

National  
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# KEY ENVIRONMENTAL IMPACT STATEMENTS OF THE DEPARTMENT OF ENERGY



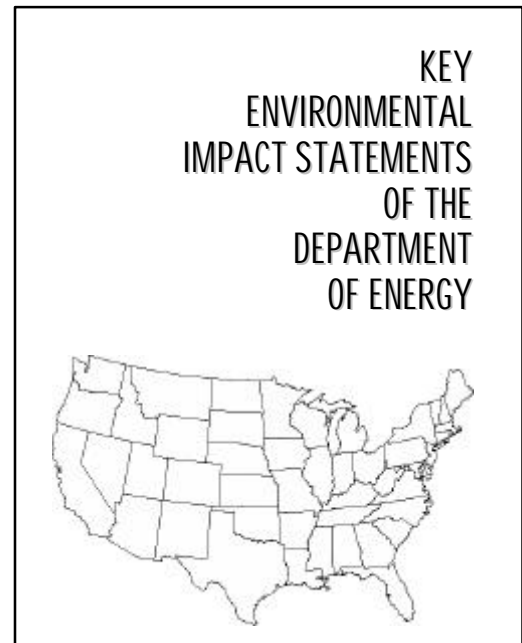
U.S. Department of Energy  
Environment, Safety and Health  
Office of NEPA Policy and Assistance, EH-42

October 1998

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This package contains information on key environmental impact statements of the Department of Energy.\* It was prepared by the Office of NEPA Policy and Assistance in consultation with the involved Program and Field Offices, using the best available information.

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  - ◆ Oak Ridge Reservation
  - ◆ Pantex Plant
  - ◆ Rocky Flats Environmental Technology Site
  - ◆ Savannah River Site



Further information about this package or the Department of Energy's National Environmental Policy Act process may be requested from:

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\*Does not include information on environmental impact statements from Power Administrations, Fossil Energy and Energy Conservation and Renewable Energy

## Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to select a strategy for the long-term management of depleted uranium hexafluoride.

Document Number:	DOE/EIS-0269
Program:	Nuclear Energy
Operations Office:	Not Applicable
States:	TN, KY, OH

Milestones		
Advance Notice of Intent	(59 FR 56325)	11/10/94
Notice of Intent	(61 FR 2239)	1/25/96
Draft PEIS		12/97
Final PEIS	(scheduled)	2/99
Record of Decision	(scheduled)	3/99

### Description

This programmatic environmental impact statement (PEIS) evaluates the environmental impacts associated with alternative strategies for the long-term management and use of depleted uranium hexafluoride stored at sites near Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. DOE currently manages about 700,000 metric tons of depleted uranium hexafluoride stored as a solid in 55,608 steel cylinders. Depleted uranium hexafluoride is a product of the gaseous diffusion

process used to enrich uranium. The PEIS considers general strategy options and presents the general environmental impacts of constructing and operating potential facilities and transporting materials to and/or from such facilities.

### Alternatives

Alternative management strategies considered in the draft PEIS include: (1) continued storage and management of depleted uranium hexafluoride cylinders at the Oak Ridge, Paducah, and Portsmouth sites indefinitely (No Action); (2) consolidating long-term storage as depleted uranium hexafluoride; (3) consolidating long-term storage as depleted uranium oxide; (4) use as depleted uranium oxide; (5) use as depleted uranium metal; and (6) disposal as depleted uranium oxide. The Department's preferred alternative in the draft PEIS for the long-term management of depleted uranium hexafluoride is to begin conversion to oxide and metal promptly and support development of markets for the conversion products.

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Fact Sheet #1

## Surplus Plutonium Disposition Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to make the following decisions based upon the results of this EIS and other information and considerations: (1) whether to construct and operate a pit disassembly/conversion facility, and if so, where; (2) whether to construct and operate an immobilization facility (including selection of the specific immobilization technology), and if so, where; and (3) whether to construct and operate a mixed oxide (MOX) fuel fabrication facility, and if so, where.

Document Number:	DOE/EIS-0283
Program:	Fissile Materials Disposition
Operations Office:	Not Applicable
States:	ID, SC, TX, WA

Milestones		
Notice of Intent	(62 FR 28009)	5/22/97
Draft EIS		6/98
Final EIS	(scheduled)	1/99
Record of Decision	(scheduled)	2/99

### Description

This environmental impact statement (EIS) will tier from the Storage and Disposition of Weapons-Usable Fissile Materials Programmatic EIS (PEIS), issued in December 1996, and the associated Records of Decision (ROD) (62 FR 3014, January 21, 1997; Amended 63 FR 43386, August 13, 1998). In the 1997 Record of Decision, DOE decided that this follow-on EIS would examine reasonable

alternatives and potential impacts for the siting of three facilities for the disposition of surplus plutonium. (The Amended ROD did not alter this approach to disposition.) The first is a facility to disassemble and convert pits (a nuclear weapons component) into plutonium oxide suitable for disposition at the Hanford Site, Idaho National Engineering and Environmental Laboratory (INEEL), Pantex Plant or Savannah River Site (SRS). The second is a facility to immobilize surplus plutonium in a glass or ceramic form for disposition in a geologic repository. The immobilization facility would be located at either Hanford or SRS, and would include a collocated capability to convert non-pit plutonium into a form suitable for immobilization. The third facility would fabricate plutonium into MOX fuel, and would be located at Hanford, INEEL, Pantex or SRS. The MOX fuel would be used in existing commercial light water reactors and the spent fuel would be disposed of in a geologic repository. As part of the assessment of the MOX facility, this EIS will analyze the fabrication of up to ten lead assemblies that may be needed to support the MOX fuel program. This EIS also discusses decommissioning and decontamination of the three facilities.

### Alternatives

This EIS identifies reasonable alternatives for the proposed siting, construction, and operation of three facilities for plutonium disposition. The first is a facility to disassemble and convert pits into plutonium oxide suitable for disposition. This disposition and conversion facility would be located at either DOE's Hanford Site, INEEL, Pantex or SRS, with SRS and Pantex designated in the draft EIS as preferred sites. The second is a facility to immobilize surplus plutonium for disposal in a geologic repository. This second facility would be located at either Hanford or SRS, and includes a collocated capability to convert non-pit plutonium materials into a form suitable for immobilization. SRS has been designated in the draft EIS as the preferred site. The third is a facility to fabricate plutonium oxide into MOX fuel. This MOX fuel fabrication facility would be located either at Hanford, INEEL, Pantex or SRS and the MOX fuel would be used in existing commercial light water reactors in the United States. SRS has been designated in the draft EIS as the preferred site for the MOX fuel fabrication. Under the No Action alternative no disposition would occur.

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## Waste Management Programmatic Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needed to enhance the management of its current and anticipated volumes of radioactive and hazardous wastes to ensure safe and efficient control of these wastes, comply with applicable laws and regulations, and protect worker and public health and safety. Accordingly, decisions were needed on the appropriate Department-wide configurations; i.e., where to treat, store and dispose of these DOE wastes.

Document Number:	DOE/EIS-0200
Program:	Environmental Management
Operations Office:	Not Applicable
States:	National

Milestones	
Notice of Intent	(55 FR 42633) 10/22/90
Revised Notice of Intent	(60 FR 4607) 1/24/95
Draft Implementation Plan	2/92
Final Implementation Plan	12/93
Draft EIS	9/95
Final EIS	5/97
Records of Decision for:	
Transuranic Waste	(63 FR 3629) 1/23/98
Non-Wastewater Hazardous Waste	(63 FR 41810) 8/5/98
Low-level Waste	(scheduled) 12/98
Low-level Mixed Waste	(scheduled) 12/98
High-level Waste	(scheduled) 1/99

### Description

This programmatic environmental impact statement (PEIS) evaluated the proposed action of formulating and implementing an integrated Waste Management Program. DOE considered a broad range of alternatives for the configuration of waste management activities and the potential consolidation of operations. A second tier of National Environmental Policy Act reviews, including environmental impact statements or environmental assessments, would be developed as appropriate to support the siting, construction and operation of new facilities at specified sites under this framework.

### Alternatives

The PEIS identified decentralized, regionalized, and centralized management alternatives for each waste type (high-level radioactive waste, transuranic waste, low-level

radioactive waste, low-level mixed waste, and hazardous waste). These alternatives further the goal of providing safe, efficient, environmentally acceptable, and effective waste management within the context of applicable regulations. The Department's preferred alternatives are identified in the Final PEIS, and summarized by waste type: (1) High-level waste: DOE prefers **decentralized storage** of immobilized high-level waste at the Hanford Site, Idaho National Engineering and Environmental Laboratory (INEEL), Savannah River Site (SRS), and West Valley. (2) Low-level waste: DOE prefers **decentralized minimum treatment** at all 27 sites having low-level waste as described below. (3) Low-level mixed waste: DOE prefers **regionalized treatment** of low-level mixed waste at the Hanford Site, INEEL, Oak Ridge Reservation (ORR) and SRS, plus **decentralized treatment** at the remaining major DOE sites.

DOE prefers **regionalized disposal** of low-level and mixed wastes at two or three regional sites to be selected from the six sites (Hanford Site, INEEL, Nevada Test Site, Los Alamos National Laboratory, ORR, SRS) currently

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*(continued next page)*

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## Waste Management Programmatic Environmental Impact Statement (cont.)

used for low-level waste disposal. The sites not selected as regional facilities would continue to dispose of on-site waste. The sites selected for disposal of low-level waste do not necessarily have to be the same as those selected for disposal of low-level mixed waste. DOE will consider five criteria in its evaluation of the disposal options. These criteria are mission capability, environment, safety and health, transportation, cost, and stakeholder acceptance. The feedback and continuing discussions with states, Tribal Nations, and stakeholders will be key to the final decision making process.

