor was selected for the D Tanks removal action and mobilization occurred in July 1994. Dismantlement of the tanks started on September 14, 1994. Draft Designs for the Cesspool Removal Action were submitted in August 1994. The Building 464 soil removal action was completed in December 1993.

In FY 95, the following remedial actions occurred:

- Twenty-three cesspool removals were completed;
- Four underground storage tanks were cut and packaged and the waste shipped offsite;
- D-Tanks removal was completed; and
- Landfill capping was initiated.

In FY 96, the following remedial actions occurred:

- The "current" landfills were capped in November 1995;
- Capping of the "former" landfill was initiated;
- Public water was provided to over 500 residences that are adjacent to BNL;
- The cesspool removal action was completed in March 1996;
- Construction of OU I and OU III groundwater/treatment was initiated as a removal action; and
- Design of the OU IV remedy was initiated.

Enforcement Activities

A $100,000 assessment of penalties under RCRA/TSCA was pending throughout 1992 and 1993. A settlement of $62,000 was reached in the spring of 1994. On May 11, 1994, DOE, EPA, and the operating contractor (Associated Universities Incorporated) signed an agreement on the penalty, which also included preparation of a Wildlife Survey and Management Plan and an internal audit of the hazardous waste management system. These activities were completed in October 1995 and are awaiting regulatory approval.

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Fernald, Hamilton County, Ohio

Office: Ohio Field Office Project

Size: 1,050 acres (1.6 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Fernald Environmental Management Project (FEMP), formerly the Feed Materials Production Center, was constructed in the early 1950s and was used to produce uranium metal products for use by the Government. Production was suspended in July 1989.

Overview of Environmental Conditions: Soil and groundwater contamination by radionuclides above background levels both onsite and in adjacent offsite areas. Release of radon and the retention of large quantities of low-level radioactive and mixed wastes in onsite storage areas are also of significant concern.

CERCLA/RCRA Remediation Funding in FY 96: $179,821,000

Progress in Reaching Interagency Agreement

At the time when FEMP was placed on the NPL, the site was engaged in activities aimed at compliance with the terms of an existing Federal Facility Compliance Agreement signed on July 18, 1986 between DOE and EPA Region V. The CERCLA portion of the Federal Facility Compliance Agreement was replaced by the signing of a Consent Agreement (an IAG) with EPA on April 9, 1990, which became effective on June 29, 1990. The Consent Agreement provides for the execution of RI/FSs for five OUs and the performance of removal and remedial actions at the facility. DOE and EPA signed an Amended Consent Agreement which was executed on September 20, 1991. The Amended Consent Agreement revised the milestones for submittal of these RI/FS documents to EPA and expanded the scope of the RI/FS to the former production area. The Amended Consent Agreement was modified in April 1993 as a result of an informal settlement concerning OU 2 schedules.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the Amended Consent Agreement at the FEMP total $188.1 million of appropriated funding for FY 97 and $160.2 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new public comments regarding the Consent Agreement were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

The RI/FS process at the FEMP was initiated in July 1986 under the provisions of a 1986 Federal Facility Compliance Agreement. The 1990 CERCLA 120 and 106 Consent Agreement amended the CERCLA portion of the 1986 agreement and restructured the ongoing investigations into five distinct OUs. The 1991 Amended Consent Agreement revised the milestones for submittal of RI/FS documentation to EPA for five OUs; whereby separate RI/FS reports and RODs would be issued for each of the OUs. Additionally, the amended IAG established milestone dates for the submittal of select documents addressing all five OUs and a final combined site-wide OU. Progress in completing the RI/FS for each of the five OUs as defined under the provisions of the Amended Consent Agreement (as modified in April 1993) is summarized below.

Affecting All OUs

The Amended Consent Agreement provided for the submittal of a risk assessment work plan to establish the specific approach, parameters, and models to be employed to conduct OU baseline and FS risk assessments. Approval of this work plan was received from EPA in May 1992. A site-wide characterization report, required by the agreement, providing a preliminary site-wide baseline assessment was transmitted to EPA in August 1992. A site-wide CERCLA quality assurance plan pertaining to all facility environmental sampling and analysis was approved by EPA in September 1992. This plan integrates DOE and EPA quality assurance policies and principles. The Sitewide Characterization report was approved by EPA on May 28, 1993. The preliminary Sitewide Baseline Risk Assessment was approved by EPA on April 1, 1994.

The FEMP is currently in the process of negotiating a site-wide environmental monitoring plan, termed the Integrated Environmental Monitoring Plan. The document was submitted in draft form to EPA on August 1, 1996. The revised document is scheduled to be submitted to EPA on January 31, 1997. This plan, when approved, will establish the site-wide monitoring plan to address remediation activities through the redirection of existing environmental monitoring program elements.

OU 1: Waste Storage Area

This OU comprises the existing six FEMP waste pits, the Clearwell, the Burnpit, berms, liners, and soil within the OU boundary. The initial Screening of Alternatives Report was approved by EPA in January 1991. The final RI Report was submitted to EPA in February 1994 and, following comment resolution and incorporation, was approved by EPA in August 1994. The OU 1 draft FS Report and PP were submitted to EPA in March 1994. The Final Draft FS Report and PP were approved by EPA in August 1994. The PP was released for review by the public in August 1994, and a Public Hearing on the PP was held in August 1994. The Draft ROD for OU 1 was submitted to EPA in November 1994, and the Final ROD was signed in March 1995. The OU 1 draft Remedial Design Work Plan (RDWP) was submitted in April 1995 to EPA, and the final RDWP was approved in June 1995. As identified by RDWP, the Preliminary Design Package is expected to be submitted to EPA on October 23, 1996, and the Pre-Final Design Package was submitted to EPA on March 20, 1996, both of them on schedule.

A Fernald Environmental Restoration Management Corporation task team, which includes the DOE, Fernald Area Office, has initiated definition of the scope, schedule, cost, and pros and cons of privatization of activities associated with the remediation of the waste pits. Initial review has indicated that the privatization concept could be used site-wide on other projects.

OU 2: Other Waste Units

This OU comprises the FEMP solid waste landfill, lime sludge ponds, flyash piles, and south field area. Site investigation activities within this unit included the completion of geophysical surveys, collection of representative waste and leachate samples from each waste unit, and the completion of over 25 wells in the vicinity of the waste units.

In accordance with the April 1993 revisions to the Amended Consent Agreement, the OU 2 revised RI report was submitted to EPA and Ohio and approved in January 1994. A formal public comment period began on October 26 and ended on November 25, 1994. A request to extend the public comment period was received on November 2, 1994. The Ross Township Board of Trustees formally requested a 30-day extension to the public comment period in order to allow additional time for the public to review the *Proposed Plan for Remedial Actions at Operable Unit 2*. In January 1995, the OU 2 FS/PP was approved. The OU 2 Draft ROD was submitted to EPA in February 1995, and approval was received in June 1995. The OU 2 RDWP was submitted to EPA in November 1995. The RD Work Package (30 percent Remedial Designs Work Package) was submitted to EPA in May 1996 for the Waste Units. The Pre-Final Design Package for Roads was submitted to EPA in May 1996. The Final Remedial Action Work Package for the Onsite Disposal Facility was submitted in June 1996, and in August 1996 for the Roads.

OU 3: Production Area and Production-Associated Facilities

This OU comprises the FEMP former Production Area and production-associated facilities and equipment (including all above- and below-grade improvements), including but not limited to all structures, equipment, utilities, drums, tanks, solid waste, waste products, thorium, effluent lines, K-65 transfer line, wastewater treatment facilities, fire training facilities, scrap metal piles, feed stock, and coal piles. The Interim ROD to decontaminate and dismantle the facilities in OU 3 was approved by EPA in July 1994. The Interim RD/RA Work Plan was submitted to EPA in March 1995 and approved in May 1995. A combined Draft RI/FS/PP for OU 3 was submitted to EPA in September 1995 and was resubmitted in December 1995. The Final OU 3 Draft ROD was submitted to EPA in August 1996. The Draft RD/RA Work Plan is scheduled to be submitted to EPA in November 1996.

OU 4: Silos 1, 2, 3, and 4

This OU comprises the four waste storage silos located in the FEMP waste storage area. The Initial Screening of Alternatives Report was approved by EPA in October 1990. The final RI report was approved in November 1993. The OU 4 FS/PP was conditionally approved in February 1994. The PP was released for review by the public in March 1994, and a Public Hearing on the PP was held in March 1994. After consideration of public input, the Final ROD was signed by EPA in December 1994. Upon finalization of the ROD, the Amended Consent Agreement requires completion of an RDWP. The RDWP defines the strategy and schedule for development of the remedial design. The final RDWP was approved by EPA in June 1995. Consistent with the Final RDWP for OU 4, a phased approach is being utilized to accomplish remedial action activities. A Remedial Action Work Plan (RAWP) is being developed to identify the implementation strategy and schedule for completion of all remedial activities as set forth in the ROD.

