DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
SITE/PROJECT COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM MISSION

The Defense SITE/PROJECT COMPLETION account will provide funding for projects that will be completed by FY 2006 at sites or facilities where a DOE mission will continue (e.g., environmental management, nuclear weapons stockpile stewardship or scientific research) beyond 2006. Hence, this account focuses on the completion of specific EM projects at sites where the Department anticipates continuing missions.

This account includes projects that will be performed by the following Operations Offices: Albuquerque (AL), Idaho (ID), Oakland (OAK), Richland (RL), and Savannah River (SR). The account focuses managers on completing projects by 2006 and distinguishes these projects from the long-term projects or activities at the sites, such as waste management (e.g., high level waste vitrification), or the Department's other enduring missions, such as those carried out by the Offices of Defense Programs, Nuclear Energy, and Energy Research. Although the largest amount of funding for project completion activities is in the defense account, a greater number of sites are funded in the non-defense project completion account.

The largest amount of funding requested in the Defense SITE/PROJECT COMPLETION account is for the Hanford (Washington), Savannah River (South Carolina) and Idaho sites. A significant amount of activity at these sites is expected to be finished by 2006, although Richland and Idaho site personnel will continue to carry out environmental management activities and Savannah River Site personnel are expected to continue environmental management and nuclear weapons stockpile stewardship activities beyond the year 2006.

Two sites in California will be funded by the Defense SITE/PROJECT COMPLETION account: Lawrence Livermore National Laboratory (LLNL), which is managed by the Oakland Operations Office, and Sandia National Laboratory/Livermore (SNL/CA), which is managed by the Albuquerque Operations Office.

The Albuquerque Operations Office also manages activities at the Sandia National Laboratory (SNL); the Kansas City Plant (KCP) in Missouri; the Pinellas Plant in Florida; the Pantex Plant in Texas, and the Grand Junction Project Office in Colorado.

SITE/PROJECT COMPLETION - DEFENSE - PROGRAM MISSION (cont'd)

In addition, the Albuquerque Operations Office provides for funding the South Valley Site in New Mexico and the Maxey Flats Site in Kentucky, where DOE has been named a potentially responsible party (PRP) for cleanup efforts.

In a limited number of cases, the account includes sites where no enduring mission is expected beyond 2006 and the cleanup will be completed by 2006. Normally, these sites would be included in the the Site Closure account. Funding these sites from the SITE/PROJECT COMPLETION account rather than the DEFENSE FACILITIES CLOSURE PROJECTS account will provide the operations office which manages the project with greater flexibility in managing the funds for all of its projects. Use of the DEFENSE FACILITIES CLOSURE PROJECTS account for these sites would impose an additional appropriation control on the funds for the cleanup of these sites without commensurate benefit.

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SITE/PROJECT COMPLETION
(Dollars in thousands)

PROGRAM FUNDING PROFILE

Subprogram	FY 1997 Adjusted Appropriation	FY 1998 Adjusted Appropriation	FY 1999 Budget Request
Remedial Action/Release Sites	$ 81,966	$84,700	$74,007
Facility Decommissioning	15,275	6,900	0
Facilities Deactivation	124,403	105,548	138,901
Nuclear Materials Stabilization	341,405	372,423	456,435
Spent Nuclear Fuel Stabilization	241,115	213,413	229,592
Landlord	83,430	26,719	28,497
High-Level Waste	7,148	7,940	13,349
Transuranic Waste	25,537	42,436	36,216
Mixed Low-Level Waste	36,086	26,172	23,182
Low-Level Waste	23,493	18,248	11,231
Hazardous Waste	22,229	22,778	9,790
Other Waste	6,036	6,628	6,524
Long-Term Surveillance and Maintenance	263	210	0
Program Support	51,173	31,434	19,529
TOTAL, SITE/PROJECT COMPLETION	$1,059,559	$965,549	$1,047,253
Operations and Maintenance [non-add]	[$925,453]	[$863,792]	[$848,090]
Construction [non-add]	[$134,106]	[$101,757]	[$199,163]

SITE/PROJECT COMPLETION - DEFENSE - PROGRAM FUNDING PROFILE

Public Law Authorizations

Pub. Law 95-91, Department of Energy Organization Act (1977)
Pub. Law 105-62, The Energy and Water Development Appropriations Act, Fiscal Year 1998
Pub. Law 105-340, National Defense Authorization Act, Fiscal Year 1998

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SITE/PROJECT COMPLETION
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PROGRAM FUNDING BY SITE

Field Offices/Sites	FY 1997 Adjusted Appropriation	FY 1998 Adjusted Appropriation	FY 1999 Budget Request
ALBUQUERQUE OPERATIONS OFFICE			
Albuquerque Operations Office (NM)	$ 24,462	$ 16,053	$ 5,243
Grand Junction Office (CO)	8,000	8,000	1,200
Kansas City Plant (MO)	11,714	4,522	1,996
Pantex Plant (TX)	19,685	24,541	12,618
Pinellas Plant (FL)	62,054	3,947	3,835
Sandia National Laboratories (CA/NM)	33,566	45,190	27,612
Subtotal, ALBUQUERQUE	$159,481	$102,253	$52,504
CHICAGO OPERATIONS OFFICE			
Ames Laboratory (IA)	$ 50	$ 103	$ 0
Argonne National Laboratory - East (IL)	4,334	4,306	0
Brookhaven National Laboratory (NY)	102	0	0
Chicago Operations Office (IL)	213	291	0
Subtotal, CHICAGO	$4,699	$4,700	$ 0
IDAHO OPERATIONS OFFICE			
Idaho National Engineeringand Environmental Laboratory (ID)	$ 105,669	$ 106,630	$ 100,583
Subtotal, IDAHO	$ 105,669	$ 106,630	$ 100,583

SITE/PROJECT COMPLETION - DEFENSE - PROGRAM FUNDING BY SITE

Field Offices/Sites	FY 1997 Adjusted Appropriation	FY 1998 Adjusted Appropriation	FY 1999 Budget Request
OAKLAND OPERATIONS OFFICE			
Energy Tech Eng. Center/SSFL (CA)	$ 1,760	$ 0	$ 0
Lawrence Livermore National Laboratory (CA)	57,695	54,543	51,154
Oakland Operations Office (CA)	3,794	1,271	600
Subtotal, OAKLAND	$63,249	$55,814	$51,754
RICHLAND OPERATIONS OFFICE			
Richland (WA)	$305,855	$273,968	$350,145
SAVANNAH RIVER OPERATIONS OFFICE			
Savannah River Site (SC)	$420,606	$422,184	$492,267
TOTAL, SITE/PROJECT COMPLETION, Defense	$1,059,559	$ 965,549	$1,047,253

SITE/PROJECT COMPLETION - DEFENSE

ALBUQUERQUE

I. Mission Supporting Goals and Objectives

MISSION

In the Defense Environmental Restoration and Waste Management Appropriation, the Environmental Management Program, managed through the Albuquerque Operations Office (DOE-AL), supports cleanup activities at seven geographic sites in six states. These sites include the Kansas City Plant (KCP) in Missouri; the Pantex Plant in Texas; the Sandia National Laboratory (SNL) sites in California (SNL/CA) and New Mexico (SNL/NM); the Maxey Flats site in Kentucky; the Pinellas Plant in Florida; and the South Valley Superfund Site in New Mexico.

2006 STRATEGY

In accordance with the Draft 2006 Plan, the Albuquerque Operations Office goal is to complete cleanup of all geographic sites under its cognizance by FY 2006. The cleanup of the KCP will be complete in FY 1999; Pantex in FY 2000; SNL/NM in FY 2001; and SNL/CA in FY 1999. These sites have continuing Defense Programs missions. The assumption is that any required surveillance and maintenance and ground water monitoring activities will be budgeted for by Defense Programs, although this has not been finalized yet. As part of the reengineering of the waste management activities EM is responsible only for legacy waste. There are no legacy wastes in this budget relative to the waste activities that are being transferred to the Office of Defense Programs. The cost of managing newly generated waste associated with activities at KCP have been budgeted within the Office of Defense Program's Stockpile Management program. Completion of the Pinellas Plant in Florida, which has been sold for commercial use, has allowed accelerated progress to continue at other AL sites, even as overall funding levels are reduced. Long-term ground water pump and treat activities will continue at the Pinellas Plant and be administered by the Grand Junction Office as part of its long-term surveillance and maintenance program.