**Record of Decision for Transuranic Waste:** DOE selected the decentralized alternative in which each of DOE's sites will treat and store its transuranic waste on-site, pending disposal at the Waste Isolation Pilot Plant. However, Sandia National Laboratory (New Mexico) will transfer its transuranic waste for treatment and storage at the Los Alamos National Laboratory.

**Record of Decision for Non-Wastewater Hazardous Waste:** DOE decided to continue to use off-site facilities for the treatment of major portions of the non-wastewater hazardous waste generated at DOE sites. Oak Ridge Reservation, Tennessee and the Savannah River Site, South Carolina will treat some of their own non-wastewater hazardous waste on-site.

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Fact Sheet #3

## Hanford Remedial Action Environmental Impact Statement and Comprehensive Land-Use Plan at the Hanford Site

### Agency Decisions Needed

The mission of the Hanford Site has changed from producing materials for national defense to environmental restoration, waste management, and science and technology, resulting in the need for a comprehensive, long-term approach to planning and development for the site.

Additionally, Public Law 104-201 and DOE Order 430.1, *Life-Cycle Asset Management*, require development of a comprehensive land-use plan for Hanford. Accordingly, the Hanford Remedial Action Environmental Impact Statement (HRA EIS) will help DOE to establish and implement such a plan over for at least the next 50 years.

Document Number:	DOE/EIS-0222
Program(s):	Environmental Management
Operations Office:	Richland
State(s):	WA

Milestones	
Notice of Intent	(57 FR 37959) 8/21/92
Draft EIS	8/96
Revised Draft EIS	(scheduled) 10/98
Final EIS	(scheduled) 2/99
Record of Decision	(scheduled) 3/99

### Description

In response to public comments, DOE will issue a revised draft HRA EIS that focuses on land-use rather than remedial action, and contains proposed procedures, alternative land use maps, and guidelines for implementing the Hanford Comprehensive Land-Use Plan. DOE received over 2,000 comments on the original August 1996 draft HRA EIS from public agencies, Tribal governments, interest groups, and other

members of the public. Many commenters stated that the combination of a land-use plan with remedial action evaluations in the original draft EIS was confusing. Commenters also stated that DOE should involve local agencies (e.g., Benton County and the City of Richland) in the land-use planning process. DOE agreed to requests to become Cooperating Agencies for this EIS from: the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce Tribe Department of Environmental Restoration and Waste Management; the Bureau of Land Management; the Bureau of Reclamation; the U.S. Fish and Wildlife Service; the City of Richland; and Benton, Franklin, and Grant counties.

### Alternatives

The revised draft HRA EIS will present a set of Hanford-specific land-use policies and procedures and evaluates six alternatives, including the No Action alternative, DOE's preferred alternative, and four other alternatives developed by the Cooperating Agencies. Each alternative features a

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different land-use map with a different mosaic of land-use designations. The Cooperating Agencies have based their land-use planning on nine agreed-upon designations and definitions so that land-use plans can be developed in common and compared. These land-use designations are: Industrial-Exclusive, Industrial, Agricultural, Research and Development, High-Intensity Recreation, Low-Intensity Recreation, Conservation (Mining and Grazing), Conservation (Mining), and Preservation.

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## Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to evaluate: (1) alternatives for managing radioactive and hazardous wastes that have either been produced at the Hanford Site or received from off-site generators; and (2) potential impacts associated with ongoing activities of the Hanford Site Solid Waste Program; the implementation of the Waste Management (WM) PEIS; and potential impacts of other relevant past, present, and reasonably foreseeable activities in light of recent changes in the missions of DOE facilities.

Document Number: DOE/EIS-0286  
 Program: Environmental Management  
 Operations Office: Richland  
 States: Washington

Milestones	
Notice of Intent	(62 FR 55615) 10/27/97
Draft EIS	(scheduled) 12/98
Final EIS	(scheduled) 6/99
Record of Decision	(scheduled) 8/99

### Description

DOE activities at the Hanford Site have generated a variety of solid wastes, including low-level radioactive waste, low-level radioactive mixed waste, transuranic and mixed transuranic waste, and hazardous wastes. Equipment managed under the Hanford Site Solid (Radioactive and Hazardous) Waste Program has also been contaminated. The mission of the Hanford Site Solid

Waste Program is to safely and efficiently manage existing and new wastes received from on-site and off-site generators and to decontaminate equipment for reuse or disposal in compliance with Federal and state regulations. The Yakama Indian Nation is a cooperating agency for this environmental impact statement.

### Alternatives

The preliminary alternatives for the Hanford Site Solid Waste Program include: (1) continue ongoing waste management activities and implement those actions for which NEPA reviews have been completed and decisions made (No Action alternative); (2) implement programmatic decisions resulting from the WM PEIS, including managing at the Hanford Site some radioactive and hazardous wastes from off-site facilities, with on-site or off-site treatment, storage, and disposal, depending on the type of waste (proposed action); (3) minimize the use of land and facilities at Hanford by managing solid radioactive and hazardous wastes at either commercial facilities or other DOE sites; and (4) maximize use of land and facilities at Hanford for management of solid radioactive and hazardous wastes such that Hanford would serve as a regional or national management site for specific types of waste.

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## Advanced Mixed Waste Treatment Project at the Idaho National Engineering and Environmental Laboratory Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to decide whether or not to allow construction and operation of the proposed Advanced Mixed Waste Treatment Project (AMWTP) to treat approximately 65,000 cubic meters of transuranic waste, alpha-contaminated low-level mixed waste, and low-level mixed waste in a manner consistent with state and Federal law and consistent with the schedule contained in the October 17, 1995 Settlement Agreement and the subsequent Court Order. The waste is currently stored above ground at the Radioactive Waste Management Complex (RWMC) at the Idaho National Engineering and Environmental Laboratory (INEEL). DOE also anticipates that it may need to treat an additional 120,000 cubic meters of waste from INEEL and other DOE sites in the future.

Document Number:	DOE/EIS-0290
Program:	Environmental Management
Operations Office:	Idaho
State:	Idaho

Milestones	
Notice of Intent	(62 FR 62025) 11/97
Draft EIS	7/98
Final EIS	(scheduled) 11/98
Record of Decision	(scheduled) 12/98

### Description

In the 1995 Settlement Agreement among DOE, the Department of the Navy, and the state of Idaho, DOE agreed to procure a mixed waste treatment facility for treating and packaging waste for shipment out of Idaho to the Waste Isolation Pilot Plant (WIPP) or another acceptable disposal facility. This environmental impact

statement (EIS) will help DOE make decisions needed to comply with the Settlement Agreement and other applicable requirements for waste management. On December 20, 1996, DOE selected, under a phased contract arrangement, BNFL Inc. for further consideration of its proposal to construct and operate the AMWTP. DOE will complete this EIS before deciding whether to authorize BNFL, Inc. to proceed with the construction and operation phases of the contract. This EIS tiers from the WIPP Final Supplemental EIS II and the Programmatic Spent Nuclear Fuel Management and INEL Environmental Restoration and Waste Management Programs EIS.

### Alternatives

The AMWTP EIS evaluates the following alternatives: (1) No Action alternative under which existing waste management operations, facilities and projects would continue; (2) the proposed action alternative (the preferred alternative in the draft EIS), under which BNFL Inc. would build and operate an AMWTP facility using proposed thermal and physical treatment technologies on the subject waste for certification and shipment to WIPP or another acceptable disposal facility; (3) non-thermal treatment alternative under which some treatment of transuranic, alpha low-level mixed, and low-level mixed wastes would occur at an AMWTP facility at the same location as the preferred alternative. Wastes that require thermal treatment would be repackaged for storage; (4) treatment and storage alternative which would carry out the same processes as the proposed action except treated waste would be placed in RCRA-permitted storage units at the RWMC on-site for long-term storage.

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## Idaho High-Level Waste and Facilities Disposition at the Idaho National Engineering and Environmental Laboratory Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to decide how to manage, treat, store and dispose of high-level radioactive wastes currently stored at the Idaho National Engineering and Environmental Laboratory (INEEL), in accordance with a 1995 Settlement Agreement and Court Order with the state of Idaho.

Document Number:	DOE/EIS-0287
Program:	Environmental Management
Operations Office:	Idaho
State:	Idaho

Milestones		
Notice of Intent	(62 FR 49209)	9/15/97
Draft EIS	(scheduled)	2/99
Final EIS	(scheduled)	7/99
Record of Decision	(scheduled)	9/99

### Description

This environmental impact statement (EIS) will evaluate the environmental impacts associated with alternative strategies for managing high-level and associated radioactive wastes generated by spent nuclear fuel and irradiated target reprocessing operations and operations at related facilities at INEEL. Under the Settlement Agreement and Court Order, DOE agreed to treat high-

level radioactive wastes at the Idaho National Technology Engineering Center (INTEC, formerly known as the Idaho Chemical Processing Plant) and to remove these wastes from Idaho. Reasonable alternatives will be considered for treating sodium-bearing liquid radioactive wastes and the high-activity calcine, and for disposition of facilities associated with those wastes including closure of the tanks. This EIS will tier from the Programmatic Spent Nuclear Fuel Management and INEL Environmental Restoration and Waste Management Programs EIS. This EIS will also evaluate the impacts of projected facility closures at INTEC.

### Alternatives

The preliminary alternatives for the Idaho High-Level Waste and Facilities Disposition EIS include: (1) continuing current high-level radioactive waste management activities at the INTEC (liquid wastes would be removed from the tanks using existing waste transfer equipment, and calcined and stored on-site in the INEEL bin sets, but not be prepared for disposal) (No Action alternative); (2) various combinations of different high/low activity separation technologies, material encapsulation, decontamination and decommissioning options, and waste residue treatments, and (3) a non-separation alternative under which DOE would analyze options for treating the sodium bearing liquid radioactive waste and the calcine high-level waste into forms that are suitable for in-place disposal at INEEL, or for off-site disposal in a geological repository.