There are two phases associated with the OU 4 RAWP. Phase I will focus on initial RA activities in support of the construction of the Fernald Residues Vitrification Plant (FRVP) as follows: Underground Utilities/Site Preparation; Silo Superstructure Construction; and New Radon Treatment System

data from the OU 4 Vitrification Pilot Plant so as to adequately address the following technical work scope: FRVP Process Building Construction and FRVP Operation. The Phase I RAWP was submitted to EPA in December 1995. Phase I of the Vitrification Pilot Plant construction was completed in May 1996, and operations began in June 1996. The Phase I Pilot Operation is expected to be completed in February 1997.

OU 5: Environmental Media

This OU comprises groundwater, surface water, soil, sediments, and flora and fauna in the vicinity of the FEMP not included in the definition of OUs 1 through 4. The Initial Screening of Alternatives Report was submitted to EPA in November 1992 and was conditionally approved in January 1993. EPA comments were incorporated and the Initial Screening of Alternatives was resubmitted to EPA in March 1993. A treatability study work plan was approved by EPA in September 1992. The RI report was submitted to EPA in June 1994 and approved in February 1995. The draft FS/PP Report was submitted to EPA in November 1994 and approved in April 1995. The OU 5 draft ROD was submitted to EPA in August 1995 and was approved in January 1996. Final OU 5 Remedial Design Work Plan was submitted to EPA in June 1996.

Site Remediation Acceleration

In June 1996, new target funding levels were issued for FY 97 in the range of approximately $264.5 million. As a result of this reduction from the original plan of $276 million funding level, a replan was conducted. The replan indicated a possible extension of one to three years of the Ten-Year Plan (now the Fernald 2006 Plan). However, Fernald Field Office is committed to devise a strategy that will realize the goals that were identified in the Ten-Year Plan (now the Fernald 2006 Plan).

Progress in Conducting Remedial Actions

Final RODs for OUs 1, 2, and 3, and an Interim ROD for OU 4 have been approved by the EPA, and the Final ROD for OU 5 was approved in January 1996. Therefore, site activities at Fernald have moved from the assessment phase into the cleanup phase. Further, several removal actions are planned or are underway.

Removal Actions

Thirty removal actions have been designated for the Fernald site, two of which have multiple phases resulting in 34 actions. These actions have been assigned to various site complexes. Twenty-five actions have been completed, one has been canceled, and the remaining eight are either complete or are being incorporated with RD/RA Work Plans.

Enforcement Activities

In October 1996, FEMP entered into a Final Dispute Resolution with EPA concerning replanning of a milestone for OU 4. Negotiations of the schedule are pending, awaiting agreement by an independent technical review of a path forward, which is expected in the spring of 1997.

MOUND PLANT

Dayton, Montgomery County, Ohio

Office: Ohio Operations Office

Size: 306 acres (0.5 square mile)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Mound Plant has been in continuous use since 1948. Its main mission was to manufacture non-nuclear components and tritium-containing components for nuclear weapons that are assembled at another site. Other activities include the separation, purification, and sale of stable isotopes of the noble gases; solar energy; fossil fuels; nuclear safeguards; waste management; heat source testing (plutonium); and fusion fuel systems. In 1995, the primary mission changed to cleanup to industrial standards, as approved by EPA, in order to sell the site for industrial use.

Overview of Environmental Conditions: Tritium and VOC contamination of onsite and offsite groundwater and soils contaminated with residual plutonium from past onsite operations.

CERCLA/RCRA Remediation Funding in FY 96: $35,971,000

Progress in Reaching Interagency Agreement

DOE and EPA Region V executed an FFA on August 6, 1990. The State of Ohio expressed an interest in developing a three-party agreement, with the State of Ohio being added to the FFA. Negotiations were held on the development of the new three-party FFA, which were culminated by the signing of this new agreement on July 15, 1993.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $84.4 million of appropriated funding for FY 97 and $83.1 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Prior to FY 93, limited public comments were received on the original 1990 FFA. Most of those comments inquired why the site was placed on the NPL. Limited comments were received during the FY 93 comment period for the new three-party FFA (no formal comment period in FY 94). EPA Region V, the State of Ohio, and DOE evaluated these comments and determined that no modifications to the FFA were required.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Mound Plant was originally divided into nine OUs that separated the plant into geographic units. In FY 96, Mound rebaselined its cleanup effort to be more action-oriented to result in an acceleration of cleanup at a reduced cost. The site is now divided

into "Onsite Areas," "Offsite Areas," and a "Groundwater" element. The Onsite Areas incorporate nearly all work activities inside the fenceline of the plant associated with areas previously identified in OUs 2, 5, and 6. The Onsite Areas contain 19 release blocks (letters A through S) containing approximately 219 potential release sites that will undergo a Removal Site Evaluation process to determine site uncertainties, potential data needs, and ultimately the appropriate response action required under CERCLA. The potential release sites are evaluated to determine:

- Sites that require No Further Assessment based on existing information (i.e., no problem exists at the site);
- Sites for which a response action is warranted based on existing information (i.e., a problem does exist); and
- Sites for which there is insufficient information available to make a determination (i.e., not able to determine if there is a problem).

The Offsite Work addresses the remediation of the plutonium-contaminated soils and sediment in the Miami-Erie Canal located adjacent to the Mound Plant (within the City of Miamisburg) resulting from a ruptured waste process line in 1969 and the remaining effort of the RI/FS process for OU 9. The Groundwater element addresses the implementation of the groundwater remedy for the VOCs found in a portion of the Buried Valley Aquifer underlying the southwest corner of the plant, also known as OU 1, for which an ROD was completed in FY 95.

Progress in Conducting Remedial Actions

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.

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.

In FY 96, EPA, Ohio EPA 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 can be made. Three of the seven removal actions have been initiated, two (potential release sites 111 and 408) have initiated field work, and one has initiated design work (potential release site 266). The remainder of the removals await availability of funds. Approximately 50 potential release sites underwent assessment prior to the FY 96 decisions. There remain 96 potential release sites to be addressed in FY 97. Additionally, groundwater and regional soils investigations were performed for monitoring and decision-making purposes. As a result 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.

SAVANNAH RIVER SITE

Aiken, Aiken County, South Carolina

Office: Savannah River Operations Office

Size: Approximately 198,400 acres (310 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Savannah River Site (SRS) is located in south-central South Carolina, approximately 25 miles southeast of Augusta, Georgia and 20 miles south of Aiken, South Carolina. The site encompasses 310 square miles and is bordered by the Savannah River on the southwest. Although SRS' primary mission over the past 40 years focused on the production of nuclear materials (primarily tritium and plutonium) for national defense, the site's nuclear production reactors have not operated since 1988. R Reactor was shut down permanently in 1964, and C Reactor was placed in cold standby in 1987. K, P, and L reactors were shut down in 1988 for maintenance and safety upgrades and have never been restarted. As a result, much of the site's mission has turned to environmental restoration and waste management activities. The current program consists of 467 inactive waste and groundwater sites and an estimated 600 facilities that are candidates for decommissioning.

(continued)

Progress in Reaching Interagency Agreement

DOE, EPA Region IV, and the State of South Carolina negotiated an IAG for SRS during calendar years 1990 through 1992. The IAG was executed on January 15, 1993 and became effective on August 16, 1993.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG total $100.7 million of appropriated funding for FY 97 and $99.1 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

The IAG Notice of Intent was signed on December 2, 1991. The document was released for a 60-day public review on December 17, 1991; the public comment period ended on February 14, 1992. A public meeting was held on January 23, 1992. Significant public comments focused on the specific roles and jurisdictions of the South Carolina Department of Health and Environmental Control (SCDHEC) and EPA Region IV in maintaining and enforcing DOE SRS cleanup actions.

The public comments also included concerns that the IAG should not limit SCDHEC's RCRA authority. The IAG was revised to better clarify dispute resolution procedures and authorities of the two regulators for oversight of RCRA and CERCLA cleanup activities.

Overview of Environmental Conditions: Onsite soil, groundwater and air emissions associated with chemical and radioactive releases.

CERCLA/RCRA Remediation Funding in FY 96: $83,719,000

Additionally, public comments showed the need to revise SRS' system of prioritizing waste units. The IAG was revised to include a priority system recommended by EPA, and a responsiveness summary addressing public comments was issued in 1993.

Comments requesting a site advisory board consisting of members of the public were addressed in a revised public involvement plan. SRS developed a site-specific advisory board, called the Citizens Advisory Board, which began functioning in 1994 and has made ten recommendations to DOE.