FY 1999 PROGRAM

The KCP is part of a 300-acre Federal complex located 12 miles south of downtown Kansas City, Missouri. In FY 1993, the Department shut down several facilities across the country and consolidated the production of non-nuclear components for nuclear weapons at the KCP Site. The KCP is comprised of 43 release sites, of which 37 were completed by the end of

I. Mission Supporting Goals and Objectives (cont'd)

FY 1999 PROGRAM (cont'd)

FY 1997; five are scheduled in FY 1998; and one is scheduled in FY 1999, which will complete cleanup of the KCP site. Advanced technologies are being employed to reduce soil contamination (microwave enhanced volatilization technology) and to reduce groundwater cleanup time and cost (iron trench treatment wall). Waste management activities were completed in FY 1997, when responsibility for waste activities was returned to the generator.

The Pantex Plant is located near Amarillo, Texas, and has responsibility for dismantlement and maintenance of the Nation's nuclear weapons stockpile, and storage of plutonium from dismantled weapons. At the Pantex Plant, the EM activities consist primarily of storage, treatment, and disposal of various waste types; and cleanup of contaminated soils and ground water. In FY 1994, the site was placed on the National Priorities List, thereby requiring remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authority. The Pantex Plant is comprised of 249 release sites, of which 214 were completed by the end of FY 1997; twenty-four are scheduled for FY 1998; and the final eight will be completed by FY 2000, which will complete the remediation of this site. Ground water pump and treat will likely need to continue well past this date; however, technology development activities are underway through the Innovative Treatment Remediation Demonstration (ITRD) program to try to accelerate groundwater cleanup at the Pantex Plant. Beginning in FY 1999, the Office of Defense Programs has financial and programmatic responsibility for waste management activities.

The SNL/CA facility is located adjacent to the Lawrence Livermore National Laboratory (LLNL) in California. Major restoration activities include the cleanup of a 59,000 gallon diesel fuel oil spill from an underground transfer pipe. The key Draft 2006 Plan initiative is to complete remediation of this facility in FY 1999 using advanced technology (bioremediation). In FY 1999, waste management legacy activities will also be completed and budgeted for the Defense Programs.

The SNL/NM site located in Albuquerque, New Mexico, is a research and development facility with a primary mission of developing, engineering, and testing non-nuclear components of nuclear weapons. By FY 2006, the disposition of all historical waste will be completed; the closure of excess waste management facilities finalized; and the cleanup program completed. In FY 1999, disposal of more than 90 percent of its historical/legacy low-level waste and mixed low-level waste will be

I. Mission Supporting Goals and Objectives (cont'd)

FY 1999 PROGRAM (cont'd)

completed. Major restoration efforts involve the remediation of inactive waste disposal and release sites at Albuquerque and a number of other remote locations. These sites have known or suspected releases of hazardous, radioactive, or mixed waste. Another major Draft 2006 Plan initiative will be to close out remediation activities at all of the release sites by FY 2001. In FY 1999, waste management legacy activities will also be completed and budgeted for the Defense Programs.

The SNL/CA and SNL/NM sites are comprised of 250 release sites, of which 202 were completed by the end of FY 1997; 16 are scheduled for completion in FY 1998; and 26 are scheduled for completion in FY 1999. SNL/CA cleanup will be completed in FY 1999 and SNL/NM in FY 2001.

The Pinellas Plant is a 97-acre site located six miles north of St. Petersburg, Florida, in Pinellas County. In 1995 it was sold to the Pinellas County Industrial Council, and DOE leased back portions of the plant to complete final environmental remediation of the plant site. All stabilization and deactivation activities were completed in FY 1997. In FY 1998, DOE will complete all remaining administrative closeout activities. In FY 1998 and FY 1999, DOE will continue with annual payments for Pinellas post-contract medical, pension, and other contractor worker benefits. Annual payments will be required until such time as the DOE can liquidate these liabilities with lump-sum payments, the current present value of which totals approximately $60,000,000. The remaining ground water pump and treat project is scheduled to continue until FY 2014. However, the planned implementation of additional innovative technologies involving rotary steam stripping and bioremediation may significantly reduce the time and cost of completing the project.

The Department is a potentially responsible party (PRP) at the South Valley site in New Mexico. The one release site at South Valley was completed in FY 1996. Currently ground water monitoring and ground water remediation system operation and maintenance activities are ongoing at this site. The Government is taking steps to reach a liability buy-out settlement under which DOE will no longer be involved in the Project.

The Maxey Flats site in Kentucky is another site where DOE is responsible for contributing a PRP payment for the cleanup of the site. Maxey Flats is considered one release site. EM's last PRP payment is expected in FY 1999, with cleanup activities scheduled for completion in FY 2000.

SITE/PROJECT COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

I. Mission Supporting Goals and Objectives (cont'd)

COMPLIANCE DRIVERS

The DOE-AL manages, coordinates, tracks, and assists in the implementation of programs at Pantex, Pinellas, Kansas City, and both Sandia National Laboratory locations. Agreements-in-Principle (AIP) with the States of Texas and Missouri are also managed and implemented by the DOE-AL, as well as DOE's payment for cleanup of the Maxey Flats, Kentucky site, and the South Valley, New Mexico site. Legal drivers at Albuquerque include the Resource Conservation and Recovery Act (RCRA), CERCLA, National Environmental Policy Act (NEPA), State laws and codes, DOE Orders, and Federal Facility Compliance Agreements for waste management activities at Sandia National Laboratories, Pantex and Kansas City Plant.

II. Funding Schedule

Program Activity	FY 1997	FY 1998	FY 1999	$ Change	% Change
Remedial Action/Release Sites	$ 46,462	$ 49,422	$ 45,764	$ -3,658	-7%
Transuranic Waste*	186	5,732	0	-5,732	-100%
Mixed Low-Level Waste*.	11,232	4,965	0	-4,965	-100%
Low-Level Waste*	6,432	7,061	0	-7,061	-100%
Hazardous Waste*	9,711	11,020	0	-11,020	-100%
Other Waste	280	655	0	-655	-100%
Landlord	52,861	3,200	501	-2,699	-84%
Program Support	32,317	20,198	6,239	-13,959	-69%
TOTAL, Albuquerque.	$ 159,481	$ 102,253	$ 52,504	$ -49,749	-49%

* Re-engineering transfers newly generated waste to Defense Programs in FY 1999 for Sandia/NM, Sandia/CA, Pantex, and LANL. The KCP transferred to Defense Programs in FY 1998.