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Fact Sheet #7

## Proposed Conveyance and Transfer of Certain Land Tracts Located at Los Alamos National Laboratory, Los Alamos and Santa Fe Counties, New Mexico Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to fulfill its obligations to transfer certain land tracts to the County of Los Alamos or to their appropriate designee and convey administrative control over certain other tracts to the Secretary of the Interior in trust for the Pueblo of San Ildefonso. DOE has identified suitable land tracts at or in the vicinity of the Los Alamos National Laboratory (LANL), as set forth in Section 632 of the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 1998, Public Law 105-119 (P.L. 105-119).

Document Number:	DOE/EIS-0293
Program:	Defense Programs
Operations Office:	Los Alamos Area Office
States:	NM

### Description

P.L. 105-119 provides that the purpose of the conveyances and transfers is to fulfill the obligations of the U.S. under sections 91 and 94 of the Atomic Energy Community Act of 1955 (42 U.S.C. 2391, 2394) with respect to LANL. The Secretary of Energy has preliminarily identified nine parcels of land currently under the jurisdiction or administrative control of the

Secretary that are not required to meet the national security mission of DOE, presently or within the next ten years: (1) Technical Area 21 Tract; (2) DP Road Tract; (3) DOE Los Alamos Area Office Site Tract; (4) Airport Tract; (5) White Rock Site Tract; (6) Rendija Canyon Site Tract; (7) White Rock Y Site Tract; (8) two miscellaneous sites—Site 22 and Manhattan Monument Site; and (9) Technical Area-74. The EIS will be prepared to provide DOE decision makers and stakeholders with information on projected environmental impacts that would result from the proposed conveyance and transfer of land tracts for future uses.

### Alternatives

Preliminary alternatives identified in the Notice of Intent are: (1) Conveyance and Transfer of All Land Tracts; (2) Partial Conveyance and Transfer of Tracts which would involve most of the tracts with the retention by DOE of any land tract that can not be cleaned up within the next ten years; and (3) No Action, which would be to continue the current use of the land tracts with no conveyance or transfer. Each alternative would analyze the impacts of up to three potential uses of land depending on information on the intended use provided by the County and Pueblo. The three potential uses of the land include: (1) historic, cultural or environmental preservation; (2) economic diversification; or (3) community self-sufficiency.

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**Site-wide Environmental Impact Statement  
for the Los Alamos National Laboratory  
Los Alamos, New Mexico**

**Agency Decisions Needed**

The Department of Energy (DOE) needs to determine the level of operations for the Los Alamos National Laboratory (LANL). In addition, the Department needs to make project-specific decisions including site-specific implementation of

plutonium pit production and disposition of low-level radioactive waste.

Document Number:	DOE/EIS-0238
Program:	Defense Programs
Operations Office:	Albuquerque
State:	New Mexico

Milestones		
Advance Notice of Intent	(59 FR 40889)	8/10/94
Notice of Intent	(60 FR 25697)	5/12/95
Implementation Plan		11/95
Draft EIS		5/98
Final EIS	(scheduled)	12/98
Record of Decision	(scheduled)	2/99

**Description**

This site-wide environmental impact statement (EIS) addresses operations and planned activities at LANL foreseen within the next five to ten years. The EIS provides an analysis of ongoing and proposed actions at LANL. The document also explores mitigation opportunities for facilities and operations, and strategies for materials management and waste management.

**Alternatives**

DOE has identified environmental issues and alternatives for the site-wide EIS through the public scoping process with the assistance of stakeholders. The EIS examines four reasonable alternatives for LANL operations.

(1) The No Action alternative reflects the continuation of current facility operations and management plans in support of assigned missions; (2) the Reduced Operations alternative reflects reduced (and in some cases, minimal) operations in support of assigned missions, while maintaining safety and security; (3) the Expanded Operations alternative (the preferred alternative in the draft EIS) includes two siting and construction projects: enhancement of pit manufacturing (implementing the Stockpile Stewardship and Management Programmatic Record of Decision (December 19, 1996, 61 FR 68014), and the expansion of the low-level radioactive waste disposal area at LANL); and (4) the Greener Alternative, requested by members of communities near Los Alamos, would change the emphasis of Los Alamos operations to focus on basic science, waste minimization and treatment, weapons dismantlement, non-proliferation, and other areas of national and international importance. This alternative will neither add nor eliminate missions from Los Alamos.

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## Spallation Neutron Source Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) is proposing the Spallation Neutron Source (SNS) to provide the United States with a modern, high performance pulsed neutron research facility to meet current and future needs.

Document Number:	DOE/EIS-0247
Program:	Energy Research
Operations Office:	Oak Ridge
States:	TN, NY, NM, IL

### Milestones

Notice of Intent	(62 FR 40062)	7/25/97
Draft EIS	(scheduled)	10/98
Final EIS	(scheduled)	3/99
Record of Decision	(scheduled)	4/99

### Description

DOE is proposing to design, construct, and operate a SNS facility to provide an opportunity for basic research in the fields of physical and biological sciences, industrial applications, and medical research in the United States. The proposed SNS facility would consist of a proton accelerator system, spallation target systems, and

experiment areas, along with accompanying laboratories, offices, and support facilities. Initial operating power for the SNS would be 1 megawatt, but the facility may be upgraded during the first 10-15 years of operation to higher power levels (maximum of 4 megawatts) to provide even greater research capabilities. The environmental impact statement (EIS) will examine the environmental impacts of constructing and operating the SNS facility in its fully upgraded condition (4 megawatts) at alternative locations of Oak Ridge National Laboratory, Oak Ridge, Tennessee; Argonne National Laboratory, Argonne, Illinois; Los Alamos National Laboratory, Los Alamos, New Mexico; and Brookhaven National Laboratory, Upton, New York.

### Alternatives

Alternatives for the National Spallation Neutron Source EIS include: (1) not to build or operate the SNS (No Action); (2) construct and operate the SNS at Oak Ridge National Laboratory (preferred alternative in the draft EIS) or at one of the following sites: (a) Argonne National Laboratory (b) Los Alamos National Laboratory (c) Brookhaven National Laboratory. The EIS will include a discussion of technical alternatives that were considered in the conception design of the SNS.

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Fact Sheet #10

## Management of Certain Plutonium Residues and Scrub Alloy Stored at the Rocky Flats Environmental Technology Site Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to decide whether and how to process the scrub alloy and certain plutonium residues stored at the Rocky Flats Environmental Technology Site to address health and safety concerns regarding the storage of the materials, and to prepare the materials for off-site disposal or other disposition, while supporting site closure and limiting worker exposure and waste production.

Document Number:	DOE/EIS-0277
Program:	Environmental Management
Operations Office(s):	Rocky Flats
State(s):	CO, SC, NM

Milestones		
Notice of Intent	(61 FR 58866)	11/19/96
Draft EIS		11/97
Final EIS		8/98
Records of Decision	(scheduled)	10/98
	(scheduled)	11/98

### Description

DOE previously analyzed, as a result of health and safety concerns identified by the Defense Nuclear Facilities Safety Board (the Board), the stabilization of the approximately 106,000 kg of plutonium residues at the Rocky Flats Site for safe interim storage (see the Solid Residue Treatment, Repackaging, and Storage Environmental Assessment, DOE/EA-1120, April 1996). After stabilization, however,

approximately 42,000 kg of the residues would still contain enough plutonium to make them subject to safeguards and security controls. As a result, they would not be acceptable for disposal at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. This environmental impact statement (EIS) analyzed alternatives for processing the approximately 42,000 kg of residues and all of the scrub alloy to address health and safety concerns raised by the Board and to prepare the residues and scrub alloy for off-site disposal as transuranic waste at WIPP or other disposition.

### Alternatives

DOE identified and analyzed the following alternatives: (1) No Action - stabilization of residues as analyzed in the Environmental Assessment and storage of the scrub alloy with repackaging, as needed, for interim storage; (2) processing without Plutonium Separation - processing the residues and scrub alloy on-site without plutonium separation; (3) processing with plutonium separation - processing the residues and scrub alloy on-site at Rocky Flats and off-site at the Los Alamos National Laboratory (LANL) and the Savannah River Site (SRS) to separate the plutonium (the separated plutonium would be placed in safe and secure storage pending disposition after completion of the Surplus Plutonium Disposition EIS, see Fact sheet #2); (4) combination of processing technologies - a combination of the processing technologies from Alternatives 1 and 2; and (5) preferred alternative - all materials would be processed at Rocky Flats except for sand, slag, crucible; certain direct oxide reduction salts; fluoride residues; and scrub alloy. The plutonium salts would be processed at LANL. The other plutonium materials would be processed at SRS.

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*(continued next page)*

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Fact Sheet #11

**Management of Certain Plutonium Residues and Scrub Alloy  
Stored at the Rocky Flats Environmental Technology Site  
Environmental Impact Statement (cont.)**

DOE plans to issue two Records of Decision. The first Record of Decision will consider the following categories of plutonium residues and scrub alloy for disposal or other disposition: sand, slag and crucible residues, direct oxide reduction salt residues (low plutonium concentration), combustible residues, plutonium fluoride residues, Ful Flo filter media residues, glass residues, graphite residues, inorganic (metal and other) residues, and scrub alloy.

The second Record of Decision will consider the remaining categories of plutonium residues discussed within the scope of the Final EIS, which include: incinerator ash residues, graphite fines residues, inorganic ashes, molten salt extraction/electrorefining salt residues, direct oxide reduction salt residues (high plutonium concentration), high-efficiency particulate air filter media residues, and sludge residues. DOE will issue the second Record of Decision after completion of a 45 day comment period.

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*Fact Sheet #11*

## Sandia National Laboratories/New Mexico Site-wide Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to determine appropriate management strategies for the Sandia National Laboratories/New Mexico. The U.S. Air Force is participating as a cooperating agency.