Progress in Conducting Remedial Investigations/Feasibility Studies

A RCRA 3004(u) permit was issued by EPA Region IV and the State of South Carolina on September 29, 1987. A program plan, which outlines the requirements for the preparation of unit-specific investigation plans and proposed plans, was revised on August 20, 1993. The following activities were accomplished during FY 96:

- Submitted 13 RFI/RI Plans;
- Signed 2 Interim Remedial Action (IRA) RODs;
- Submitted 21 RFI/RI and Baseline Risk Assessments;
- Submitted one Treatability Study Work Plan;
- Completed site screening/evaluation at 42 additional sites and submitted 24 site Evaluation Reports to the regulatory agencies;
- Continued implementation of the Field Investigation Plan at the Mixed Waste groundwater unit and Burial Ground Complex;
- Submitted 10 Corrective Measure Studies/FS Reports on CERCLA sites;
- Initiated field starts at 10 units;
- Submitted eight RD/RA Work Plans and Reports; and
- Submitted 10 Corrective Measures Study/Feasibility Study Reports on CERCLA units.

Progress in Conducting Remedial Actions

The following activities were accomplished in FY 96:

- Initiated 11 RAs and completed one RA;

- Initiated four Time-Critical Removal Actions and completed two;
- Completed off-gas construction of the M-1 Air Stripper unit;
- Initiated Dense Non-Aqueous Phased Liquid remediation at the M-Area Basin;
- Installed two of 12 recirculation wells at the Southern Sector;
- Removed over 340,000 pounds of contaminated vegetation in H-Area;
- Initiated soil cover at the Old Radioactive Waste Burial Ground; and
- Removed 80,000 pounds of solvents in the A/M Area, bringing the total to over 420,000 pounds of solvents removed.

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OAK RIDGE RESERVATION (Oak Ridge National Laboratory; Y-12 Plant; K-25 Site [Oak Ridge Gaseous Diffusion Plant]; and Oak Ridge Associated Universities)

Oak Ridge, Anderson and Roane Counties, Tennessee

Office: Oak Ridge Operations Office

Size: 37,000 acres (57.8 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Oak Ridge National Laboratory (ORNL) provides extensive research and development in energy production. Activities include reactor and accelerator development and operation, production and sale of radioactive and stable isotopes, and environmental and health research.

The K-25 Site (the Oak Ridge Gaseous Diffusion Plant) was a production and development facility for uranium enrichment. Production operations at the K-25 Site ceased in 1985. The present mission of the K-25 Site is environmental restoration, decommissioning, waste management, and support for other government agencies in the Work for Others program.

The Y-12 Plant's original mission was to separate the fissionable isotope of uranium-235 by the electromagnetic process. The plant today has four principal missions: to dismantle nuclear weapon components; to provide special production support to DOE programs; to support ORNL research programs; and to serve as a manufacturing, technology, and demonstration center.

Progress in Reaching Interagency Agreement

DOE, EPA Region IV, and the State of Tennessee have negotiated an IAG for the following sites included within the Oak Ridge Reservation (ORR): ORNL, Y-12 Plant, K-25 Site, ORAU, and the Clinch River. The IAG was effective on January 1, 1992. In accordance with the IAG, the ORR is currently integrating the requirements of corrective measures under RCRA and applicable state law with response actions under CERCLA.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG at the ORR total $74.6 million of appropriated funds for FY 97 and $84.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

The public comment period for the IAG closed on February 25, 1991. No comments were received. No new public comments regarding the IAG were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

To address contamination of the ORR as a whole, the reservation has been partitioned into 80 OUs/Work Units consisting of source control OUs and integrator

Mission (continued):

The Oak Ridge Associated Universities (ORAU) is a private, not-for-profit association of 49 colleges and universities. It is a contractor to DOE, conducting research and education programs in the areas of energy, health, and the environment for DOE, ORAU's member institutions, and other private and government organizations.

Overview of Environmental Conditions: The sites include waste units that are either radioactive, hazardous, mixed (both radioactive and hazardous), or non-radioactive/non-hazardous. Examples of the concerns include radioactive underground tanks, solid waste disposal areas, liquid waste pit and trenches, hydrofracture facilities, and dense, non-aqueous phase liquid migration in fractured rock. More than 400 contaminated units exist at the reservation, and surface water and groundwater also are contaminated.

CERCLA/RCRA Remediation Funding in FY 96: $85,266,000

OUs (such as groundwater and surface water), which can be prioritized to achieve the most effective and rapid investigation and cleanup possible. OUs are redefined and work schedules are adjusted as investigations progress and new data become available. RI/FSs are being conducted for each OU. Removal actions and interim remedial actions are conducted, where appropriate, to address threats to human health and the environment in advance of the final remedial action selection.

The remedial action work plans, site characterization studies, RI reports, and remedial design work plans have been prepared, using EPA guidelines for CERCLA RI/FSs and RCRA RFIs where appropriate. These documents were sent out in accordance with milestones specified in the negotiated IAG and the schedule defined in the RCRA permit. Public meetings were held during the year to advise the public of the restoration process being implemented to remediate the ORR and to address the public's concerns over the relative risk associated with the offsite contamination. Work completed or underway during FY 96 includes:

- ORAU - The South Campus Facility ROD was approved in December 1995. Additionally, an Action Memorandum for Freeds Bend Area was approved in October 1995.

- ORNL - Completion of the Molten Salt Reactor Experiment Deposit Removal Action Memorandum and Old Hydrofracture Tank Sludge Removal Action Memorandum.

- Y-12 Plant - Completion of the Chestnut Ridge OU 2 ROD and the Bear Creek Valley OU 2 ROD.

Progress in Conducting Remedial Actions

Final CERCLA remedial action will be initiated after RODs are signed. Removal and interim cleanup actions completed during FY 96 include:

- K-25 Site - Two Interim Actions and two decommissionings involving 50 structures were completed. The shipment of 78,000 cubic feet of pond waste raw sludge from K-25 to the private sector for treatment and disposal was completed. There were 308,230 cubic feet of stabilized pond waste from K-25 shipped for disposal. Contaminated sediment was removed from the K-25 cooling tower basin. A total of 118 infrastructure projects for the landlord were completed.

- ORNL - Grouting of four high-risk trenches was completed. The groundwater plume at Core Hole 8 was contained. Construction was completed and cold test initiated for the Gunite Tanks Treatability Study. Contaminated liquids were removed from Low Level Liquid Waste Tanks. Interim Actions were completed on WAG 1, the Process Waste Surge Tank, and the WAG 1 Tank Content Removal. Demolition of the Waste Evaporator Facility completed this decommissioning activity.

- Y-12 Plant - Construction of the Filled Coal Ash Pond was completed. Remedial actions were performed for the Storage Area RCRA Closure and the Interim Drum Yard. The decommissioning of the Steam Coil Removal was completed as an Interim Action.

- ORR (Offsite) - Completion of the Lower East Fork Poplar Creek Phase I Remedial Action of Soils and Soil Disposal at Y-12 landfill. The City of Oak Ridge Sewage Digester content removal was completed.

In addition, in FY 96 the ORR established the Sample Management Office as part of its community relations efforts.

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PANTEX PLANT

Amarillo, Potter and Randall Counties, Texas

Office: Albuquerque Operations Office

Size: 16,000 acres (25 square miles)

NPL Status: Placed on the NPL on May 31, 1994.

Mission: The facility was originally constructed in 1942 for the U.S. Army Ordnance Corps for loading conventional ammunition shells and bombs. In 1951, the Atomic Energy Commission (DOE's predecessor) took over the main plant and surrounding 10,000 acres for use as a nuclear weapons production facility. The Pantex Plant's current functions include the fabrication of chemical high explosives; high-explosives development work in support of the design laboratories; and nuclear weapons assembly, disassembly, testing, quality assurance, repair, retirement, and disposal.

Overview of Environmental Conditions: Potential for soil and groundwater contamination from formulation and development of high explosives; machining and plating operations; weapon component tests (non-nuclear); facility and vehicle operations and maintenance activities; and historical waste management and disposal practices. High-explosive and solvent contamination may also have resulted from operations during World War II.

CERCLA/RCRA Remediation Funding in FY 96: $13,025,000

Progress in Reaching Interagency Agreement

Remediation of environmental conditions is currently being addressed under authority of a RCRA Part B Permit, issued June 6, 1991 by the Texas Natural Resources Conservation Commission (formerly the Texas Water Commission). IAG negotiations have been initiated with FY 98 projected as the completion date. EPA may be willing to use the RCRA permit instead of the IAG to regulate corrective actions at the site.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration at the Pantex Plant total $9.1 million of appropriated funding for FY 97 and $9.6 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No formal public comment occurred in FY 96 concerning the IAG. Pantex Plant continued its aggressive community relations program during FY 96 by holding monthly public information meetings and participating in the monthly Pantex Plant Citizens Advisory Board. Supporting efforts include issuance of press releases for major milestones, dissemination of fact sheets and brochures, and maintenance of public reading rooms.

Progress in Conducting Remedial Investigations/Feasibility Studies

The assessment phase for four projects was completed in FY 96. Two assessments will be completed in FY 97.