III. Performance Summary - Accomplishments

[PBS Numbers are Bracketed in the Text]	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites			
Carry out Voluntary Corrective Measures/No Further Action determinations at both SNL sites. [AL018]	$13,778	$20,358	$19,587
• In FY 1997, 22 remedial actions were initiated and completed. • In FY 1998, 16 remedial actions will be initiated and completed. • In FY 1999, 26 remedial actions will be initiated and completed.			
Carry out remediation activities at Chemical Waste Landfill at SNL/NM. [AL018]	$1,908	$2,635	$3,548
• In FY 1997, interim measures continued. • In FY 1998, interim measures continue, and excavation at a separate location begins. • In FY 1999, interim measures will continue and excavation will continue.			
Provide for treatment, storage and disposal of environmental restoration-generated wastes at SNL/NM. [AL017]	$1,473	$2,813	$3,831
• In FY 1997, Temporary Unit was constructed and operations began and the permit for Corrective Action Management Unit (CAMU) was approved. • In FY 1998, construction will be completed and operations will begin at CAMU. • In FY 1999, continue operations at CAMU.			
Conduct compliance monitoring and carry out bioremediation, an innovative technology developed earlier by EM, of the Fuel Oil Spill at SNL/CA. [AL018]	$1,304	$1,182	$646
• In FY 1997, pilot scale bioremediation activities continued. • In FY 1998, pilot scale bioremediation activities continue. • In FY 1999, full scale bioremediation activities will be initiated, which completes the planned remediation alternative and this bioremediation effort will continue for several years.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
Conduct assessment activities at the 95th Terrace and multi-site corrective measures study at KCP. [AL-007]	$298	$74	$10
• In FY 1997, characterization was completed. • In FY 1998, administrative closure will be initiated. • In FY 1999, administrative closure will be completed.			
Carry out innovative technology demonstration projects at KCP. [AL007]	$990	$129	$8
• In FY 1997, the Funnel and Gate Iron Filing project was initiated and the Microwave Technology Demonstration project was initiated. Also completed Deep-Soil Mixing Report. • In FY 1998, continue the Funnel and Gate Iron Filing project and complete the Microwave project. • In FY 1999, complete the Funnel and Gate Iron Filing project.			
Provide for Solid Waste Management Unit (SWMU) remediation activities at KCP. [AL007]	$865	$3,034	$920
• In FY 1997, completed closeout of 2 of 8 remaining release sites. • In FY 1998, complete closeout of 5 of 6 remaining release sites. • In FY 1999, complete closeout of 1 (the last) release site.			
Continue ground water treatment and monitoring at KCP. [AL007]	$791	$950	$898
In FY 1997, FY 1998 and FY 1999, carry out characterization and assessment for groundwater protection, ditches and playas, High Explosive/Radioactive (HE/RAD) sites, landfill sites, firing sites, burning ground, miscellaneous spill sites, and other minor sites at Pantex. [AL-014]	$2,370	$1,820	$1,766

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
Carry out remediation activities at the ditches and playas, HE/RAD sites, landfill sites, firing sites, and other minor sites. [AL-014] • In FY 1997, 19 site closures were completed. • In FY 1998, 24 site closures will be completed. • In FY 1999, continue remediation activities in support of outyear completion.	$1,843	$4,161	$4,488
In FY 1997, FY 1998 and FY 1999, carry out remediation efforts at Pantex Plant Zone-12 Ground Water Protection Project. Corrective measures construction will be completed and treatability study and monitoring will continue for groundwater in FY 1999.	$3,486	$3,519	$5,045
Continue ground water remediation at South Valley. DOE is one of several potentially responsible parties contributing funding for this cleanup. Funding amounts noted are only the DOE portion while the narrative reflects total activity at the site supported by multiple contributors. [AL003] • In FY 1997, groundwater monitoring and remediation operation activities continued. • In FY 1998, groundwater monitoring and remediation operation activities will continue (no PRP payments will be made from DOE while buyout negotiations continue). • In FY 1999, groundwater monitoring and remediation operation activities will continue (PRP payments will be necessary from DOE if buyout negotiations are not successful.	$163	$0	$483
In FY 1997, FY 1998, and FY 1999, support remedial action at Maxey Flats, KY, disposal site. DOE is one of several potentially responsible parties contributing funding for this cleanup. [AL021]	$8,000	$8,000	$1,200

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
Cleanup and exit from Pinellas Plant. [AL025]	$9,193	$747	$3,334
• In FY 1997, completed all environmental remediation activities at Pinellas, except for long-term ground water pump-and-treat operations.			
• In FY 1998, DOE completes administrative closeout activities and vacates Pinellas Plant. Continue ground water pump and treat operations (administered by Grand Junction).			
• In FY 1999, implement additional innovative technologies to the ground water pump and treat operations (administered by Grand Junction).			
Subtotal, Remedial Action/Release Sites	**$46,462**	**$49,422**	**$45,764**
Transuranic Waste			
Provides for the treatment, storage and disposal (starting in FY 1999) at WIPP of transuranic waste at Sandia. [AL013]	$186	$732	$0
• In FY 1997, minimum activity in preparation of TRU waste disposal was performed.			
• In FY 1998, continue certification and preparation of TRU waste for shipment to WIPP.			
• In FY 1999, responsibility for characterization and preparation of TRU waste at Sandia is transferred to Defense Programs in FY 1999 under the re-engineering initiative.			
Treatment			
• In FY 1997, 0 cubic meters were treated.			
• In FY 1998, 0 cubic meters will be treated.			
• In FY 1999, this activity will be transferred to Defense Programs.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Transuranic Waste (cont'd)			
Storage • In FY 1997, 6 cubic meters were stored. • In FY 1998, 17 cubic meters will be stored. • In FY 1999, this activity will be transferred to Defense Programs.			
Disposal • In FY 1997, 0 cubic meters were disposed. • In FY 1998, 0 cubic meters will be disposed. • In FY 1999, this activity will be transferred to Defense Programs.			
Support the new Hazardous Waste Treatment and Processing Facility (92-D-172) construction project at Pantex. • In FY 1997, no activity. • In FY 1998, received final funding necessary to complete project at a TEC of 6 million, which was previously deferred to support other activities and initiate construction. • In FY 1999, no funds are necessary to complete project; initiate operations in the 3rd Quarter, FY 1999.	$0	$5,000	$0
Subtotal, Transuranic Waste	**$186**	**$5,732**	**$0**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Mixed Low-Level Waste			
Provides for the characterization, treatment, and disposal of mixed low-level waste under terms of Federal Facility Compliance Orders at Sandia, and Pantex and Kansas City Plant. [AL013]	$11,232	$4,965	$0
• In FY 1997, continued treatment and disposal at all sites. • In FY 1998, continue treatment and disposal at all sites, with exception of newly generated waste at KCP, which was transferred to Defense Programs in FY 1998. • In FY 1999, responsibility and funding for newly generated MLLW is transferred to Defense Programs.			
Treatment • In FY 1997, 7 cubic meters were treated. • In FY 1998, 24 cubic meters will be treated.			
Storage • In FY 1997, 284 cubic meters were stored. • In FY 1998, 301 cubic meters will be stored.			
Disposal • In FY 1997, 2 cubic meters were disposed. • In FY 1998, 122 cubic meters will be disposed.			
Subtotal, Mixed Low-Level Waste	**$11,232**	**$4,965**	**$0**

SITE/PROJECT COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Low-Level Waste			
Provides for the compliant treatment, storage, and disposal of LLW from Pantex, Sandia/NM, and Sandia/CA at DOE and commercial disposal sites. [AL013]	$6,432	$7,061	$0
• In FY 1997, continued treatment, storage and disposal. • In FY 1998, continue treatment, storage and disposal. • In FY 1999, responsibility and funding for this activity is transferred to Defense Programs under the re-engineering initiative.			
Treatment • In FY 1997, 60 cubic meters were treated. • In FY 1998, 269 cubic meters will be treated.			
Storage • In FY 1997, 826 cubic meters were stored. • In FY 1998, 768 cubic meters will be stored.			
Disposal • In FY 1997, 121 cubic meters were disposed. • In FY 1998, 389 cubic meters will be disposed.			
Subtotal, Low-Level Waste	**$6,432**	**$7,061**	**$0**