Document Number:	DOE/EIS-0281
Program:	Defense Programs
Operations Office:	Albuquerque
State:	New Mexico

Milestones	
Notice of Intent	(62 FR 29332) 5/30/97
Draft EIS	(scheduled) 1/99
Final EIS	(scheduled) 6/99
Record of Decision	(scheduled) 7/99

### Description

Sandia is a DOE research and development laboratory located on Kirtland Air Force Base in Albuquerque, New Mexico. Its responsibilities include nuclear weapons stockpile stewardship; intelligence, nonproliferation and arms control; energy and environment technologies; other engineering and research activities; and work for others. This site-wide environmental impact statement (EIS) will address potential

impacts of all operations and planned activities at Sandia over approximately the next 10 years. The document will analyze and describe operations of the key facilities (e.g., the Neutron Generator Facility, physical testing and simulation facilities, accelerators, reactors, and outdoor test facilities) in detail.

### Alternatives

Three alternatives will be examined in the EIS: (1) the No Action alternative; (2) the Expanded Operations alternative; and (3) the Reduced Operations alternative. The No Action alternative would continue current facility operations planned throughout Sandia National Laboratory in support of assigned missions. The Expanded Operations alternative would reflect an increase in facility operations to the highest levels that can be supported by current facilities. This could require construction projects to address safety, security and environmental compliance as well as to support reconfiguration of facility equipment and operations to optimize use of current facilities capabilities. The Reduced Operations alternative would be based on the minimum level of operations that would maintain the physical facility and equipment in an operational readiness mode and would assure sufficient staff with the knowledge, training, and experience to perform the operations within Sandia's mission, if the need should arise.

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Fact Sheet #12

## Construction and Operation of an Accelerator for the Production of Tritium at the Savannah River Site Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to evaluate how to design, build, and operate a linear accelerator for the production of tritium at the Savannah River Site (SRS). The accelerator would support DOE's mission to ensure a new source of tritium to support the nuclear weapons stockpile.

Document Number:	DOE/EIS-0270
Program:	Defense Programs
Operations Office:	Savannah River
State:	South Carolina

Milestones		
Notice of Intent	(61 FR 46787)	9/5/96
Draft EIS		12/97
Final EIS	(scheduled)	1/99
Record of Decision	(scheduled)	2/99

### Description

DOE evaluated the programmatic need for a new tritium source in a Programmatic Environmental Impact Statement for Tritium Supply and Recycling. In the Record of Decision (ROD) (60 FR 63878, December 12, 1995), DOE decided to pursue a dual-track approach on the two most promising tritium supply alternatives: (1) to initiate purchase of an existing commercial reactor for

conversion to a defense facility, or purchase of irradiation services with an option to purchase the reactor (see Fact Sheet for Production of Tritium in a Commercial Light Water Reactor (CLWR), #16); and (2) to design, build, and test critical components of an accelerator system for tritium production. The ROD stated that DOE would select one of these approaches by the end of 1998 to serve as the primary source of tritium. The other alternative, if feasible, would continue to be developed as a backup tritium source. The SRS was selected as the location for an accelerator, should one be built. This environmental impact statement will examine the impacts of the various options for the construction and operation of an accelerator to produce tritium. The accelerator and locations on the SRS would be designed with the capacity to produce up to 3 kilograms of tritium per year. DOE plans to issue this EIS and the two other tritium-related EISs (See Fact Sheets #15 and #16) simultaneously early in 1999, following the Secretary's selection of the technology—reactor or an accelerator—to be used as the primary technology for production of tritium.

### Alternatives

Alternatives identified are: (1) to produce tritium in a commercial-light water reactor (the No Action alternative) and (2) various accelerator design features which would employ various cooling and power supply alternatives at either of two designated sites. The preferred alternative identified by DOE is the construction and operation of a superconducting accelerator with klystron radio frequency power, cooled by mechanical draft cooling towers with river water makeup, a helium-3 target blanket, powered by existing electric power sources, which would be located three miles northeast of the Tritium Loading Facility at the Savannah River Site, and a tritium extraction facility at the accelerator site to handle the gaseous target for the accelerator and capability for extraction of tritium from CLWR targets if the reactor technology were pursued for back-up technology.

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Fact Sheet #13

## Management of Spent Nuclear Fuel at the Savannah River Site Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to decide how to manage spent nuclear fuel currently stored at the Savannah River Site, and foreign, domestic and government research reactor aluminum-clad spent nuclear fuel assigned to, but not yet received by the Site in preparation for disposition.

Document Number:	DOE/EIS-0279
Program:	Environmental Management
Operations Office:	Savannah River
State:	South Carolina

Milestones		
Notice of Intent	(61 FR 46790)	9/5/96
Draft EIS	(scheduled)	10/98
Final EIS	(scheduled)	3/99
Record of Decision	(scheduled)	4/99

### Description

The current Savannah River Site inventory of spent nuclear fuel consists of approximately 215 metric tons and includes various forms such as Site spent fuels consisting of aluminum-clad highly enriched uranium; aluminum-clad targets or slugs containing plutonium or other isotopes; aluminum-clad spent nuclear fuels from offsite domestic and foreign research reactors; and test

reactor spent nuclear fuels clad in zirconium, stainless steel and other materials. This environmental impact statement will evaluate management options for: (1) approximately 40 metric tons of spent nuclear fuel and targets currently stored at the Site; (2) approximately 28 metric tons of foreign research reactor spent nuclear fuel that may be shipped to the Site over the next 37 years; and (3) DOE and domestic research reactor spent nuclear fuel that will be shipped to the Site for the foreseeable future.

### Alternatives

Preliminary alternatives identified are: (1) continued wet storage (No Action) - which would continue current storage and future receipts of domestic and foreign spent fuel in the receiving basin for off-site fuel and in the L-Reactor disassembly basin; (2) new processing technology alternative - evaluation of cost-effective non-aqueous based processing (a. melt and dilute, b. mechanical dilution c. vitrification, d. electrometallurgical treatment) technologies to prepare the spent fuel for placement in a geological repository; (3) new packaging alternative - storage at a potential transfer and storage facility prior to shipment to a geologic repository; and (4) conventional processing alternative - conventional processing in existing chemical separation facilities which would dissolve the fuel, blend highly enriched uranium to low enrichments, and recover the low-enriched uranium.

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Fact Sheet #14

## Construction and Operation of a Tritium Extraction Facility at the Savannah River Site Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to determine where to construct and operate a tritium extraction facility at the Savannah River Site. The tritium extraction facility (TEF) would support the Department's mission to ensure a source of tritium to support the nuclear weapons stockpile.

Document Number:	DOE/EIS-0271
Program:	Defense Programs
Operations Office:	Savannah River
State:	South Carolina

Milestones			
Notice of Intent	(61 FR 46790)	9/5/96	
Draft EIS		5/98	
Final EIS	(scheduled)	1/99	
Record of Decision	(scheduled)	2/99	

### Description

DOE evaluated tritium production technologies and sites for new tritium supply and recycling facilities in a Programmatic Environmental Impact Statement for Tritium Supply and Recycling. In the Record of Decision (ROD) (60 FR 63878, December 12, 1995), DOE decided to construct and operate a TEF at the Savannah River

Site as part of a dual-track strategy to ensure a supply of tritium to support the continuing nuclear weapons stockpile of the United States. One of the strategy tracks is the Commercial Light Water Reactor (CLWR) alternative (see Fact Sheet for Production of Tritium in a Commercial Light Water Reactor, #16), and the other is an accelerator system for tritium production (see Fact Sheet for Construction and Operation of an Accelerator for the Production of Tritium at the Savannah River Site, #13). The ROD stated that DOE would select one of these approaches by the end of 1998 to serve as the primary source of tritium. The TEF would be built at the Savannah River Site, and would be capable of extracting tritium both from CLWR targets and from an alternate design for accelerator targets. (The primary accelerator design would use a different technology to extract tritium.) The overall mission of the TEF would be to extract tritium gas from targets irradiated in a CLWR or an accelerator, and deliver weapons-quality tritium. This site-specific environmental impact statement analyzes the environmental impacts of construction and operation of the proposed TEF. DOE plans to issue this EIS and the other two EISs (See Fact Sheets #13 and #16) simultaneously early in 1999, following the Secretary's selection of the technology—reactor or an accelerator—to be used as the primary technology for production of tritium.

### Alternatives

Alternatives analyzed in the Draft EIS are: (1) not to build the proposed TEF (No Action); (2) construct and operate a TEF in H Area at the Savannah River Site (preferred alternative); (3) refurbish and use the existing Allied General Nuclear Services Facility in Barnwell County, South Carolina.

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Fact Sheet #15

## Production of Tritium in a Commercial Light Water Reactor Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to evaluate how to use one or more commercial light water reactors (CLWR) for the production of tritium to ensure a new tritium source required to support the nuclear weapons stockpile.

Document Number:	DOE/EIS-0288
Program:	Defense Programs
Operations Office:	Not Applicable
States:	AL, SC, TN

### Milestones

Notice of Intent	(63 FR 13097)	1/15/98
Draft EIS		8/98
Final EIS	(scheduled)	1/99
Record of Decision	(scheduled)	2/99

### Description

DOE evaluated the programmatic need for a new tritium source in a Programmatic Environmental Impact Statement for Tritium Supply and Recycling. In the Record of Decision (ROD) (60 FR 63878, December 12, 1995), DOE decided to pursue a dual-track strategy to ensure a supply of tritium to support the continuing

nuclear weapons stockpile of the United States. One of the strategy tracks is the CLWR alternative, and the other is an accelerator system for tritium production which is currently being evaluated in the Construction and Operation of an Accelerator for the Production of Tritium at the Savannah River Site Environmental Impact Statement (see Fact Sheet for Accelerator for the Production of Tritium, #13). The ROD stated that DOE would select one of these approaches by the end of 1998 to serve as the primary source of tritium. The other alternative, if feasible, would continue to be developed as a backup tritium source.