Progress in Conducting Remedial Actions

A groundwater treatment system was designed, manufactured, and installed for use on the Zone 12 perched groundwater. This system was completed one year ahead of schedule at a saving of $1.5 million. In FY 96, removal actions and interim corrective measures were completed at the Ditches and Playas, the High Explosives/Radiation Sites, and the Miscellaneous Chemical Spill Sites. In FY 96, 29 SWMUs were closed as No Further Action Required, and 17 were closed as completed cleanups. In FY 97, 17 SWMUs will be closed, 17 interim corrective measures will be completed, and 3 removal actions will be completed.

MONTICELLO MILL SITE AND MONTICELLO VICINITY PROPERTIES

Monticello, San Juan County, Utah

Office: Grand Junction Office

Size: 110 acres (0.2 square mile) (Mill Site), plus approximately 425 Vicinity Properties in the town of Monticello and 27 peripheral properties.

NPL Status: Facility comprised of two individual NPL sites: the Mill Site was placed on the NPL on November 21, 1989 and the Vicinity Properties on June 10, 1986.

Mission: Former uranium milling operation.

Overview of Environmental Conditions: Soil, groundwater, and surface water contamination from radioactive mill tailings, process equipment, and milling operations. Approximately 2.6 million cubic yards of contaminated material.

CERCLA/RCRA Remediation Funding in FY 96: $32,692,000

Progress in Reaching Interagency Agreement

DOE, EPA Region VIII, and the State of Utah negotiated and signed an FFA for the Monticello Mill Site and the Vicinity Properties. This FFA, which covered both NPL sites, was executed on December 22, 1988. The March 1995 Site Management Plan establishes the overall plan for remedial actions at Monticello. Enforceable milestones are established for the submission of primary documents as defined by the FFA.

Specific Cost Estimates and Budgetary Proposals Involved in the Federal Facility Agreement

Funds budgeted for environmental restoration under the FFA at the Monticello Mill Site and Vicinity Properties total $21.2 million of appropriated funding for FY 97 and $23.4 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Federal Facility Agreement

No new public comments regarding the FFA were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

Mill Site: The RI/FS addressing mill tailings and 22 peripheral properties was completed in 1990. An additional RI/FS addressing groundwater and surface water contamination and contamination of five peripheral properties (OU 3) commenced in 1992. A Phase I RI/FS Work Plan was approved by EPA and the State of Utah, and field activities were initiated. The OU

3 baseline surface water and groundwater sampling for the OU 3 RI was completed and a Baseline Data Summary Report prepared in February 1994. The Draft Final OU 3 RI/FS Work Plan, Field Sampling Plan, and Quality Assurance Project Plan were submitted for regulatory review in September 1995. Soil, sediment, surface water, groundwater, and biota sampling in support of the RI is expected to be completed in October 1996. Submittal of the Baseline Risk Assessment is planned for March 1997 and the Draft RI for June 1997.

Vicinity Properties: The RI/FS for the Vicinity Properties was completed in calendar year 1989.

Progress in Conducting Remedial Actions

Mill Site: The ROD for OUs 1 and 2 of the Mill Site was signed by EPA in August 1990 and by DOE in September 1990; construction of site preparation facilities at OU 1 is complete. These facilities include the installation of surface water drainage control structures, including the runoff retention pond for the 78-acre site and contiguous peripheral properties. Repository excavation and liner installation at OU 1 are expected to be completed in early FY 97. Offsite drainage control ditches and the liner for Pond 3 were completed. To meet Utah discharge standards, the wastewater treatment plant was installed, tested, and operated to treat contaminated runoff. The Mill Site Remediation design, which includes the onsite repository, was completed, and the subcontract for Mill Site Remediation was awarded. Construction of Pond 4, which is used to manage leachate from the repository, was completed. The repository excavation and liner installation are expected to be completed in November 1996. Unnecessary groundwater monitoring wells were abandoned at the Mill Site and the Repository Site. The scope of the OU 3 groundwater modeling was concurred on by the regulators in November 1995. During FY 96 at OU 2, remedial action was started and completed at five properties.

Vicinity Properties: The ROD covering the Vicinity Properties was signed by EPA in September 1989 and by DOE in December 1989. Since the last Annual Report to Congress, remedial actions have been completed on 389 of the project total of 425. Fourteen Vicinity Properties were remediated in FY 96.

Enforcement Activities

DOE purchased emergency preparedness vehicles for the City of Monticello as a Supplemental Environmental Project in an attempt to resolve the dispute over fines for violations of state storm water discharge standards. In addition, DOE expects to pay $40,000 in fines to the EPA.

HANFORD SITE

Richland, Benton County, Washington

Office: Richland Operations Office

Size: 359,680 acres (562 square miles)

NPL Status: Four areas were placed on the NPL on October 4, 1989 (Areas 100, 200, 300, and 1100). Area 1100 was deleted from the NPL on September 30, 1996.

Mission: Chosen in 1943 for the Manhattan Project, the Hanford Site was used to produce plutonium for the world's first nuclear weapons. Today the focus of activities is site cleanup and environmental restoration; scientific and environmental research; development and application of radioactive waste and hazardous waste management technology; and design, construction, and operation of major energy-related test and development facilities.

Overview of Environmental Conditions: Onsite soil, groundwater, and sediment contamination by various hazardous and radioactive substances. Various levels of radionuclides are also routinely identified in the Columbia River.

CERCLA/RCRA Remediation Funding in FY 96: $105,220,000

Progress in Reaching Interagency Agreement

DOE, EPA Region X, and the State of Washington negotiated and signed the Hanford Federal Facility Agreement/Consent Order (hereafter referred to as the Tri-Party Agreement) on May 15, 1989. This Tri-Party Agreement provides the framework for effective investigation of waste sites and subsequent remediation of hazardous and mixed waste contamination at Hanford. An annual update is prepared to address additional problems and to incorporate schedules agreed to in approved RI/FS Work Plans or other work scopes agreed to by the three parties. Revision 2 of the Tri-Party Agreement was published in September 1992, which included the second and third amendments to the Consent Order.

On May 23, 1993 negotiations began on significant changes to the Tri-Party Agreement. Change for CERCLA activities included development and inclusion of milestones related to the proposed Environmental Restoration Disposal Facility, consolidation of the 300 Area OUs into a single CERCLA project, and accelerated groundwater remediation projects. The amended Tri-Party Agreement was signed on January 25, 1994.

In July 1994, the DOE, EPA Region X, and the Washington State Department of Ecology agreed to negotiate on matters related to Hanford's "Refocusing Environmental Restoration" program. The parties agreed to negotiate cleanup schedules in order to achieve earlier remediation of sites along the Columbia River, and to increase emphasis on protecting and remediating groundwater. In addition, the parties agreed to consult with affected Indian Nations and other stakeholders to seek and respond to their values and concerns. The parties concluded

formal negotiations on September 30, 1994, and the amended Tri-Party Agreement was signed on July 28, 1995 after a 45-day public comment period.

Amendment 6 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. The changes fall into these broad categories:

- Single Regulator Approach (eliminating support agency staffing);
- Providing unit managers and their line managers with increased responsibility and authority regarding their projects; and
- Streamlining the dispute resolution/decision-making process.

For detailed information regarding the Tri-Party Agreement, see the FY 91 CERCLA 120 Report to Congress.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for CERCLA activities in the environmental restoration program under the Tri-Party Agreement total $95.9 million of appropriated funding for FY 97 and $94.1 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Amendments and updates to the Tri-Party Agreement are subject to public comment periods prior to signature by the three parties. The 5th and 6th amendments were signed by the three parties in February 1996. For detailed information regarding the Tri-Party Agreement comment process, see the FY 91 CERCLA 120 Report to Congress. All future changes to the Tri-Party Agreement will also be subject to public review and comment.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Hanford Site includes a broad range of waste units that contain either radioactive, hazardous, mixed (both radioactive and hazardous), or nonradioactive/nonhazardous solid waste. Certain hazardous substances and hazardous wastes remain on and under the Hanford Site and have been detected in groundwater and surface water. An estimated 5 billion cubic yards of solid and dilute liquid waste, including hazardous substances, mixed waste, and hazardous waste and constituents, have been disposed of at the Hanford Site.

All remediation work at the Hanford Site was originally included within four NPL sites (the 100, 200, 300, and 1100 Areas), 74 source OUs containing 1,249 identified hazardous waste sites (985 past-practice sites), and 4 groundwater OUs. After cleanup was completed, the 1100 Area was deleted from the NPL in September 1996. OUs were prioritized by EPA and the State of Washington in 1989 for investigation based on an initial assessment of environmental risk.

The following activities were accomplished during FY 96:

100 Area

- A CERCLA PP was prepared for the 100 Area waste sites that were not addressed by documentation for the 100-BC-1, 100-BC-2, 100-BC-5, 100-DR-2, 100-FR-1, 100-KR-1, 100-KR-4, and 100-HR-2 OUs;
- A Focused FS Report was prepared for the 100 Area waste sites that were not addressed by documentation for the 100-BC-1, 100-BC-2, 100-BC-5, 100-DR-2, 100-FR-1, 100-KR-1, 100-KR-4, and 100-HR-2 OUs; and
- A Limited Field Investigation for the cribs in the 100-NR-1 OU was submitted.