SITE/PROJECT COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Hazardous Waste			
Provides for the RCRA compliant treatment, storage, and disposal of hazardous waste from Pantex, Sandia/NM, and Sandia/CA at off-site commercial facilities of hazardous waste. [AL012] • In FY 1997, commercial disposal of 1,035 metric tons of hazardous waste. • In FY 1998, continue commercial disposal of hazardous waste. Treat, store, and disposal of 1,114 metric tons. • In FY 1999, responsibility and funding for this activity is transferred to Defense Programs under the re-engineering initiative.	$9,711	$11,020	$0
Subtotal, Hazardous Waste	**$ 9,711**	**$ 11,020**	**$ 0**
Other Waste			
Provides funding for characterization of SNL/NM and SNL/CA materials which will eventually be declared waste. [AL012] • In FY 1997, characterization of materials in inventory. • In FY 1998, continue characterization of materials. • In FY 1999, responsibility and funding for this activity is transferred to Defense Programs under the re-engineering initiative.	$280	$655	$0
Subtotal, Other Waste	**$ 280**	**$ 655**	**$ 0**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Landlord			
General Purpose Site-Wide Infrastructure Services. [AL019] • In FY 1997, provided for Pinellas base landlord costs; site closure activities including removal of equipment, records and other personal property; contractor workforce restructuring benefits. • In FY 1998, support of contract closeout and post-contract worker retirement benefits, such as pension and medical and life insurances. • In FY 1999, continue annual payments for post-contract worker retirement benefits not related to Section 3161.	$52,861	$3,200	$501
Subtotal, Landlord	**$ 52,861**	**$ 3,200**	**$ 501**
Program Support			
In FY 1997 and FY 1998 provide essential management oversight, including site advisory boards, and support activities for the compliant storage, treatment and disposal of wastes. In FY 1999, Pantex and SNL/NM and SNL/CA waste management support transfers to Defense Programs; however, there continues environmental restoration support for Pantex. [AL014, AL015, AL017]	$7,130	$3,810	$1,319
In FY 1997 and FY 1998, support for cooperative agreements with Historically Black Colleges and Universities (Norfolk State and Clark Atlanta), the Waste Education Research Consortium, and the Center for Materials Research to support research, technology development and transfer and environmental educationIn FY 1999, these activities will be curtailed due to decreased funding levels. [AL002]	$23,237	$15,553	$3,441

SITE/PROJECT COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Program Support			
In FY 1997, FY 1998, and FY 1999, provide support for KCP Innovative Treatment Remediation Demonstration Program in assessment, implementation and validation of innovative technologies. [AL002]	$888	$335	$160
In FY 1997, FY 1998, and FY 1999, provide support for Agreements in Principle with Texas and Missouri. [AL002]	$1,062	$500	$1,319
Subtotal, Program Support	**$ 32,317**	**$ 20,198**	**$ 6,239**
TOTAL, ALBUQUERQUE	**$ 159,481**	**$ 102,253**	**$ 52,504**

Explanation of Funding Changes From FY 1998 to FY 1999:

Remedial Action/Release Sites: Net decrease due to overall reduction in funding as work is completed:

SNL increases activities at the Chemical Waste Landfill and increases in CAMU operations.	$+624
KCP is nearing completion.	$-2,351
Pantex increases work scope to complete corrective measures construction in FY 1999.	$+1,799
South Valley is nearing completion; reflects DOE increased PRP payment for FY 1999.	$+483
Maxey Flats potentially responsible party payment is reduced; reflects decrease in PRP payment for FY 1999.	$-6,800
Pinellas increase is due to implementing additional innovative technologies to aggressively perform pump and treat operations.	$+2,587

SITE/PROJECT COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

Explanation of Funding Changes from FY 1998 to FY 1999: (cont'd)

Transuranic Waste: All waste types will be funded by Defense Programs through the re-engineering effort.	$-5,732
Mixed Low-Level Waste: All waste types will be funded by Defense Programs through the re-engineering effort.	$-4,965
Low-Level Waste: All waste types will be funded by Defense Programs through the re-engineering effort.	$-7,061
Hazardous Waste: All waste types will be funded by Defense Programs through the re-engineering effort.	$-11,020
Other Waste: All waste types will be funded by Defense Programs through the re-engineering effort.	$-655
Landlord: Contribution for annual payment for post-contract worker retirement benefits is reduced.	$-2,699
Program Support: Decrease of management oversight and support activities in line with Congressional intent:	
Decrease in activities for compliant, storage, treatment, and disposal of wastes because responsibility for Pantex, SNL/NM and SNL/CA has been transferred to Defense Programs in FY 1999; however, there is still environmental restoration support.	$-2,491
Decrease in cooperative agreements with HBCUs and Universities.	$-12,112
Decrease in support for the KCPs innovative treatment remediation demonstration program.	$-175
Increase in available funding for AIPs with Texas and Missouri to support the Pantex and	$+819
Total Funding Change, Albuquerque	**$-49,749**

SITE/PROJECT COMPLETION - DEFENSE

CHICAGO

I. Mission Supporting Goals and Objectives

MISSION

The Environmental Management (EM) program managed through the Chicago Operations Office supports defense funded activities at three sites in two states. These sites include the Ames Laboratory in Iowa; and the Argonne National Laboratory - East (ANL-E) site, and Site A in Illinois. The Chicago Operations Office manages, coordinates, tracks, and assists in the implementation of programs among the various sites. The majority of activities managed by the Chicago Operations Office are funded in the Non-Defense account. The FY 1999 Defense account budget request includes no funding for Chicago activities. All defense-related efforts will be completed by the end of FY 1998.

2006 STRATEGY

The goal of the Draft 2006 Plan is to complete remediation of all Chicago sites by 2006, and to transfer management of all newly-generated waste from ongoing operations back to the generator. There is expected to be no EM funding for Chicago sites beyond 2006, and no defense funding beyond 1998.

FY 1999 PROGRAM

There are no defense-funded activities in FY 1999, as all remaining Chicago activities are supported under the non-defense EM Site/Project Completion account. All prior defense-funded activites; i.e., Site A, have been completed.

The Ames Laboratory is located on a property owned by Iowa State University. Outside of the limits of the city of Ames, a chemical disposal site was active from 1958 to 1966. The Ames Laboratory is comprised of 11 release sites, which were all completed by the end of FY 1997, with only surveillance and maintenance being supported through FY 1998 in the Defense Appropriation. Waste management activities supported under the non-defense appropriation will be completed in FY 2000 when responsibility for waste activities is returned to the DOE Office of Energy Research.

SITE/PROJECT COMPLETION - DEFENSE - CHICAGO (cont'd)

I. Mission Supporting Goals and Objectives (cont'd)

ANL-E is a research laboratory occupying a 700 acre tract of land located approximately 22 miles southwest of downtown Chicago in DuPage County, Illinois. Research activities have been ongoing since World War II. ANL-E is comprised of 439 release sites and 81 facilities. Through the end of FY 1997, remediation of 413 release sites and 40 facilities were completed. Completion of additional release sites and facilities is scheduled as follows: two release sites and two facilities in FY 1998; and one release site and zero facilities in FY 1999 (under the non-defense appropriation). Beginning in FY 2000, responsibility for management of newly generated waste will be transferred to DOE's Office of Energy Research.

Site A is an area where early activities were conducted by the Manhattan Engineer District between 1942 and 1956. It is located in the Palos Forest Preserve in Cook County, Illinois, and contained two experimental nuclear reactors and associate research laboratories. Site A is comprised of ten release sites, which were all completed by the end of FY 1997. Beginning in FY 1999, management and funding for surveillance and maintenance activities at Site A have been transferred to the Long-Term Surveillance and Maintenance (LTSM) program, which is under the responsibility of the Grand Junction Office in Colorado.

COMPLIANCE DRIVERS

Major legal drivers include the Resource Conservation and Recovery Act (RCRA) and state laws.