Prior to the initiation of the CLWR EIS, DOE started a procurement process to evaluate various CLWR alternatives including the purchase of CLWR irradiation services and/or purchase of an existing reactor. In September 1997, as a result of the procurement process, DOE selected the Tennessee Valley Authority's (TVA) proposal to enter into an agreement, contingent upon completion of the NEPA process, to produce tritium using one or more of its reactors. This CLWR EIS evaluates the environmental impacts associated with producing tritium at one or more of the following TVA reactor plants: Bellefonte Nuclear Weapons Plant Units #1 and/or #2 (Hollywood, Alabama); Watts Bar Nuclear Power Plant Unit #1 (Spring City, Tennessee); and the Sequoyah Nuclear Power Plant Units #1 and/or #2 (Soddy Daisy, Tennessee). Additionally, this CLWR EIS analyzes the potential environmental impacts associated with fabricating tritium-producing burnable absorber rods (TPBARS), transporting non-irradiated TPBARS from the fabrication facility to the reactor sites, irradiating TPBARS in the reactors, and transporting the irradiated TPBARS from the reactors to a tritium extraction facility that would be established at the Savannah River Site (see Fact Sheet for Construction and Operation of a Tritium Extraction Facility, #15). DOE plans to issue this EIS and the other two EISs (See Fact Sheets #13 and #15) simultaneously early in 1999, following the Secretary's selection of the technology—reactor or an accelerator—to be used as the primary technology for production of tritium.

### Alternatives

The CLWR EIS examines the following alternatives: (1) producing tritium at one or more of the TVA reactor plants at Bellefonte, Watts Bar, or Sequoyah and associated transportation issues; and (2) the No Action alternative, such as constructing and operating an accelerator at the Savannah River Site. The preferred alternative has not yet been identified.

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Fact Sheet #16

## Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to assess the potential environmental impacts from construction, operation, and closure of a Nuclear Regulatory Commission-licensed geologic repository for disposal of spent nuclear fuel and high-level radioactive waste, as mandated by the Nuclear Waste Policy Act, as amended (Act). This environmental impact statement (EIS) is required to support DOE's site recommendation to the President, as appropriate, under Section 114 of the Act.

Document Number:	DOE/EIS-0250
Program:	Civilian Radioactive Waste Management
Operations Office:	Not Applicable
State:	Nevada/National

Milestones		
Notice of Intent	(61 FR 40164)	8/7/95
Draft EIS		7/99
Final EIS	(scheduled)	8/2000

### Description

Section 114 of the Act describes the process for obtaining site approval and construction authorization. As part of this process, DOE must conduct hearings in the vicinity of Yucca Mountain and receive public comments regarding a possible recommendation of the site. Following these hearings and completion of site characterization activities, the Secretary of Energy must decide whether to

recommend approval of the site to the President. If a decision is made to recommend the Yucca Mountain site, the Secretary must make available to the public, and submit to the President, a comprehensive statement of the basis for such recommendation. Pursuant to Section 114(a)(1)(D) of the Act, this comprehensive statement must include the Final EIS prepared for the Yucca Mountain Site pursuant to Section 114(f) and the National Environmental Policy Act. The analysis of potential environmental impacts in this EIS will support DOE's site recommendation to the President and the President's ultimate decision as to whether to recommend to Congress that the Yucca Mountain site be developed as a geologic repository.

### Alternatives

In 1987, the Act was amended and directed DOE to evaluate only Yucca Mountain as a candidate disposal site. The Act also restricted the analysis of alternatives that the EIS must consider. To assist with meaningful comparison of potential impacts associated with the proposed action, the EIS will evaluate a No Action alternative and three thermal loading implementing alternatives: (1) high thermal load; (2) intermediate thermal load, and (3) low thermal load. The EIS will include an evaluation of the environmental impacts of surface and subsurface construction, operation, and eventual closure activities, as well as national and regional transportation and various packaging options for shipping spent nuclear fuel and high-level radioactive waste.

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Fact Sheet #17

## High Flux Beam Reactor Transition Project at the Brookhaven National Laboratory Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to make a decision on the future of the existing High Flux Beam Reactor (HFBR) at Brookhaven National Laboratory (BNL). The HFBR was shut down in December 1996 after tritium-contaminated groundwater was found in the vicinity of the facility.

Document Number:	DOE/EIS-0291
Program:	Energy Research
Operations Office:	Chicago
State:	New York

Milestones	
Notice of Intent	(62 FR 62572) 11/24/97
Draft EIS	(scheduled) 11/98
Final EIS	(scheduled) 5/99
Record of Decision	(scheduled) 6/99

### Description

The HFBR was commissioned in 1965 as a scientific facility dedicated to neutron scattering research and other research programs in solid state physics, nuclear physics, material technology, structural biology, medicine and chemistry. The HFBR has provided about two-thirds of the Department's experimental capability at reactors for

neutron scattering. On December 21, 1996, the HFBR was shut down for refueling and maintenance, a routine activity which normally occurs almost every month. Before the reactor was returned to operation, however, monitoring indicated that a plume of tritiated water was contaminating the groundwater in excess of drinking water standards south and down gradient of the reactor. Data collection and analysis identified the HFBR spent fuel pool as the likely source of the tritium plume. In May 1997, a short-term removal action, in the form of a groundwater extraction system, was undertaken to ensure that tritium-contaminated groundwater in excess of drinking water standards does not leave the BNL site boundary. DOE is considering several reasonable alternatives for the future of the HFBR.

### Alternatives

The HFBR Transition Project EIS will analyze the following reasonable alternatives: (1) continued maintenance of the HFBR in a shut down and defueled condition for the indefinite future (No Action); (2) resumption of operation (after modifications and repairs are completed) at a power level of 30 MW, or up to 60 MW; (3) resumption of reactor operation at a power level up to 60 MW and enhancement of the reactor's scientific research capabilities; and (4) permanent shut down of the reactor for eventual decontamination and decommissioning.

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## National Ignition Facility at the Lawrence Livermore National Laboratory Supplemental Environmental Impact Statement

### Agency Decisions Needed

The Department of Energy (DOE) needs to conduct a full evaluation of potential risks (from buried hazardous, toxic, and/or radioactive waste) to the human environment resulting from continuing to construct and operate the National Ignition Facility (NIF) at Lawrence Livermore National Laboratory (LLNL) in Livermore, California. The scope of the evaluation was established by the Joint Stipulation and Order approved and entered as an Order of the Court on October 27, 1997, in partial settlement of the lawsuit Natural Resources Defense Council (NRDC) v. Peña.

Document Number:	DOE/EIS-0236S
Program:	Defense Programs
Operations Office:	Oakland
State:	California

### Milestones

Notice of Intent	(62 FR 51341)	9/25/98
Draft EIS	(scheduled)	12/98
Final EIS	(scheduled)	4/99
Record of Decision	(scheduled)	5/99

### Description

The NIF is part of DOE's development of science-based, rather than underground nuclear test-based, stewardship of the nuclear weapons stockpile. In the NIF, nuclear fusion of very small amounts of hydrogen isotopes is expected to be achieved using the energy inherent in laser light. The environmental consequences of construction

and operation of the NIF were addressed in detail in Appendix I of the Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SSM PEIS). The SSM PEIS addressed alternative plans for DOE's defense program activities related to nuclear weapons stockpile issues at several DOE laboratories, including LLNL. The Record of Decision (ROD) for the SSM PEIS was published on December 26, 1996 (61 FR 68014). In the ROD, DOE announced a decision to proceed with construction and operation of NIF at LLNL. Construction of the NIF is expected to be completed by October 2003. During site excavation for NIF in September 1997, buried electrical capacitors containing polychlorinated biphenyls and other items were discovered at the site. Several of the capacitors had leaked, contaminating surrounding soil. The capacitors and surrounding soil were cleaned up in accordance with State and Federal regulations. The possibility of such an event was not foreseen and therefore not addressed in the SSM PEIS. As a result, the NRDC filed a lawsuit against DOE alleging that DOE knew but did not adequately analyze and disclose the risk of building the NIF in an area that may contain buried hazardous, toxic, and/or radioactive waste.

### Alternatives

This Supplemental EIS will analyze the results of subsequent waste characterizations activities that DOE conducted pursuant to the Joint Stipulation and Order. This will help DOE determine if cleanup of the hazardous, toxic, and/or radioactive materials buried in the northeast corner of LLNL is complete.

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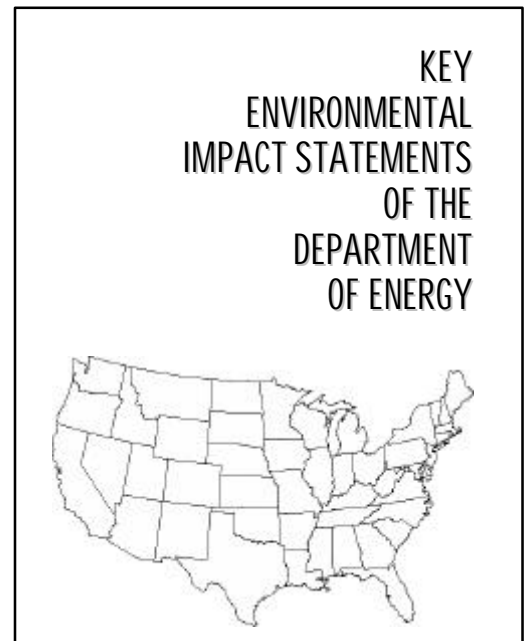
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Fact Sheet #19

# Diagrams for Potential Actions and Recent Decisions Affecting the:

- ◆ Hanford Site
- ◆ Idaho National Engineering and Environmental Laboratory
- ◆ Los Alamos National Laboratory
- ◆ Nevada Test Site
- ◆ Oak Ridge Reservation
- ◆ Pantex Plant
- ◆ Rocky Flats Environmental Technology Site
- ◆ Savannah River Site



# EISs POTENTIALLY AFFECTING THE HANFORD SITE

## RECENT DECISIONS AFFECTING THE HANFORD SITE

•**Tank Waste Remediation System Record of Decision (2/26/97)** - DOE will conduct phased retrieval and treatment of high-level tank wastes over approximately 40 years. DOE will dispose of the resulting vitrified low activity waste stream on-site, and package vitrified high-level waste for storage pending disposal in a national geologic repository. Decisions on disposition of cesium and strontium capsules are deferred pending evaluation of potential uses.