200 Area

- One CERCLA PP was submitted for the 200-UP-2 OU;
- The Environmental Restoration Disposal Facility began operations on July 1, 1996 under a CERCLA ROD that was issued in January 1995;
- A Focused FS Report for the 200-UP-2 OU was submitted; and
- A Limited Field Investigation Report for the 200-UP-1 groundwater OU was submitted.

300 Area

- A CERCLA PP for the 300-FF-1 and 300-FF-5 OUs was submitted; and
- A CERCLA ROD for the 300-FF-1 and 300-FF-5 OUs was prepared and signed on July 17, 1996.

1100 Area

- The 1100 Area was deleted from the NPL on September 30, 1996.

Progress in Conducting Remedial Actions

Under the Hanford Site Past Practice Strategy, sites that pose a threat to human health and the environment are identified. These sites are considered for Expedited Response Actions (ERAs).

The following ERA activities were accomplished in FY 96:

100 Area

- The N-Springs ERA is located near the N-Reactor. Past liquid effluent discharges have led to strontium-90 radionuclide releases along the southern bank of the Columbia River, known as N-Springs. In August 1995 operations of a groundwater treatment system at N-Springs began.

- Excavation of the 116-C-1 trench and 116-B-4 french drain continued during FY 96.

200 Area

- The 200 West Area carbon tetrachloride treatment site (located in the 200-ZP-2 OU) vapor extraction continues. The system is now automated. Through September 1996, more than 159,000 pounds of carbon tetrachloride have been removed.

There were no ERAs done during FY 96 in either the 300 or 1100 Areas.

Other accomplishments include:

100 Area

- Excavation of contaminated soils began in FY 96.

- 15,300,000 gallons of groundwater have been pumped and treated at the 100-HR-3 OU.

200 Area

- Pump and treat is continuing as remediation in the 200-ZP-1 and 200-UP-1 OUs; 14,300,000 gallons and 28,500,000 gallons respectively have been treated through FY 96 at these OUs.

300 Area

- Remediation will begin in FY 97.

1100 Area

- Cleanup of the 1100 area was completed in FY 95. The 1100 area cleanup consisted of excavation of PCB-contaminated soil from the Horn Rapids Landfill and Ephemeral Pool and construction of a cap. More than 11 million gallons of groundwater have been treated and the past-practice disposal facility (the Environmental Restoration Disposal Facility) started operations. EPA deleted the 1100 Area from the NPL on September 30, 1996.

SECTION V

SITE SUMMARIES FOR SELECTED FACILITIES NOT ON THE NPL (BY STATE)

V. SITE SUMMARIES FOR SELECTED FACILITIES NOT ON THE NPL (BY STATE)

This section of the annual report to Congress provides descriptions of selected U.S. Department of Energy (DOE) facilities not on the National Priorities List (NPL). The level of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) funding allocated to these sites drives their selection for presentation in this section. This section is not required by CERCLA 120(e)(5); it is provided for public information. The information provided includes background summary information, environmental conditions, and funding information. Ross Complex in Washington was deleted from the NPL on September 23, 1996. Since it was deleted from the NPL at the end of fiscal year (FY) 96, the site summary presented in this section contains the same information as those sites listed on the NPL for FY 96. Figure I-1 presents the geographic location of the sites subject to Section 120 of CERCLA, including the sites highlighted in this section.

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LAWRENCE BERKELEY NATIONAL LABORATORY

Berkeley, Alameda County, California

Office: Oakland Operations Office

Size: 130 acres (0.2 square mile)

Mission: The Lawrence Berkeley National Laboratory (LBNL) was moved in 1940 to its present location from elsewhere on the University of California at Berkeley campus. LBNL is engaged primarily in basic energy research such as high-energy physics, nuclear physics, heavy-ion fusion, magnetic fusion energy, biology, and medicine.

Overview of Environmental Conditions: Onsite releases of heavy metals and other pollutants to the sanitary sewer system and soil and groundwater contamination by chlorinated hydrocarbons, solvents, tritium, and motor fuels.

CERCLA/RCRA Remediation Funding in FY 96: $3,261,000

Remediation of environmental conditions at LBNL is being addressed under authority of a Resource Conservation and Recovery Act (RCRA) permit, which includes corrective action requirements. The site has been classified by the U.S. Environmental Protection Agency (EPA) as No Further Remedial Action Planned.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at LBNL total $3.2 million of appropriated funding for FY 97 and $4.0 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

LBNL corrective actions are being conducted in compliance with the site's RCRA Part B Permit. As part of this process, a RCRA Facility Assessment (RFA) was conducted by the State of California and LBNL. Because of the Part B Permit and the RFA requirement, the State of California requested LBNL to submit a RCRA Facility Investigation (RFI) Work Plan in accordance with the RCRA corrective action process. The RCRA investigation process follows a phased approach starting with the RFA, followed by an RFI and corrective measures study. LBNL completed its RFA in July 1992. RFI activity commenced in FY 92, and the RFI work plan was submitted to the State of California in November 1992. The first two RFI progress reports were sent to regulators in November 1994 and November 1995, respectively, with a final RFI report scheduled for delivery to regulators in February 1997. Site characterization is scheduled for completion in FY 98.

The Old Town Plume Corrective Measures Work Plan was submitted to the regulators in FY 96. Completed construction of four Interim Corrective Measure Groundwater Treatment Systems.

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SANDIA NATIONAL LABORATORIES/CALIFORNIA

Livermore, Alameda County, California

Office: Albuquerque Operations Office

Size: 413 acres (0.6 square mile)

Mission: Established in 1956 to provide support services to the neighboring Lawrence Livermore National Laboratory, Sandia National Laboratories/California's initial mission was to provide ordnance engineering services to Lawrence Livermore National Laboratory. Current programs being carried out at Sandia National Laboratories/California include nuclear weapons systems development and combustion, solar, and fusion research. The site was developed initially by the U.S. Navy in 1942 and later relinquished for DOE activities in 1956.

Overview of Environmental Conditions: Soil and groundwater contamination from a diesel fuel leak and from historical land disposal practices.

CERCLA/RCRA Remediation Funding in FY 96: $2,391,000

Remediation of environmental conditions at Sandia National Laboratories/California is being addressed under authority of a State of California Cleanup Order.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at Sandia National Laboratories/California total $2.5 million of appropriated funding for FY 97 and $3.0 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

On October 15, 1987, a Preliminary Assessment/Site Investigation (PA/SI) was submitted to EPA in response to CERCLA Section 120 requirements. To date, EPA has not completed a Hazard Ranking System evaluation for this site.

In December 1989, the State of California Regional Water Quality Control Board (RWQCB) issued a Site Cleanup Order (No. 89-184) to DOE and the Sandia Corporation. This order modified Order 88-142 requiring the consolidation of all site work to be accomplished by the Sandia Corporation and DOE, and set forth provisions and specifications for development and implementation of soil cleanup alternatives for identified areas of soil and groundwater pollution. Four areas of potential soil and groundwater pollution were identified in the Cleanup Order: Trudell Auto Repair Shop, Fuel Oil Spill, Navy Landfill, and Miscellaneous Sites. Remedial Investigations (RIs) at all four sites were completed in 1991.

Remedial activities associated with the Trudell Auto Repair Shop were completed in September 1990, and

the site was closed in December 1990. (DOE procured the land on which the repair shop was located to serve as a buffer zone for the protection of site operations.)

Regarding the cleanup of the Fuel Oil Spill site, authorization to proceed as recommended with an in-situ bioremediation pilot study was provided in December 1990. The remedial action plan for the Fuel Oil Spill was submitted to the State of California for review in March 1992. In October 1993, the state approved the use of the bioremediation pilot study for cleanup. An interim remedial measure is being implemented to protect groundwater while the bioremediation pilot study is being constructed and implemented. Construction of the pilot project was completed in FY 95. The third injection phase of the bioremediation phase began in the summer of 1996.

The Navy Landfill Solid Waste Water Quality Assessment Test report was submitted for review on June 29, 1990, as scheduled, recommending the "No Action Alternative." Groundwater monitoring continued through 1994 to address RWQCB concerns. The RWQCB gave permission in November 1994 to prepare a closure plan for the Navy landfill. Acceptable closure should consist of slope stabilization to be compatible with explosive magazines at the base of the landfill.

The Miscellaneous Sites investigation found contaminants present in concentrations far below regulatory guidelines. The report was submitted to the State of California recommending "no further action." The RWQCB agreed to closure of the assessment phase in 1994; no remedial activities were necessary.