II. Funding Schedule

Program Activity	FY 1997	FY 1998	FY 1999	$ Change	% Change
Remedial Action/Release Sites	$ 891	$ 4,306	$ 0	$ -4,306	-100%
Long-Term Monitoring.	263	210	0	-210	-100%
Program Support	3,545	184	0	-184	-100%
TOTAL, Chicago	$ 4,699	$ 4,700	$ 0	$ -4,700	-100%

SITE/PROJECT COMPLETION - DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments
[PBS Numbers are Bracketed in the Text]

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites [CHAE0002; CHAM0025]			
Conduct remediation activities at ANL-E to reduce risk and comply with RCRA permit. (Also funded under the Non-Defense EM appropriation--Performance Metrics for these activities will be reflected in the Non-Defense appropriation). [CHAE0002; CHAM0025]	$891	$4,306	$0
• In FY 1997, completed assessment of the Solid Waste Disposal and Mixed Waste Disposal Areas; completed off-site ground water barrier; and began removal of the 317-Area French Drain and extension of the Landfill cap.			
• In FY 1998, complete removal of the 317-Area French Drain, demonstrate soil-mixing technology, extend the Landfill Cap; and begin final remediation of the Solid Waste Disposal and Mixed Waste Disposal Areas.			
• In FY 1999, activities will be provided in the Non-Defense appropriation.			
Subtotal, Remedial Action/Release Sites	**$ 891**	**$ 4,306**	**$ 0**
Long-Term Monitoring			
Provide surveillance and maintenance at Ames. [CHAM0025]	$50	$52	$0
Conduct remediation of Site A to reduce risk and transfer property back to the private owner. [CHCH0030]	$213	$158	$0
• In FY 1997, remediation of Site A was completed and the site returned to the private owner.			
• In FY 1998, S&M will be provided.			
• In FY 1999, S&M support will be provided by the Grand Junction Office.			
Subtotal, Long-Term Monitoring	**$263**	**$210**	**$0**

SITE/PROJECT COMPLETION - DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Program Support [CHAM0025; CHBN0005; CHAE0002; CHAE0004]			
Provide for program management for all Chicago activities, including compliance, quality, safety and health, and project technology support.	$3,545	$184	$0
Subtotal, Program Support	$3,545	$184	$0
TOTAL, CHICAGO	**$4,699**	**$4,700**	**$0**

Explanation of Funding Changes from FY 1998 to FY 1999:

Remedial Actions/Release Sites: Decrease reflects completion of all Defense-related efforts Continuing FY 1999 activities are supported under the non-defense appropriation.	$-4,306
Long-Term Monitoring: Reflects shift of surveillance and maintenance activities to Grand Junction Project Office within the non-defense appropriation.	$-210
Program Support: Reflects completion of all Defense-related program management and crosscutting activities. FY 1999 support will continue under the EM non-defense appropriation.	$-184
Total Funding Change, Chicago	**$-4,700**

SITE/PROJECT COMPLETION - DEFENSE

IDAHO

I. Mission Supporting Goals and Objectives

MISSION

The Idaho National Engineering and Environmental Laboratory (INEEL), established as the National Reactor Testing Station in 1949, occupies 890 square miles in the Snake River Plain of Southeastern Idaho. Over the years, 52 reactors have been constructed and operated at INEEL. There are nine primary facilities at INEEL as well as administrative, engineering, and research laboratories in Idaho Falls, approximately 50 miles east of the site. Other activities at INEEL over the last five decades include nuclear technology research, defense programs, engineering testing and operations, as well as ongoing projects to develop, demonstrate, and transfer advanced engineering technology and systems to private industry. These activities have resulted in an inventory, as well as the continuous generation, of all waste types, totaling approximately 9,786 m^3 of high-level waste (HLW), 65,000 m^3 of transuranic (TRU) waste, 9,731 m^3 of low-level waste (LLW), and 1,295 m^3 of mixed low-level waste (MLLW). These wastes must be stored, treated, and disposed according to environmental regulations and the Idaho Settlement Agreement. INEEL activities have also resulted in contaminated areas and potential release sites requiring remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other environmental regulations. Finally, activities at INEEL that have since been discontinued have left a number of surplus facilities. The deactivation program provides for the deactivation of seven surplus facilities currently in the INEEL deactivation program, placing these facilities in a safe, stable, low-cost condition, requiring minimal surveillance and maintenance. An additional 44 surplus facilities will eventually be added to the deactivation program, all to be completed by FY 2006.

2006 STRATEGY

By FY 2006, INEEL will complete cleanup of several waste streams and release sites, will satisfy the Settlement Agreement requirement to ship 3,100 m^3 of TRU waste offsite for disposal by December 31, 2002, and will have all of the INEEL-managed SNF in stable, dry storage awaiting final disposition. LLW, MLLW, and other waste, will be treated, stored, and disposed in compliance with regulatory requirements and agreements. Meanwhile, INEEL will be pursuing longer-term projects to complete disposition of TRU waste, HLW, and SNF, and closure of remaining CERCLA release sites after FY 2006.

I. Mission Supporting Goals and Objectives

2006 STRATEGY (cont'd)

The current inventory of TRU mixed waste at INEEL is approximately 65,000 m^3, which are stored at the Radioactive Waste Management Complex (RWMC). Most of the waste was shipped from the Rocky Flats Plant for interim storage until disposal at a TRU waste repository. RWMC operations include waste characterization and certification of TRU waste to meet the Waste Isolation Pilot Plant (WIPP) waste acceptance criteria (WAC).

By December 31, 2002, a minimum of 3,100 m^3 of TRU waste will be shipped to WIPP for disposal to comply with the Idaho Settlement Agreement. The remaining waste will be treated in the planned Advanced Mixed Waste Treatment Project (AMWTP) to meet WIPP WAC before it is shipped for disposal. The AMWTP is a privatization project, which is discussed in the Defense EM Privatization budget narrative and is funded primarily through the EM Privatization Account. The AMWTP treatment facility will begin production operations in 2003. These operations will be funded under the Post 2006 Completion budget. Between 2003 and 2006, an additional 6,000 m^3 of the stored TRU waste will be treated in the AMWTP and shipped to WIPP for disposal. All TRU waste is planned to be removed from Idaho by December 31, 2015, but not later than December 31, 2018, as required by the Idaho Settlement Agreement.

At INEEL, there are a variety of legally-driven remediation activities at three (of a total of 10) Waste Area Groups (WAG), encompassing 26 (of a total of 98) different operable units (OU), which are comprised of 183 (of a total of 691) release sites and facilities. Potential release sites include tanks, spills, disposal sites, wastewater disposal systems, leach pits, trenches, rubble piles, ponds, cooling towers, wells, landfills, and storage areas. All investigations and remedial actions for the Test Area North (TAN) (WAG 1), Central Facilities Area (CFA) (WAG 4), and the Power Burst Facility/Auxiliary Reactor Area (PBF/ARA) (WAG 5) will be completed byFY 2006 in accordance with the Federal Facility Agreement and Consent Order (FFA/CO). Remediation of WAG 1, WAG 4, and WAG 5, included in this portion of the budget, supports the goal of delisting the INEEL from the National Priorities List (Superfund Site).

Various surplus facility deactivation and infrastructure line-item projects and facility upgrades will be completed to ensure integrity of required facilities.

I. Mission Supporting Goals and Objectives

2006 STRATEGY (cont'd)

Deactivation of the seven surplus defense production facilities currently in the INEEL Defense Deactivation Program will be completed by FY 2004, placing these facilities in a safe, stable, low-cost condition.

The FY 2006 strategy includes accomplishing the following:

- All seven of the surplus facilities currently in the deactivation program will be deactivated by FY 2004, leaving 44 facilities (some still operational) before FY 2006.
- Ship at least 3,100 m^3 of stored TRU waste to WIPP for final disposal by December 31, 2002, to meet a requirement in the Idaho Settlement Agreement. The remaining approximately 62,000 m^3 of stored TRU waste will be treated in the privatized Advanced Mixed Waste Treatment Project and shipped to WIPP for disposal under the Post-2006 Completion budget.
- The MLLW treatment at the Waste Experimental Reduction Facility (WERF) would cease when the AMWTP begins operations in FY 2003, and the facility would undergo Resource Conservation and Recovery Act closure by FY 2006.
- Eliminate backlog of LLW and MLLW.
- All Records of Decision for environmental restoration work at INEEL should be negotiated by FY 2002 and remediation will be complete in Pit 9 and in three of the eight WAGs by FY 2006.
- Complete 100 percent of assessments, 90 percent of release sites, and have the TAN groundwater pump and treat system in progress.
- Complete five infrastructure line-item construction projects by FY 2002. By 2006, at least one additional infrastructure line-item construction project will have been initiated and completed, and infrastructure projects will continue at a level adequate to ensure integrity of required facilities.