•**Storage and Disposition of Weapons-Usable Fissile Materials Record of Decision (1/21/97); Amendment (8/13/98)** - Storage: Plutonium currently stored at Hanford will remain there until disposition (or movement to lag storage at the disposition sites). Hanford non-pit, surplus, weapons-usable plutonium would be stored at the Savannah River Site in the Actinide Packaging and Storage Facility and 105-K if Savannah River Site is selected as the immobilization site by the Record of Decision for the Surplus Plutonium Disposition EIS.

Disposition: DOE has narrowed the field of candidate disposition sites. Hanford is a candidate for an immobilization facility, a mixed oxide fuel fabrication facility, and a pit (weapon component) disassembly and conversion facility.

•**Plutonium Finishing Plant Stabilization at the Hanford Site Record of Decision (7/10/96)** - DOE will stabilize various Plutonium Finishing Plant plutonium-bearing materials for storage in Plutonium Finishing Plant vaults. DOE may immobilize and store as waste certain low concentration residues.

•**Management of Spent Nuclear Fuel from the K-Basins at the Hanford Site Record of Decision (3/15/96)** - DOE will remove spent nuclear fuel from K-Basins and package the fuel in inert-gas-filled canisters for dry storage in a vault facility to be built at Hanford. DOE will transfer K-Basins sludge to double-shell high-level waste tanks.

•**Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory and Environmental Restoration and Waste Management Programs Record of Decision (6/1/95); Amendment (3/8/96)** - Hanford will continue to manage Hanford's spent nuclear fuel, except that sodium-bonded Fast Flux Test Facility spent nuclear fuel will be shipped to Idaho.

•**Waste Isolation Pilot Plant (WIPP) Disposal Phase SEIS-II Record of Decision (1/23/98)** - WIPP will dispose of transuranic waste from the Hanford Site.

•**Waste Management Programmatic EIS Record of Decision for Transuranic Waste (1/23/98)** - Transuranic waste at the Hanford Site will be packaged to meet WIPP waste acceptance criteria and stored on-site for eventual disposal at WIPP; **Record of Decision for Non-Wastewater Hazardous Waste (7/30/98)** - the Hanford Site will continue to use off-site facilities for treatment of its site-generated non-wastewater hazardous waste.

## WASTE MANAGEMENT PEIS (See Fact Sheet #3)

Hanford is one of six preferred alternative sites for regional disposal of low-level/low-level mixed wastes (to be narrowed to two or three sites)

Hanford is the preferred alternative for storage of its high-level waste pending disposal

## HANFORD SITE

•**HANFORD REMEDIAL ACTION AND LAND-USE PLAN EIS** (See Fact Sheet #4)

•**HANFORD SOLID (RADIOACTIVE AND HAZARDOUS) WASTE PROGRAM EIS** (See Fact Sheet #5)

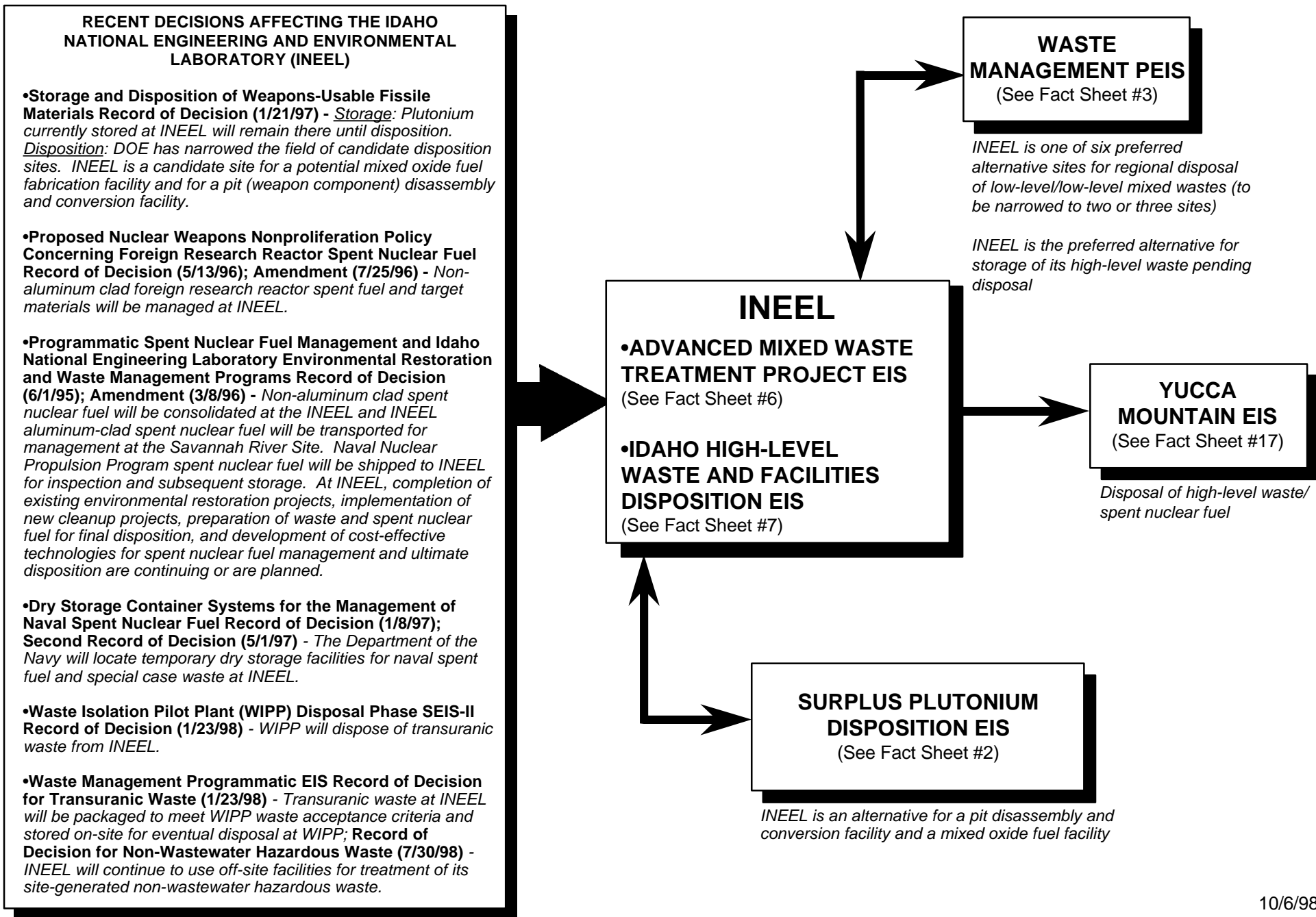
## YUCCA MOUNTAIN EIS (See Fact Sheet #17)

Disposal of high-level waste/spent nuclear fuel

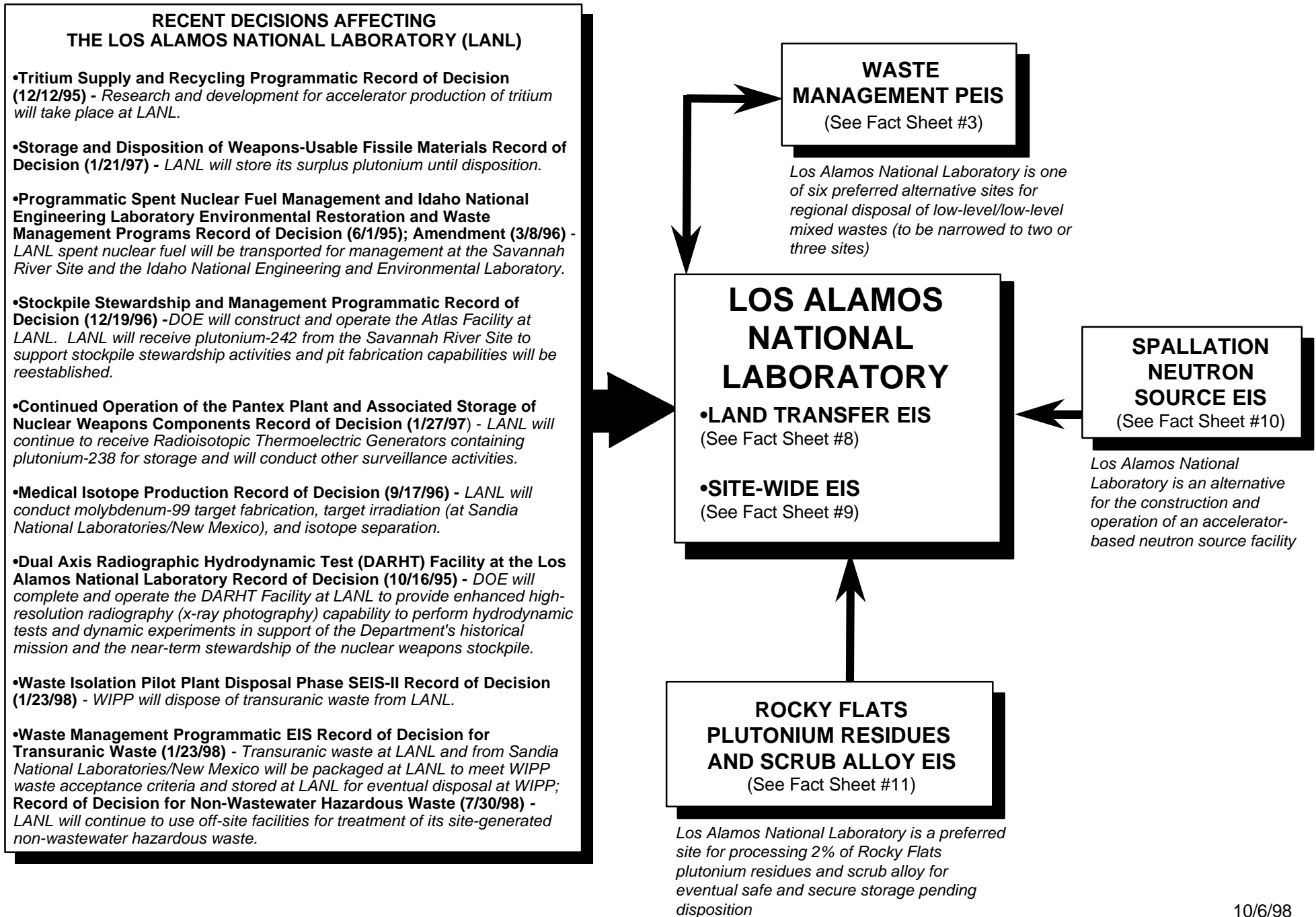
## SURPLUS PLUTONIUM DISPOSITION EIS (See Fact Sheet #2)