SANTA SUSANA FIELD LABORATORY

Simi Hills, Ventura County, California

Office: Oakland Operations Office

Size: 2,700 acres (4.2 square miles). The DOE Portion (Energy Technology Engineering Center [ETEC]) is 90 acres (0.1 square mile).

Mission: The Energy Technology Engineering Center is a surplus facility undergoing environmental restoration.

Overview of Environmental Conditions: Chemical and radionuclide contamination of onsite and offsite groundwater and onsite soil from past nuclear research operations.

CERCLA/RCRA Remediation Funding in FY 96: $1,227,000

The environmental restoration activities at the Santa Susana Field Laboratory are being conducted under RCRA, California RWQCB, and California EPA authority. Several studies have been completed at the site including CERCLA investigations by DOE, and a RCRA Corrective Action Order by U.S. EPA Region IX and California EPA Department of Toxic Substances Control (DTSC). The RCRA Facility Assessment of the Energy Technology Engineering Center was completed indicating that limited characterization work is still required. Six Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) were identified.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at Santa Susana Field Laboratory total $1.4 million of appropriated funding for FY 97 and $16.3 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

To date, no further action determinations have been given to the AOCs and four SWMUs require additional work. FY 96 activities included a risk assessment study of the former Sodium Disposal Facility to determine the need for additional soil excavation prior to final closure. The regulators continue to delay approval of project documents which has caused nearly 2 years schedule slippage. Under the RCRA Corrective Action Order, the Current Conditions Report has been completed and the RCRA Facilities Investigation Workplan was submitted in March 1995 and is expected to be approved in October 1996. Characterization of groundwater to determine cleanup technology continues and interim groundwater treatment of a contaminated well located near the Radioactive Materials Handling Facility also continues.

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PINELLAS PLANT

Largo, Pinellas County, Florida

Office: Albuquerque Operations Office

Size: 100 acres (0.2 square mile)

Mission: The Pinellas Plant has been part of the DOE's nuclear weapons complex since it opened in 1957. The plant's former mission was component fabrication. The product lines included neutron generators, lightning-arrestor connectors, capacitors, magnetics, optoelectronic devices, and other components fabrication operations.

In September 1994, the plant stopped producing weapons-related components and has transitioned from a defense mission to an environmental management mission. The DOE has completed a significant effort to transfer production capability to the two principal receiving sites.

In March 1995, the Pinellas Plant was sold to the Pinellas County Industry Council. The DOE leased back a portion of the facility to complete the current mission, to achieve a safe transition of the facility from defense production, and to prepare the site for alternative uses as a community resource for economic development.

Overview of Environmental Conditions: Onsite groundwater contamination from the storage and disposal of drummed wastes and construction debris containing solvents

(continued)

Remediation of environmental conditions at the Pinellas Plant is being addressed under authority of a Federal RCRA permit that includes corrective action requirements and cleanup under state Superfund statutes.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at the Pinellas Plant total $59.0 million of appropriated funding for FY 97 and $1.1 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

DOE submitted PA/SI information on the Pinellas Plant to EPA Region IV on October 15, 1987. Remedial activities at the Pinellas Plant are being conducted under a RCRA permit issued February 9, 1990.

Groundwater contamination from VOCs, due to past plant activities, is the main environmental concern at the Pinellas Plant.

In August 1988, the EPA completed a RFA of the Pinellas Plant. In February 1990, the EPA issued the Pinellas Plant RCRA Hazardous and Solid Waste Amendments permit. This permit identified 15 solid waste management units that may have environmental contamination as a result of past plant activities. Subsequently, three additional SWMUs were identified. Environmental investigations later revealed that 11 of these units do not pose a threat to public health or the environment. A 12th site (Former Pistol Range), originally identified as requiring a corrective measures study, was addressed by an interim measure shortly after the original

Overview of Environmental Conditions (continued): and volatile organic compounds (VOCs). Contamination on the 4.5 Acre Site adjacent to (formerly part of) the Pinellas Plant is of concern because of offsite groundwater contamination.

CERCLA/RCRA Remediation Funding in FY 96: $5,620,000

investigation. No further action is required at this 12th site. EPA Region IV is currently in the process of modifying the Pinellas Plant RCRA Hazardous and Solid Waste Amendments permit to designate these sites as requiring no further action.

During site characterization and routine soil, water, and groundwater monitoring, plant personnel identified three additional areas: the Production Components Scrap Area, the West Fenceline Area, and the Wastewater Neutralization/Building 200 Area. No hazardous waste or hazardous waste constituents were released to the environment at the Production Components Scrap Area, and EPA directed that no further action was required at this site. The other two sites have groundwater contamination exceeding Federal and state maximum contaminant levels and primary drinking water standards. Interim Remedial Actions (IRAs) are currently being performed at the West Fenceline Area until full cleanup, expected to be completed in FY 97. The RFI for the Wastewater Neutralization Building 200 Area was completed in FY 96 with completion of the Corrective Measures Study scheduled for FY 97.

Additionally, the plant is cleaning up the 4.5 Acre Site, which was sold by DOE to a private party in 1972. A U.S. Geologic Survey in 1985 identified contamination at this site. The Pinellas Plant completed a voluntary assessment and source removal in 1985. The plant is now conducting a voluntary groundwater cleanup at the site following the criteria for state-led CERCLA type actions.

Of the four onsite and one offsite areas identified as requiring further action, IRAs are currently being performed at three sites (Northeast Site, 4.5 Acre Site, and the West Fenceline Area). The IRA at the 4.5 Acre Site consists of groundwater recovery and air stripping the contaminants. The West Fenceline Area has an air sparging/vacuum groundwater extraction system in operation. The Northeast Site is undergoing a groundwater recovery and air stripping of contaminants (currently utilizing the same treatment system as the 4.5 Acre Site), and a buried drum and debris removal action was completed in September 1995. The Pinellas Plant plans to construct an additional air stripping system in fiscal year 1997, which will treat water recovered from both the Northeast Site and Building 100 Area. This additional system, along with any approved innovative technologies, will serve as a final corrective measure for these two sites.

In 1995, DOE received concurrence from EPA Region IV for transfer of the facility as required by CERCLA Section 120(h). DOE will retain responsibility for ongoing environmental remediation activities, including the plant's Hazardous and Solid Waste Amendments permit as well as the state-led 4.5 Acre Site cleanup.

Radiological environmental contamination is not a Contaminant of Concern at the Pinellas Plant. Decommissioning will not be required at the Pinellas Plant due to proposed future commercial industrial reuse of the building and the fact that only residual contamination will be addressed by the Nuclear Material Facility Stabilization process.

The Pinellas Plant was previously identified as a Potentially Responsible Party at the Peak Oil Superfund Site in Tampa, Florida. A de minimis settlement was executed in September 1995, releasing DOE from any further liability at this Superfund Site. Pinellas Plant involvement in the Zellwood/Drum Services

Site (Superfund Site in Zellwood, Florida) is currently under investigation. A response to a CERCLA Section 104(e) information request regarding involvement at this site was completed in June 1992.

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ARGONNE NATIONAL LABORATORY-EAST

Chicago, DuPage County, Illinois

Office: Chicago Operations Office

Size: 1,700 acres (2.7 square miles)

Mission: Argonne National Laboratory-East (ANL-East) conducts a broad range of energy-related research projects and various nuclear and non-nuclear energy and environmental research and development activities.

Overview of Environmental Conditions: Major concerns are closed landfills which were used to dispose of solid and liquid hazardous waste. Several buildings and research reactors are contaminated with low levels of radiation and are undergoing or are scheduled for decommissioning.

CERCLA/RCRA Remediation Funding in FY 96: $9,835,000

ANL-East is a RCRA-regulated storage and treatment facility. Environmental restoration activities are being conducted under RCRA Corrective Action guidelines, the Toxic Substances Control Act (TSCA), as well as Illinois state regulations and permits. A draft RCRA Part B permit for the site is expected to be issued by the State of Illinois in October 1996.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at ANL-East total $4.1 million of appropriated funding for FY 97 and $4.5 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

Environmental restoration activities at ANL-East include both remedial action of contaminated areas and decommissioning of contaminated buildings, including 520 release sites and facilities. Of these, 419 have been remedied or determined to require no further action by the end of FY 96.

Remedial action activities involve characterization and remediation of waste disposal and storage sites, including the Solid Waste Landfill and the Mixed Waste Landfills, various underground storage tanks and solid waste management units. All of the landfills are undergoing an RFI that is expected to be completed in 1997. Field work for this RFI began in 1995. Interim actions underway at the Mixed Waste Landfills will prevent or reduce the spread of contaminated groundwater from this area of greatest concern at the site.

Decommissioning activities at ANL-East include a variety of inactive reactor, accelerator, and hot cell

facilities. Of these, ANL-East completed the transfer of the Experimental Boiling Water Reactor to the Waste Management Program for use as a waste storage facility in 1995 and the transfer of Building 200 Hot Cells and Building 212 Gloveboxes to the Landlord in 1996.