FY 1999 PROGRAM

In FY 1999 progress and significant milestone accomplishments to achieve maximum progress toward the 2006 goal include:

- Shipment of TRU waste to WIPP will begin in FY 1998 and approximately 823 m^3 are expected to be shipped by the end of FY 1999.

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM (cont'd)

- In FY 1999, approximately 64,177 m^3 of TRU waste will be safely stored at Idaho, while preconstruction work is underway for the planned AMWTP privatization project.
- Approximately 9,731 m^3 of LLW was stored at INEEL at the end of FY 1997. The LLW has been treated and disposed at the WERF and RWMC, respectively. Additional volumes of LLW have been treated and disposed off-site at commercial facilities. By FY 1999, approximately 3,678 m^3 of LLW (including special case waste) will be stored at INEEL and approximately 1,785 m^3 of LLW (including special case waste) will be disposed on-site.
- Over 100 kilograms of highly enriched uranium (HEU) were removed from the Rover Facility in FY 1997, resolving one of the complex's highest HEU vulnerabilities. In FY 1998, one of the seven facilities currently in the deactivation program (the Rover Facility) will be deactivated. In FY 1999, two more deactivations will be complete, and deactivation project designs will be completed for the four remaining facilities, allowing deactivation of these facilities by FY 2006.
- There are 183 total release sites and facilities (RS&F) in WAGs 1,4, and 5. By the end of FY 1997, 5 additional RS&F were completed for a total of 125 completions. In FY 1998, another 10 RS&F are scheduled to be completed, and by the end of FY 1999, 22 RS&F are forecasted to be completed for a total site completion count of 411.
- Infrastructure projects (ground, roads, general purpose buildings, utilities, communications, computers and information, fleet management, maintenance, fabrication, emergency services, land management, analytical laboratories, and environmental test facilities) will continue at a level adequate to ensure the integrity of required facilities until all commitments are completed. In FY 1999, title design for the INEEL Road Rehabilitation line-item project will be completed, and title design for the INEEL Health Physics Instrumentation Laboratory line-item construction project will be initiated. In addition, the INEEL Electrical Distribution Upgrade line-item construction project will be completed in FY 1999.

COMPLIANCE DRIVER

The foundation of the INEEL program is maintaining full compliance with applicable requirements and agreements, including the Idaho Settlement Agreement, the INEEL Site Treatment Plan under the Federal Facility Compliance Act (FFCA), the FFA/CO, and other Consent Orders, and maximizing risk reduction. Disposition of TRU waste and SNF is guided by the Idaho Settlement Agreement between the Department, the Navy, and the State of Idaho. Milestones for the treatment of approximately

SITE/PROJECT COMPLETION - DEFENSE - IDAHO (cont'd)

I. Mission Supporting Goals and Objectives

COMPLIANCE DRIVER (cont'd)

1,295 m^3 of stored MLLW and for the treatment/disposal of LLW are enforceable under the requirements of the Consent Order and Site Treatment Plan adopted under authority of the FFCA. The legal drivers for the remediaion activities include the 1989 listing on the National Priorities List as well as the FFA/CO and the Idaho Settlement Agreement.

II. Funding Schedule

Program Activity	FY 1997	FY 1998	FY 1999	$ Change	% Change
Remedial Action/Release Sites	$ 10,933	$ 9,287	$ 5,921	$ -3,366	-36%
Facility Decommissioning	0	0	0	-0	-0%
Facilities Deactivation	13,654	12,152	10,963	-1,189	-10%
Nuclear Materials Stabilization	0	0	0	0	0%
Spent Nuclear Fuel Stabilization	18,837	21,307	14,454	-6,853	-32%
Landlord	7,872	3,705	9,134	+5,429	+147%
High-Level Waste	0	0	0	0	0%
Transuranic Waste	21,452	32,918	32,769	-149	0%
Mixed Low-Level Waste	17,974	14,475	17,486	+3,011	+21%
Low-Level Waste	11,283	5,694	6,842	+1,148	+20%
Hazardous Waste	272	272	379	+107	+39%
Other Waste	544	612	635	+23	+4%
Program Support	2,848	6,208	2,000	-4,208	-68%
TOTAL, Idaho	$ 105,669	$ 106,630	$ 100,583	$ -6,047	-6%

III. Performance Summary - Accomplishments
[PBS Numbers are Bracketed in the Text]

	FY 1997	FY 1998	FY 1999

Remedial Action/Release Sites

The 98 Operable Units at the INEEL have been grouped into ten Waste Area Groups (WAG). The Site/Project Completion budget covers activities in: (WAG 1) Test Area North (TAN), which consists of facilities for the handling, storage examination and research of spent nuclear fuel; (WAG 4) Central Facilities Area (CFA) which contains many of the services for the entire site; (WAG 5) Power Burst Facility/ Auxiliary Reactor Area (ARA) which served, for years, as the testing ground for nuclear fuels that power the nation's commercial nuclear reactors and is currently on standby status.

Potential release sites addressed under the WAGs include tanks, spills, disposal sites, wastewater disposal systems, leach pits, trenches, rubble piles, ponds, cooling towers, wells, landfills, storage areas, etc.

Conduct WAG 1 Activities [ID-ER-101]	$5,308	$6,737	$4,157

- In FY 1997:
  - Continued Ground Water Treatment Facility (GWTF) operation.
  - Completed design of Phase B, which addresses source removal/plume containment, for the GWTF.
  - Submitted WAG 1 Comprehensive Remedial Investigation/Feasibility Study (RI/FS) to regulatory agencies.
  - Initiated preparation of the Proposed Plan for WAG 1 Comprehensive RI/FS.
  - Began Technical Support Facility (TSF)-05 injection well surge and stress/hotspot containment for Phase B.
  - Initiated treatability studies for buried radioactive tanks called V-tanks.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
• In FY 1998: - Continue GWTF operation of the Phase B GWTF Record of Decision (ROD) with initiation of remedial action planning/design activities. • In FY 1999: - Implement Remedial Design/Remedial Action (RD/RA) activities - I-07B Hotspot containment. - Continue Phase B groundwater treatment. - Initiate Phase C, which is for plume treatment, preparation, construct Phase C plume treatment units. - Begin Phase C operations, work plan, and operations.			
Conduct WAG 4 Activities [ID-ER-104]	$4,483	$1,526	$882
• In FY 1997: - Completed Landfills, I, II, and III soil caps. - Completed WAG 4 Comprehensive RI/FS Work Plan and field implementation. - Completed lead contaminated soil removal action at OUs 4-06 and 09 and the removal action summary report. - Completed French Drains removal action. - Initiated removal action for soil contamination sites. • In FY 1998: - Continue long-term monitoring of groundwater and soils. - Completion of the WAG 4 Comprehensive RI/FS report. - Initiation of the Draft WAG 4 Comprehensive RI/FS ROD and RD/RA planning activities. - Completion of removal action for soil contamination sites.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			

- In FY 1999:
  - Continue long-term monitoring.
  - Complete proposed plan and ROD; RD/RA scope of work and RD/RA work plan.

Conduct WAG 5 Activities [ID-R-105]	$1,142	$1,024	$882

- In FY 1997:
  - Completed the SL-1/BORAX-1 burial ground caps.
  - Completed the characterization/sampling to support Comprehensive RI/FS.
  - Prepared risk modeling to support Baseline risk assessment.
  - Completed the ARA-02 removal action.
- In FY 1998:
  - Complete the Draft WAG 5 Comprehensive RI/FS ROD
  - Ship ARA-02 mixed waste to Oak Ridge for treatment.
- In FY 1999:
  - Prepare WAG-5 comprehensive proposed plan, submittal of draft ROD.