Hanford is an alternative for an immobilization facility, a pit disassembly and conversion facility, and a mixed oxide fuel facility

# EISs POTENTIALLY AFFECTING THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY



# EISs POTENTIALLY AFFECTING THE LOS ALAMOS NATIONAL LABORATORY



# EISs POTENTIALLY AFFECTING THE NEVADA TEST SITE

## RECENT DECISIONS AFFECTING THE NEVADA TEST SITE

•**Site-wide for the Nevada Test Site and Other Off-Site Test Locations within the State of Nevada Record of Decision (12/13/96)** - *For Defense Programs, activities at the Nevada Test Site will focus on experiments and operations to maintain confidence in the safety and reliability of the stockpile without underground nuclear testing and will maintain a level of readiness to resume testing, as directed by the President. DOE will maintain the current level of low-level and mixed low-level waste management activity pending decisions on low-level waste and mixed low-level waste based on the Waste Management PEIS. For the Environmental Restoration Program, characterization and selected remediation of contaminated areas of facilities will continue. Ongoing program operations and diversification of use for nondefense and private use of the Nevada Test Site will continue. Activities centered around treaty verification, nonproliferation, counter proliferation, demilitarization, and defense related research and development will continue to be an important aspect of Nevada Test Site related activities.*

•**Waste Isolation Pilot Plant (WIPP) Disposal Phase SEIS-II Record of Decision (1/23/98)** - *WIPP will dispose of transuranic waste from the Nevada Test Site.*

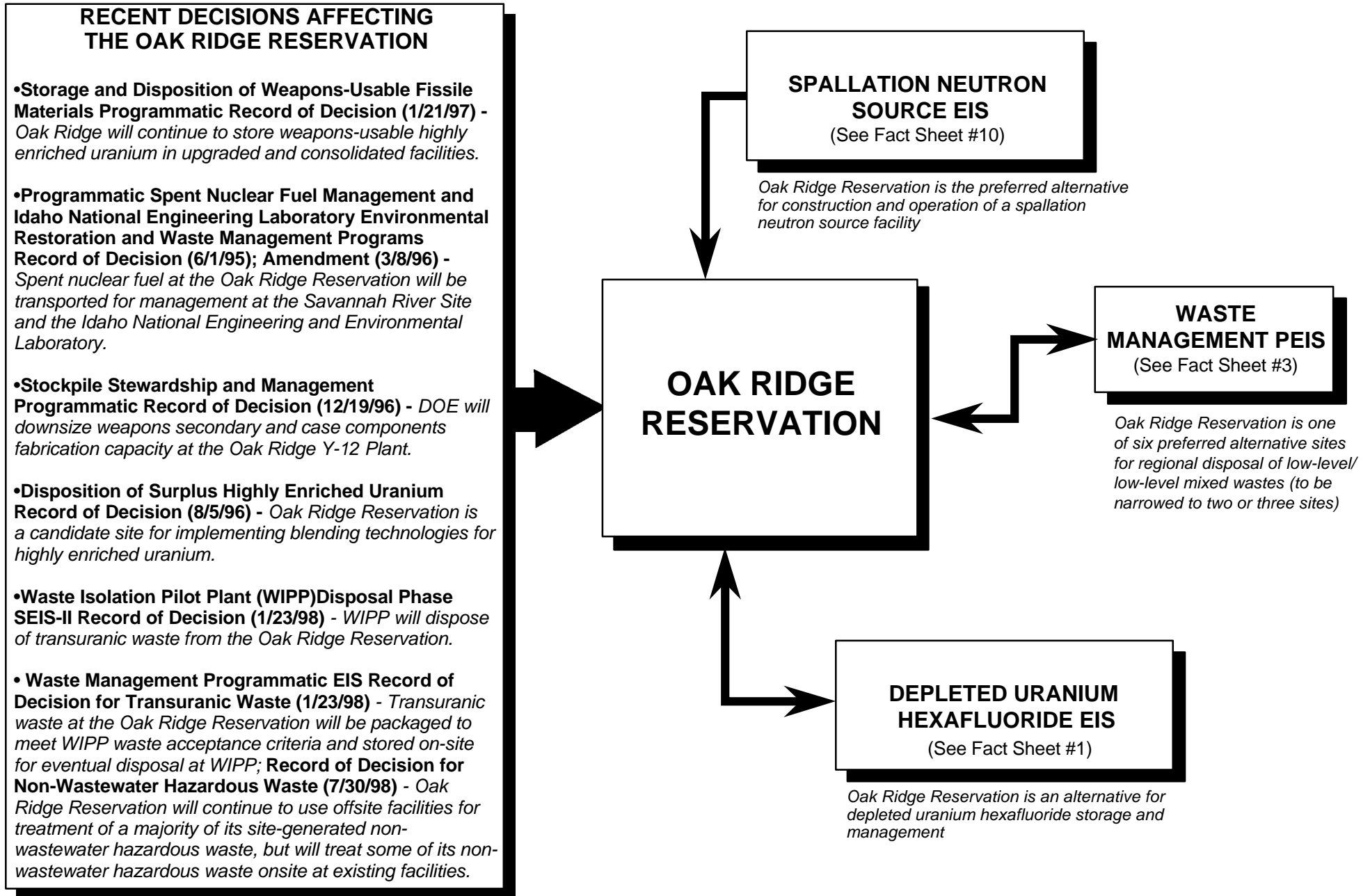
•**Waste Management Programmatic EIS Record of Decision for Transuranic Waste (1/23/98)** - *Transuranic waste at the Nevada Test Site will be packaged to meet WIPP waste acceptance criteria and stored on-site for eventual disposal at WIPP.*

## NEVADA TEST SITE

## WASTE MANAGEMENT PEIS (See Fact Sheet #3)

*Nevada Test Site is one of six preferred alternative sites for regional disposal of low-level/ low-level mixed wastes (to be narrowed to two or three sites)*

# EISs POTENTIALLY AFFECTING THE OAK RIDGE RESERVATION



# EISs POTENTIALLY AFFECTING THE PANTEX PLANT

## RECENT DECISIONS AFFECTING THE PANTEX PLANT

### •Storage and Disposition of Weapons-Usable Fissile Materials Record of Decision

*(1/21/97) - Storage: DOE will consolidate the storage of weapons-usable plutonium by upgrading existing facilities at Pantex. DOE began to move surplus plutonium pits from Rocky Flats to Pantex in 1997 (DOE expects to complete by the end of 1998). At Pantex, DOE will repackage pits from Rocky Flats in Zone 12, then place them in existing storage facilities in Zone 4, pending completion of facility upgrades in Zone 12.*

*Disposition: DOE has narrowed the field of candidate disposition sites. Pantex is one of two preferred sites for a pit (weapon component) disassembly and conversion facility and an alternative for a mixed oxide fuel facility.*

### •Stockpile Stewardship and Management Programmatic Record of Decision (12/19/96) -

*DOE will downsize weapons assembly/disassembly capacity and high explosive component fabrication capacity at Pantex.*

**•Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components Record of Decision (1/27/97) -** *DOE will continue nuclear weapon operations involving assembly and disassembly of nuclear weapons at Pantex. DOE will implement facility projects, including upgrades and construction, consistent with conducting these operations, and will continue to provide interim plutonium component (pit) storage at Pantex, and increase the authorized storage level from 12,000 to 20,000 pits.*

## PANTEX PLANT

**WASTE MANAGEMENT PEIS**  
(See Fact Sheet #3)

**SURPLUS PLUTONIUM DISPOSITION EIS**  
(See Fact Sheet #2)

*Pantex is an alternative for a mixed oxide fuel facility and one of two preferred sites for a plutonium disassembly and conversion facility*