ANL-East conducted an Open House in September 1996 to encourage the public to become more familiar with the work performed at ANL-East. ANL-East also established a Community Leaders Roundtable in 1996 that meets monthly to discuss environmental restoration and waste management activities at the site.

KANSAS CITY PLANT

Kansas City, Clay County, Missouri

Office: Albuquerque Operations Office

Size: 136 acres (0.2 square mile)

Mission: The Kansas City Plant produces and procures electrical, electronic, electromechanical, mechanical, plastic, and nonfissionable metal components for nuclear weapons. Operations began in 1949; however, prior to its current use, the facility was used as an airplane engine production plant for the Department of Defense.

Overview of Environmental Conditions: Onsite groundwater and soil contamination and air releases from the historical use of solvents and spillage of transformer oils contaminated with polychlorinated biphenyls (PCBs).

CERCLA/RCRA Remediation Funding in FY 96: $6,014,000

Remediation of environmental conditions at the Kansas City Plant is being addressed under a RCRA Section 3008(h) Administrative Order.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at Kansas City Plant total $3.5 million of appropriated funding for FY 97 and $5.8 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

In FY 96, EPA has approved the corrective measures studies for Outfall 001/Northeast Area and conditionally approved the last five corrective measures studies for Miscellaneous Contaminated Sites, Department 26, Department 27 Inside, TCE Still Area, and the Maintenance Vehicle Repair Shop Sump.

In FY 96 remedial actions have been completed for all release sites from the Plating Building Area, Department 26, Department 27 Inside, and the Miscellaneous PCB sites. Removal actions have been partially completed at the TCE Still Area and the Maintenance Vehicle Repair Shop Sump. Groundwater interim measures treatment continued in FY 96.

Assessment of 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.

Kansas City Plant continued its community relations program by publishing quarterly issues of *Focus on the Environment* and by welcoming public questions, concerns and comments. Two videotapes entitled

Working Clean and *Cleaning Up the Abandoned Indian Creek Outfall* have been made available for community groups and schools. In addition, public library access to all deliverables made to EPA was maintained.

NEVADA TEST SITE

Nye County, Nevada

Office: Nevada Operations Office

Size: 864,000 acres (1,350 square miles)

Mission: The Nevada Test Site, created in the early 1950s, is used as a detonation and testing range for both nuclear and non-nuclear weapons.

Overview of Environmental Conditions: Contamination of onsite groundwater and soil resulting from both nuclear and non-nuclear weapons testing activities.

CERCLA/RCRA Remediation Funding in FY 96: $45,900,000

The environmental restoration activities at the Nevada Test Site are being conducted under a Federal Facilities Agreement and Consent Order with the State of Nevada signed on May 5, 1996. A Sitewide Environmental Impact Statement has been prepared for activities within the State of Nevada. A Record of Decision (ROD) is expected to be completed in December 1996.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration for Nevada Test Site total $52.9 million of appropriated funding for FY 97 and $49.5 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

DOE submitted a PA and draft Hazard Ranking System scores for the Nevada Test Site and eight offsite locations to EPA Region IX on April 15, 1988. DOE has since rescored the Nevada Test Site, using the revised Hazard Ranking System. The Hazard Ranking System package was resubmitted to EPA Region IX in December 1991. The Nevada Test Site is being evaluated for potential listing on the NPL by EPA. Although EPA Region IX recommended that the site be listed, EPA has made no final decision.

Remediation activity undertaken thus far has centered on continued research into the development of a process to remediate large areas of soils contaminated with plutonium from past activities. Five bench-scale technologies have been tested. A preliminary risk assessment and a draft cost benefit analysis for these contaminated soil sites were completed. Technology development of radiation detection systems for plutonium also continued. In addition, an effort to identify, verify, and document all potential release

sites, known as the Environmental Restoration Sites Inventory, was initiated. Progress on the Underground Test Area Corrective Action Unit also continued.

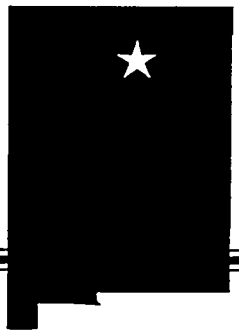
The Nevada Test Site continues remediation of inactive underground storage tanks.

There were several RCRA closure activities initiated during FY 95. Decommissioning of the Junior Hot Cell and Streamlined Approach for Environmental Restoration (SAFER) closure of the Bomblet Disposal Pit at the Tonopah Test Range were completed. The Interim Actions completed during FY 95 included removal of 12 underground storage tanks and 10 abandoned septic tanks. Four assessments were also completed in FY 95.

Work performed during 1995 for the Groundwater Characterization Project, renamed the Underground Test Area Corrective Action Unit, includes drilling of several new and reconfigured wells, development of a subproject work plan, and data analysis and modeling studies. The Underground Test Area Corrective Action Unit regional groundwater model was completed in FY 96, and the risk assessment is scheduled for completion early in FY 97.

Other FY 96 accomplishments include removal of nine underground storage tanks, completion of six assessments, cleanup of the Double Tracks site on Tonapah Test Range by removal of the plutonium-contaminated soil, installation of 14 groundwater monitoring wells required to complete site characterization activities at the Salmon Site in Mississippi, completion of three interim actions including the SAFER, and completion of five additional remedial actions.

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.



LOS ALAMOS NATIONAL LABORATORY

Los Alamos, Los Alamos County, New Mexico

Office: Albuquerque Operations Office

Size: 27,520 acres (43 square miles)

Mission: The Los Alamos National Laboratory (LANL) was originally established in 1943 by the U.S. Army's Manhattan Engineer District for the purpose of developing the first atomic bombs. The primary mission is nuclear weapons research and development. In addition, many programs are conducted at LANL in the nuclear, environmental, and energy sciences; fusion, laser isotope separation, and basic research in the area of physics; chemistry; radiology; and medicine.

Overview of Environmental Conditions: Onsite soil contamination with various chemical and radiological contaminants resulting from historic waste management and disposal practices. Decommissioning of surplus contaminated structures.

CERCLA/RCRA Remediation Funding in FY 96: $53,598,000

Remediation of environmental conditions at LANL is being addressed under authority of a RCRA permit, which includes corrective action requirements.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at LANL total $43.0 million of appropriated funding for FY 97 and $62.0 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

During FY 96, LANL completed 58 remediations and decommissioned 22 facilities bringing the cumulative total of "No Further Actions" to 1,208 out of 2,107 potential release sites.

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SANDIA NATIONAL LABORATORIES/NEW MEXICO

Albuquerque, Bernalillo County, New Mexico

Office: Albuquerque Operations Office

Size: 15,600 acres (approximately 24.4 square miles)

Mission: Created by the Sandia Corporation in 1949, the primary function of the Sandia National Laboratories/New Mexico is the research and development of weapons which use nuclear explosives. This includes the design of the arming, fusing, and firing systems used in nuclear bombs and warheads. Other projects include nuclear reactor safety studies; development of safe transport and storage systems for special nuclear material including plutonium and uranium; radioactive waste disposal techniques and site studies; pulsed power research; vertical axis wind turbine research; and fossil fuel and geothermal energy research.

Overview of Environmental Conditions: Onsite soil and groundwater contaminated with various chemical and radiological contaminants resulting from historical waste management and disposal practices.

CERCLA/RCRA Remediation Funding in FY 96: $27,404,000

Remediation of environmental conditions at Sandia National Laboratories/New Mexico has been initiated as a result of a RCRA permit issued by EPA which includes corrective action requirements.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at Sandia National Laboratories/New Mexico total $17.8 million of appropriated funding for FY 97 and $28.4 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

RFI activities at Sandia National Laboratories/New Mexico were initiated as a result of corrective action requirements in a RCRA permit issued by EPA. A total of 219 sites are being addressed for cleanup. Most sites are being cleaned up under a RCRA permit originally issued by EPA, and now by the State of New Mexico.

In FY 96, 29 voluntary corrective measures were completed. Twenty-four No Further Action requests were also submitted to the regulatory authorities. Two RFI reports and 53 site closures were completed. Other significant programs included completion of an Environmental Assessment for the Environmental Restoration Project, development of a Document of Understanding with the State and EPA, permitting of a Temporary Unit and design of a Corrective Management Action Unit, completion of the Land Use Project, and streamlining of the baseline plan for projection completion.

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ROSS COMPLEX

Vancouver, Clark County, Washington

Office: Bonneville Power Administration (BPA)

Size: 250 acres (0.4 square mile)

NPL Status: Placed on the NPL on November 21, 1989. Deleted from NPL on September 23, 1996.

Mission: The Ross Complex, in operation since the late 1930s, acts as BPA's central control center for the transmission of electricity throughout the Pacific Northwest. The complex also acts as a research and testing, maintenance, construction, operations and waste handling facility for BPA.

Overview of Environmental Conditions: Soil contamination due to historical disposal of PCB-laden capacitors; potential solvent contamination of groundwater.