The following are performance metrics for this section:

Assessments (Yearly)
- In FY 1997, completed 4 assessments.
- In FY 1998, will complete 20 assessments.
- In FY 1999, will complete 34 assessments.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
Cleanups (Yearly) • In FY 1997, completed 4 cleanups. • In FY 1998, will complete 8 cleanups • In FY 1999, will complete 21 cleanups			
Subtotal, Remedial Action/Release Sites	**$10,933**	**$9,287**	**$5,921**

Facilities Deactivation

The Stabilization and Deactivation Program at INEEL provides for the deactivation of 51 facilities that will be surplused during the life cycle of the program. The program also provides surveillance and maintenance activities for the surplus facilities to ensure public and worker safety until deactivation activities can be completed. Seven of the facilities are currently undergoing deactivation and an additional 44 facilities will be transferred to the deactivation program in future years. All seven of the surplus facilities currently in the program will be deactivated by FY 2004, and by FY 2006, all 51 facilities will be deactivated.. The deactivation program will place these facilities in a safe, stable condition, requiring minimal surveillance and maintenance cost. By the end of FY 1999, deactivation of three of these facilities (the Rover dry fuel processing facility, Waste Calcining Facility, and the Process Experimental Pilot Plant) will be completed.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facility Deactivation (cont'd)			
Pre-Deactivation Surveillance and Maintenance [ID-OIM-112]	$3,350	$4,124	$4,541

- In FY 1997:
  - Performed surveillance and maintenance (S&M) activities at surplus Idaho Chemical Processing Plant (ICPP) facilities to prevent contaminant release and to protect personnel; (facilities included CPP-601 Fuel Reprocessing Complex, CPP-602 Denigrator facility, CPP-627 Hot Chemistry Laboratory, CPP-621/1644 Bulk Chemical Storage, CPP-633 Waste Calcining Facility, CPP-640 Rover Facility, and CPP-691 Fuel Processing Facility).
  - Maintained nuclear criticality safety, industrial safety, RCRA compliance, and contamination control.
  - Completed preventive and corrective maintenance for facility structures and equipment.
- In FY 1998:
  - Will continue FY 1997 level of S&M for the seven surplus facilities.
  - Will complete S&M of CPP-633, Fuel Receipt and Storage Facility.

Pre-Deactivation Surveillance and Maintenance [ID-OIM-112] (cont'd)

- In FY 1999:
  - Will continue the S&M activities described for FY 1998.

Pre-2006 Deactivation [ID-OIM-110]	$10,304	$8,028	$6,422

- In FY 1997:
  - Removed the uranium bearing material from the Rover facility and placed it in interim storage, eliminating a significant nuclear criticality risk.
  - Submitted and received approval for the RCRA closure plan for the Waste Calcining Facility (WCF) to the State of Idaho.
  - Initiated line capping at WCF.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facility Deactivation (cont'd)			

- In FY 1997: (cont'd)
  - Completed deactivation conceptual designs for four additional facilities. (CPP-603 Fuel Receipt and Storage Facility, CPP-601 Fuel Processing Complex, CPP-627 Hot Chemistry Laboratory, and CPP-640 Headend Processing Plant).
- In FY 1998:
  - Will complete deactivation of the Rover facility. One of the seven surplus facilities is complete.
  - Will continue WCF deactivation by immobilizing the internal cell spaces, removing the superstructure, and starting construction of a RCRA compliant cap.
  - Will commence deactivation of the Process Experimental Pilot Plant (PREPP) Facility.
- In FY 1999:
  - Will complete the four remaining deactivation designs (for CPP-601 Fuel Processing Complex, CPP-627 Hot Chemistry Laboratory, and CPP-640 Headend Processing Plant).
  - Will complete deactivation of the PREPP Facility and Waste Calcining Facility. Three of the seven surplus facilities will be completed.

The Performance metrics for Facility Deactivation are: (Yearly)
- In FY 1997, no buildings were deactivated.
- In FY 1998, one building will be deactivated.
- In FY 1999, two buildings will be deactivated.

Subtotal, Facilities Deactivation	**$13,654**	**$12,152**	**$10,963**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization [ID-OIM-105, ID-OIM-106]			
The Spent Nuclear Fuel Stabilization program at INEEL provides two line item construction projects that are critical to safe, cost-effective completion of High-Level Waste (HLW), Low-Level Waste (LLW), Environmental Restoration and SNF projects required by the Idaho Settlement Agreement.			
Idaho Security Facilities Consolidation Project (95-D-456): [ID-OIM-105]	$4,959	$1,002	$845

- In FY 1997:
  - Completed a new access control facility with a central alarm station, intrusion detection system, security lighting, and closed circuit television (CCTV) at ICPP.
  - Completed mockup testing for the Security Alarm and Control System (SACS).
  - Installed the SACS hardware and completed the Power and Alarm Distribution construction.
  - Initiated interconnection of the classified SACS/alarm system.
- In FY 1998:
  - Complete SACS, interconnections and title design for remodeling three existing guardhouses (CPP-661, 669, and 697).
  - Reduce security requirements, provide a radiological control point and support personnel accountability during emergency evacuation.
- In FY 1999:
  - Will complete facilities remodeling, systems operating testing, and project turnover.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization [ID-OIM-105, ID-OIM-106](cont'd)			
Electrical Utilities Systems Upgrade Project (96-D-464) [ID-OIM-106]	$11,726	$17,466	$13,609

- In FY 1997:
  - Completed Title I design and initiated Title II design for the ICPP Electrical and Utility Systems Upgrade Project.
  - Initiated construction for the installation of a high voltage ductbank to correct the high risk safety problem of high and low voltage systems within existing manholes.
  - Initiated system programming.
- In FY 1998:
  - Complete Title II design of new electrical distribution system to correct safety code violation issues.
  - Continue construction on the replacement of overlooked and non-code compliant equipment and system.
  - Start up and initiate testing to bring parts of the new system on-line improving the safety and reliability of the electrical distribution system and supporting Settlement Agreement milestones.
- In FY 1999:
  - Will continue construction and startup activities as segments of new distribution system are completed, tested and brought on-line.
  - Will initiate replacement of electrical panels and service entrances in specific facilities to correct overloaded equipment, grounding problems on existing panels, and code violations.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization [ID-OIM-105, ID-OIM-106](cont'd)			
Support for SNF Construction Program [ID-SNF-104]	$2,152	$2,839	$0
• In FY 1997:			
- Analyzed Nuclear Regulatory Commission (NRC) requirements for drying SNF.			
- Completed fabrication/shop functional test of Three Mile Island (TMI) SNF dewatering system.			
• In FY 1998:			
- Complete installation of SNF dewatering system.			
- Complete TMI-2 hot demonstration.			
- Received Office of Civilian Radioactive Waste Management (OCRWM) furnished MD-187 shipping cask (for TMI SNF) and obtain NRC shipping license.			
• In FY 1999:			
- No activity.			
Subtotal, Spent Nuclear Fuel Stabilization	**$18,837**	**$21,307**	**$14,454**
Landlord			
INEEL site-wide infrastructure line-item construction projects provides for a variety of multi-program and general purpose infrastructure capital improvement requirements.			
INEEL Health Physics Instrumentation Laboratory (HPIL) project (99-D-404) provides for the design, procurement, and construction activities for a new facility to provide reliable and safe radioactive detection equipment for all active programs at the INEEL. [ID-OIM-109]	$0	$0	$1,050
• In FY 1997, no activity.			
• In FY 1998, no activity.			
• In FY 1999, will include the start of title design for HPIL.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Landlord (cont'd)			
INEEL Road Rehabilitation (Project No. 98-D-700): project is necessary as a safety and health project to provide safe transportation for waste movements at INEEL. [ID-OIM-108]	$0	$600	$8,084
• In FY 1997, no activity. • In FY 1998, title design activities will be initiated. • In FY 1999, title design activities will be completed and project construction will be initiated. This project is scheduled to be completed by the third quarter FY 2001.			
INEEL Electrical Distribution Upgrade (96-D-461) project provides for the planning, management, design, procurement, and construction activities to upgrade portions of the INEEL electrical distribution system which provides numerous users at INEEL with reliable electrical power. [ID-OIM-107]	$6,862	$3,105	$0
• In FY 1997, initiated Phase 2 Design and complete Phase 1 Construction. • In FY 1998, will initiate Phase 3 Design, and complete Phase 2 Construction. • In FY 1999, will complete Phase 3 Construction using carryover funds. The INEEL Electrical Distribution Upgrade Project will be complete and fully operational by September 1999.			
INEEL Emergency Response Facilities (94-D-401) project upgrades INEEL fire protection and fire protection personnel training to comply with DOE Orders and National Fire Protection Association Codes. [ID-OIM-104]	$747	$ 0	$ 0
• In FY 1997: - Completed construction of the Central Facilities Area (CFA) Fire Station and Fire Training Facility. - Initiated construction of the ANL-W Fire Station (ANL-W operations are managed by the Chicago Operations Office).			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Landlord (cont'd)			
• In FY 1998: - Project closeout of the CFA Fire Training Facility using carryover funds. - Construction of the ANL-W Fire Station, will be completed. • In FY 1999: - Project close-out of the ANL-W Fire Station will be completed using carryover funds.			
INEEL Medical Facility (94-D-415), project provides for the design, procurement, and construction activities necessary to improve and upgrade the Occupational Medical Program by providing a new replacement facility at INEEL. [ID-IOM-103] • In FY 1997, completed construction of the CFA Medical Facility. • In FY 1998, project close-out will be completed. • In FY 1999, no activity.	$263	$0	$0
Subtotal, Landlord	**$7,872**	**$3,705**	**$9,134**