# EISs POTENTIALLY AFFECTING THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

## RECENT DECISIONS AFFECTING THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

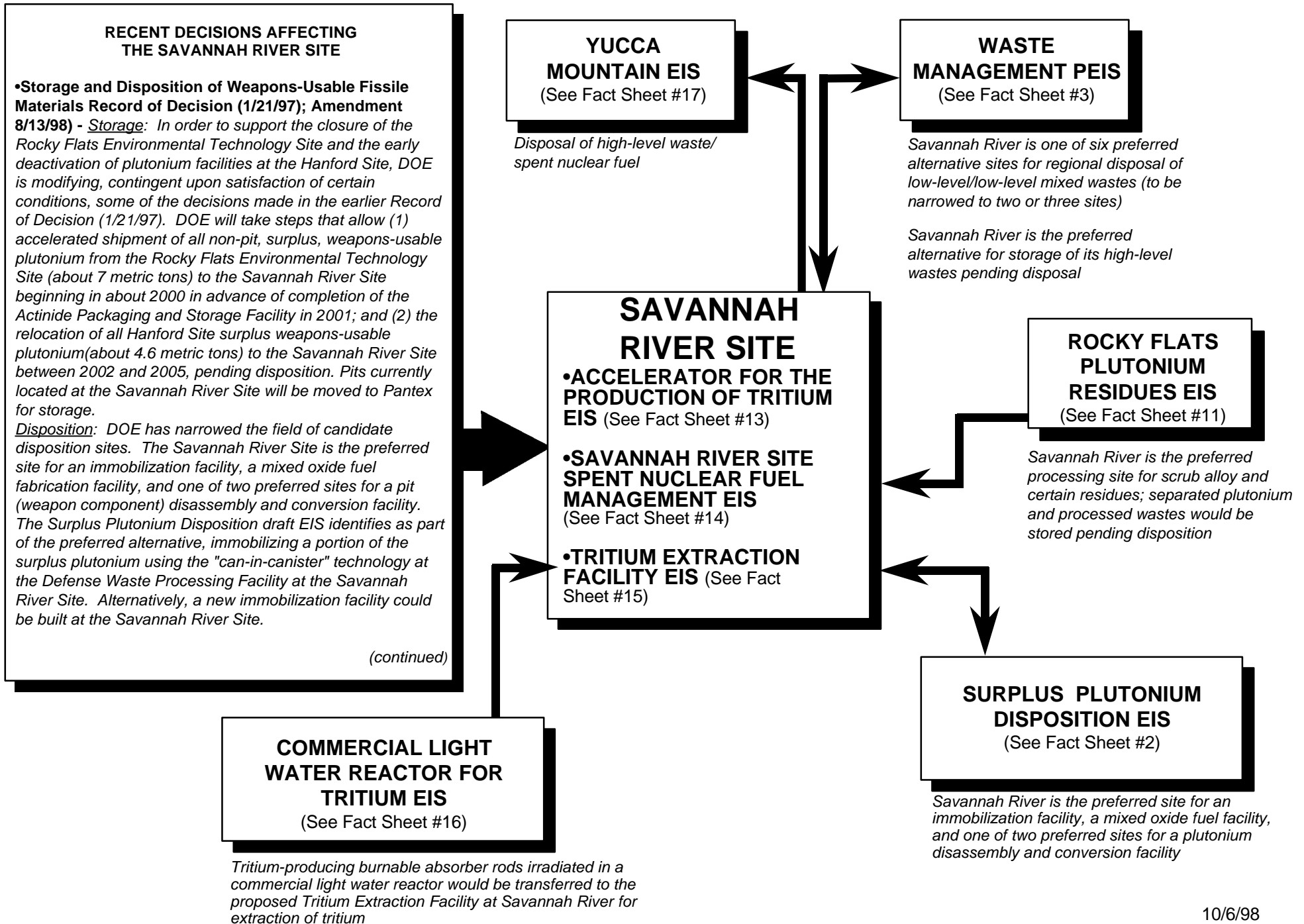
- **Storage and Disposition of Weapons-Usable Fissile Materials Record of Decision (1/21/97); Amendment (8/13/98)** - DOE will phase out storage of all weapons-usable plutonium at Rocky Flats. In 1997, DOE began to move pits to Pantex (DOE expects to complete by the end of 1998). The accelerated shipment of all non-pit, surplus, weapons-usable plutonium from Rocky Flats (about 7 metric tons) to the Savannah River Site will begin in about 2000 if Savannah River Site is selected as the site for plutonium immobilization.
- **Solid Residues Treatment Repackaging and Storage Environmental Assessment Finding of No Significant Impact (4/15/96)** - DOE will treat 64,300 kg of plutonium-bearing residues adequately for safe storage and subsequent disposal as transuranic waste.
- **Waste Isolation Pilot Plant (WIPP) Disposal Phase SEIS-II Record of Decision (1/23/98)** - WIPP will dispose of transuranic waste from Rocky Flats.
- **Waste Management Programmatic EIS Record of Decision for Transuranic Waste (1/23/98)** - Transuranic waste at Rocky Flats will be packaged to meet WIPP waste acceptance criteria and stored on-site for eventual disposal at WIPP.

## ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

- **ROCKY FLATS PLUTONIUM RESIDUES AND SCRUB ALLOY EIS** (See Fact Sheet #11)

**WASTE MANAGEMENT PEIS**  
(See Fact Sheet #3)

# EISs POTENTIALLY AFFECTING THE SAVANNAH RIVER SITE



**•Disposition of Surplus Highly Enriched Uranium Record of Decision (8/5/96)** - DOE will implement a program to make surplus highly enriched uranium, including approximately 22 metric tons currently located at the Savannah River Site, non-weapons-usable by blending it down to low enriched uranium. The Savannah River Site is one of four blending locations that may be used.

**•Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel Policy Record of Decision (5/13/96); Amendment (7/22/96)** - DOE will accept about 18 metric tons of heavy metal of Foreign Research Reactor aluminum-clad spent nuclear fuel at the Savannah River Site over a 13-year period. Pending disposition, the Foreign Research Reactor spent nuclear fuel will be placed in existing wet storage (RBOF and L Basin) at the Savannah River Site. After a limited period of storage, the aluminum-clad spent nuclear fuel will be treated and packaged, or chemically separated, at the Savannah River Site, as necessary to prepare it for transport to a final disposal repository. DOE will embark on an accelerated program at the Savannah River Site to identify, develop, and demonstrate one or more non-reprocessing, cost-effective treatment and/or packaging technologies. Should a new treatment or packaging technology not be ready for implementation by the year 2000, DOE has under active consideration chemical separation of some of the Foreign Research Reactor spent nuclear fuel in the F-Canyon, where it would be blended down to low enriched uranium and potentially placed under International Atomic Energy Agency safeguards.

**•Management of Spent Nuclear Fuel Record of Decision (6/1/95); Amendment (3/8/96)** - The Savannah River Site will manage current and future DOE aluminum-clad spent nuclear fuel. The Savannah River Site will receive approximately 870 shipments of spent nuclear fuel from domestic locations and any aluminum-clad fuel that DOE would accept from foreign research reactors. The Savannah River Site will make approximately 121 shipments of non-aluminum clad spent nuclear fuel to Idaho.

**•Tritium Supply and Recycling Programmatic Record of Decision (12/12/95)** - DOE will pursue a dual track (initiate purchase of an existing commercial reactor or irradiation services, and design, build, and test critical components of an accelerator system), selecting one as primary within three years. The Savannah River Site is selected as the location for an accelerator, should one be built. The tritium recycling facilities at the Savannah River Site will be upgraded and consolidated to support both of the dual track options. If the commercial reactor alternative is selected as the primary tritium source, a tritium extraction facility will also be constructed at the Savannah River Site.

**•Interim Management of Nuclear Materials at the Savannah River Site Records of Decision (12/19/95, 2/21/96, 9/13/96, 4/11/97, 11/14/97)** - DOE decided to implement the preferred alternatives for the management of SRS nuclear materials with the following exceptions. DOE has decided to: (1) stabilize H-Canyon plutonium-239 solutions to either a glass (vitrification), an oxide, or a metal; and (2) process neptunium-237 to either a glass (vitrification) or to an oxide. DOE will issue subsequent ROD(s) to specify which alternatives will be used. DOE also announced new preferred alternatives for managing the Mark-16 and Mark-22 fuels (blending down to low enriched uranium), and other aluminum-clad targets (processing and storage for vitrification). In the 1<sup>st</sup> Supplemental ROD, DOE decided to stabilize Mark-16 and Mark-22 fuels and other aluminum-clad targets at the SRS. In the 2<sup>nd</sup> Supplemental ROD, DOE decided (1) to dissolve, chemically separate and process (vitrify) neptunium-237 solution and targets in the F-Canyon; and (2) to stabilize plutonium-239 solutions stored in the H-Canyon facility to a metal, using the F-Canyon and FB-Line facilities. These materials will be stored at the SRS until DOE implements long-term storage and disposition decisions on weapons-usable forms of plutonium. In the 3<sup>rd</sup> Supplemental ROD, DOE decided to stabilize all remaining spent Taiwan Research Reactor fuels stored in the Receiving Basin for Off-site Fuels to a metal, using the F-Canyon and FB-Line facilities. These materials will be stored at the SRS until DOE implements long-term storage and disposition

decisions on weapons-usable forms of plutonium. In the 4<sup>th</sup> Supplemental ROD, DOE decided to: (1) add an additional method, Processing and Storage for Vitrification in the Defense Waste Processing Facility, to those being implemented for the management of plutonium and uranium stored in vaults; and (2) amend its September 13, 1996, ROD to stabilize the plutonium-239 and neptunium-237 solutions stored in H-Canyon and obsolete neptunium-237 targets stored in K-Reactor to oxide forms using the H-Canyon facilities.

**•Waste Isolation Pilot Plant (WIPP) Disposal Phase SEIS-II Record of Decision (1/23/98)** - WIPP will dispose of transuranic waste from the Savannah River Site.

**•Waste Management Programmatic EIS Record of Decision for Transuranic Waste (1/23/98)** - Transuranic waste at the Savannah River Site will be packaged to meet WIPP waste acceptance criteria and stored on-site for eventual disposal at WIPP; **Record of Decision for Non-Wastewater Hazardous Waste (7/30/98)** - Savannah River Site will continue to use off-site facilities for treatment of a majority of its site-generated non-wastewater hazardous waste, but will treat some of its non-wastewater hazardous waste on-site at the Consolidated Incineration Facility.

**•Disposal of Navy's S3G and D1G Prototype Reactor Plants EIS Record of Decision (1/28/98)** - Savannah River Site was selected to receive low-level radioactive wastes for disposal.

**•Shutdown of the River Water System at the Savannah River Site Record of Decision (1/28/98)** - Savannah River Site will continue to operate and maintain the river water system and maintain the water level of L-Lake.