CERCLA/RCRA Remediation Funding in FY 96: $0

Progress in Reaching Interagency Agreement

DOE, EPA Region X, and the State of Washington executed an Interagency Agreement (IAG) for the Ross Complex site on May 1, 1990. The agreement served as a framework for conducting remedial activities in accordance with CERCLA Section 120 and the National Contingency Plan (NCP).

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG total $0 million for FY 97 and $0 million for FY 98.

Public Comments Regarding Interagency Agreements

No new public comments regarding the IAG were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

The RI/FS scope of work was completed and submitted to EPA Region X and the State of Washington on March 15, 1990. The RI/FS work plan was submitted to all parties on June 7, 1991. It was reviewed and approved by EPA and the state. Phase I of the RI field work was completed in September 1991. Field work for Phase II of the RI was completed in August 1992.

In an agreement with EPA and the state, the site was divided into two Operable Units (OUs). OU A addresses surface soil contamination, and OU B addresses below-surface contamination, principally groundwater.

No further actions were required in FY 96.

Progress in Conducting Remedial Actions

The RI report for OU A suggested that contaminant concentrations found in the soils at the Ross Substation, Capacitor Test Lab and Wood Pole Storage Area, East may pose an unacceptable risk of occupational exposure to carcinogens. Remediation of Ross Substation and the Capacitor Test Lab was accomplished by removing polychorinated biphenyl (PCB)-contaminated surface soil in January 1994. Onsite bioremediation of contaminated surface soils from the Wood Pole Storage Area was initiated during the summer of 1994 and was completed on January 8, 1996.

In addition, the results of the RI for OU A indicated that certain contaminant concentrations in seven individual waste units exceeded soil cleanup levels promulgated under the Washington State Model Toxics Control Act. BPA undertook independent actions at these seven locations consisting of excavation and disposal of surface soils. These removal actions were begun on June 15, 1992 and were completed on July 6, 1992.

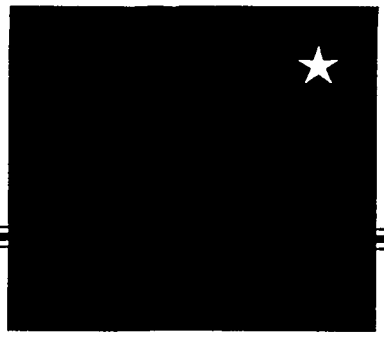
Based on the draft RI report for OU B, it was demonstrated that the residual occurrence of limited volatile organics in the groundwater did not constitute an onsite or offsite risk to human health. Groundwater monitoring will be required as part of EPA's 5-year follow-up program. The last groundwater analysis conducted in August 1995 showed that for all monitoring wells tested, contaminants of concern were below maximum contaminant levels.

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 on October 19, 1994. Contaminated soil from the Wood Pole Storage Area was excavated in the summer of 1994, and treatment onsite utilizing enhanced bioremediation was completed in FY 96. Removal of PCB-contaminated soil from the Ross Substation was accomplished in January 1994. The cleanup or removal of the substation capacitor yard soil and the replacement of PCB equipment were completed on October 23, 1995. This PCB removal was the last of the remediation activities initiated under the RODs.

Final Remedial Action Reports certifying that all conditions of the RODs have been satisfied were accepted by EPA in April 1995 (for OU B) and January 1996 (for OU A). EPA published a *Notice of Deletion from the National Priorities List* for the Ross Complex in the September 23, 1996 Federal Register (FR, Vol. 61, No. 185, p. 49690).

HOE CREEK

Gillette, Campbell County, Wyoming



Office: Federal Energy Technology Center

Size: 80 acres (0.1 square mile)

Mission: This facility, which is not owned by DOE, was used to investigate process and environmental parameters of underground coal gasification technology.

Overview of Environmental Conditions: Elevated levels of benzene and phenols in an onsite coal seam aquifer situated about 180 feet beneath the surface. The contaminants have migrated onto private property adjacent to the site.

CERCLA/RCRA Remediation Funding in FY 96: $3,732,000

The Hoe Creek Site is not on the NPL. As a result of the low Hazard Ranking Score, the site was classified as Site Evaluation Accomplished, and no further remedial action is planned by EPA unless additional contaminants are discerned.

Specific Cost Estimates and Budgetary Proposals

Funds budgeted for environmental restoration at Hoe Creek total $1.3 million of appropriated funding for FY 97 and $0.95 million for FY 98 according to the request in the President's Budget.

Progress in Conducting Remedial Actions

During FY 96, monitoring of the groundwater quality across the site continued, a 9-month field demonstration of air sparging was conducted at the Hoe Creek II area, and construction was completed in preparation for a 6-month demonstration of air sparging in the Hoe Creek III area. Groundwater monitoring was performed through an Interagency Agreement with the Omaha District of the U.S. Army Corps of Engineers. The air sparging demonstration was performed by EG&G TSWV, Inc., which is evaluating and preparing a report on the Hoe Creek II field demonstration. Initial results indicate that the air sparging reduced the benzene and phenol concentrations by 80 and 60 percent, respectively. As a consequence, the Wyoming Department of Environmental Quality is considering the technology as a viable cleanup option for the site. Current plans are to complete construction of the final cleanup of the Hoe Creek II area in the summer of 1997 and begin the anticipated 1 to 2 year operation in the fall. In addition, the Hoe Creek III air sparging demonstration will be completed and plans will be prepared for construction and final cleanup of the Hoe Creek area.

EPA directed DOE to work with the State of Wyoming to determine any site cleanup requirements. This work continues under a cleanup agreement between DOE and the state signed in August 1993.

APPENDICES

APPENDIX A - LIST OF ACRONYMS AND ABBREVIATIONS

APPENDIX B - LIST OF FACILITIES

APPENDIX A

List of Acronyms and Abbreviations

ANL	Argonne National Laboratory
ARA	Auxiliary Reactor Area
ARVFS	Army Re-entry Vehicle Facility Storage
BORAX	Boiling Water Reactor Experiment Reactor
BPA	Bonneville Power Administration
BRA	Baseline Risk Assessment
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COCA	Consent Order and Compliance Agreement
DOE	U.S. Department of Energy
EE/CA	Engineering Evaluation/Cost Analysis
EH	Office of Environment, Safety and Health
EM	Office of Environmental Management
EPA	U.S. Environmental Protection Agency
ERA	Expedited Response Action
FEMP	Fernald Environmental Management Project
FFA	Federal Facility Agreement
FFA/CO	Federal Facility Agreement/Consent Order
FR	Federal Register
FRVP	Fernald Residues Vitrification Plant
FS	Feasibility Study
FS/PP	Feasibility Study/Proposed Plan
FUSRAP	Formerly Utilized Sites Remedial Action Program
FY	Fiscal Year
GSA	General Services Area
IAG	Interagency Agreement
IM/IRA	Interim Measure/Interim Remedial Action
INEL	Idaho National Engineering Laboratory
IRA	Interim Remedial Action
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LEHR	Laboratory for Energy-Related Health Research
LLNL	Lawrence Livermore National Laboratory
MOA	Memorandum of Agreement
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NPL	National Priorities List
NRF	Naval Reactor Facility
ORAU	Oak Ridge Associated Universities
ORNL	Oak Ridge National Laboratory

APPENDIX A

List of Acronyms and Abbreviations (Continued)

ORNL	Oak Ridge National Laboratory
ORR	Oak Ridge Reservation
OU	Operable Unit
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Investigation
PCB	Polychlorinated Biphenyl
PP	Proposed Plan
PRP	Potentially Responsible Party
RA	Remedial Action
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RDWP	Remedial Design Work Plan
RFA	RCRA Facility Assessment
RFETS	Rocky Flats Environmental Technology Site
RFI	RCRA Facility Investigation
RFI/RI	RCRA Facility Investigation/Remedial Investigation
RI	Remedial Investigation
RI/BRA	Remedial Investigation/Baseline Risk Assessment
RI/FS	Remedial Investigation/Feasibility Study
RI/RA	Remedial Investigation/Remedial Action
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SAFER	Streamlined Approach for Environmental Restoration
SARA	Superfund Amendments and Reauthorization Act
SCDHEC	South Carolina Department of Health and Environmental Control
SEA	Site Evaluation Accomplished
SI	Site Investigation
SITE	Superfund Innovative Technology Evaluation
SL-1	Stationary Low Power Reactor-1
SPRO	Strategic Petroleum Reserve Office
SRS	Savannah River Site
SWMU	Solid Waste Management Unit
SWRI	Site Wide Remedial Investigation
TSCA	Toxic Substances Control Act
UCD	University of California, Davis
UMTRA	Uranium Mill Tailings Remedial Action
VOC	Volatile Organic Compound
WAG	Waste Area Group
WAPA	Western Area Power Administration

APPENDIX B

List of Facilities

APPENDIX B

List of Facilities (Continued)

APPENDIX B

List of Facilities (Continued)

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