Transuranic Waste [ID-WM-103]

The mission of the transuranic waste (TRU) program is to safely store, treat, and dispose of approximately 65,000 m^3 of TRU mixed waste at the INEEL Radioactive Waste Management Complex (RWMC). Most of the waste was shipped from the Rocky Flats Plant for interim storage until disposal at a TRU waste repository. RWMC operations include waste characterization and certification of TRU waste to meet the Waste Isolation Pilot Plant (WIPP) waste acceptance criteria (WAC). The Idaho Settlement Agreement requires a minimum of 3,100 m^3 of TRU waste to be shipped out of the state by December 31, 2002. The remaining waste will be treated in the planned, privatized Advanced Mixed Waste Treatment Project (AMWTP) to meet WIPP WAC

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Transuranic Waste [ID-WM-103] (cont'd)			
before it is shipped for disposal. The AMWTP is a privatization project, which is discussed in the Defense EM Privatization Budget Narrative and is funded primarily through the EM Privatization Account. All TRU waste is planned to be removed from Idaho by December 31, 2015, but no later than December 31, 2018, as required by the Agreement.	$21,452	$32,918	$32,769

- In FY 1997:
  - Safely stored approximately 65,000 m^3 of TRU mixed waste in compliance with RCRA, AEA, and DOE orders.
  - Completed reconfiguration of 32,800 TRU waste containers into RCRA compliant storage to meet a Consent Order milestone.
  - Completed Stored Waste Experimentation Pilot Plant (SWEPP) and payload assembly modifications to support implementation of WIPP requirements and improve operational capability.
  - Initiated single shift SWEPP production examination operations.
  - Successfully completed Phase I of the Carlsbad Area Office Site Certification Audit.
- In FY 1998:
  - Continue single shift SWEPP production examination operations, selective intrusive waste sampling and analysis, and head space gas sampling to characterize and certify waste for disposal at WIPP.
  - Initiate single shift TRUPACT loading facility operation to prepare shipments to WIPP.
  - Complete RCRA pre-closure activities for the air support buildings previously used for waste container storage.
  - Complete 10 shipments (68 m^3) of TRU waste to WIPP for disposal.
  - Safely store 64,932 m^3 of TRU mixed waste in compliance with environmental regulations and DOE orders.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Transuranic Waste [ID-WM-103] (cont'd)			

- In FY 1999:
  - Complete 110 shipments (755 m^3) of TRU waste to WIPP for disposal.
  - Safely store 64,177 m^3 of TRU mixed waste in compliance with environmental regulations and DOE orders.
  - Increase in TRU waste characterization and certification and related support activities for disposal at WIPP by completing examination of at least 4,225 drums of TRU waste at SWEPP.

Treatment
- In FY 1997, no treatment of TRU waste occurred.
- In FY 1998, no treatment of TRU waste will occur.
- In FY 1999, no treatment of TRU waste will occur.

Storage
- In FY 1997, 65,000 m^3 of TRU waste were stored.
- In FY 1998, 64,932 m^3 of TRU waste will be stored.
- In FY 1999, 64,177 m^3 of TRU waste will be stored.

Disposal
- In FY 1997, no TRU waste was disposed.
- In FY 1998, 68 m^3 of TRU waste will be shipped to WIPP for disposal.
- In FY 1999, 755 m^3 of TRU waste will be shipped to WIPP for disposal.

Subtotal, Transuranic Waste	**$21,452**	**$32,918**	**$32,769**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Mixed Low-Level Waste [ID-WM-101]			
The INEEL will safely store, treat, and dispose of its 1,295 m^3 of Mixed Low-Level Waste (MLLW) in compliance with the INEEL Site Treatment Plan (STP) Consent Order milestones under the Federal Facility Compliance Act (FFCA), RCRA, the Atomic Energy Act, state regulations, and DOE Orders. The main treatment, incineration at the Waste Experimental Reduction Facility (WERF), will continue until 2003 when operation of the AMWTF begins. Waste Reduction Operations Complex (WROC) facilities and the Idaho Chemical Processing Plant facilities provide volume reduction and storage capacity for waste awaiting treatment and disposal. By 2003, the WROC MLLW treatment will be shut down, and the WERF, Repackaging Booth, and two storage facilities will undergo RCRA closure. Additional treatment capability required for regulatory compliance includes construction and operation of several new skid-mounted type treatment processes. The DOE Oak Ridge Reservation's TSCA Incinerator and an existing, commercial treatment/disposal facility will also be used to support compliance with the STP.	$17,974	$14,475	$17,486

- In FY 1997:
  - Completed the RCRA Trial Burn for the WERF Incinerator RCRA, Part B, permit application.
  - Performed system testing and began operations of the Repackaging Booth.
  - Completed 50 percent of the lead cask dismantlement backlog.
  - Safely stored 1,295 m^3 of MLLW, treated 132 m^3, and disposed of 56.26 m^3 in compliance with the RCRA permit and DOE orders.
  - Performed treatability studies on ten MLLW streams in support of treatment operations.
  - Continued MLLW lead treatment/disposal at Envirocare, Utah.
  - Completed treatment of the backlog of incinerable MLLW.
  - Treated and disposed of approximately 266,000 lbs of contaminated lead at Envirocare.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Mixed Low-Level Waste [ID-WM-101]			

- In FY 1997: (cont'd)
  - Completed MLLW repackaging booth system testing and operations commencement.
  - Completed 14 treatability studies in support of MLLW treatment operations.
- In FY 1998:
  - Continue repackaging backlog of waste.
  - Store 1,110 m^3 of MLLW, treat 121 m^3, and dispose of 52 m^3 safely and in compliance with environmental regulations and DOE orders.
  - Continue MLLW lead treatment/disposal at Envirocare, Utah.
  - Perform treatability studies on ten additional MLLW streams in support of treatment operations.
  - Continue incineration of MLLW/LLW at WERF.
- In FY 1999:
  - Perform system testing of the sizing/opening/segregation facility.
  - Complete additional lead cask dismantlement backlog, bringing the total amount completed to 75 percent. The remaining backlog is expected to be completed in FY 2001. Store approximately 1,086 m^3 of MLLW, treat 113 m^3, and dispose of 52 m^3 safely and in compliance with environmental regulations and DOE orders.
  - Continue MLLW lead treatment/disposal at Envirocare, Utah.
  - Complete treatability studies on legacy waste MLLW/LLW.
  - Continue incineration of MLLW/LLW at WERF.
  - Begin operation of the macro-encapsulation facility.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Mixed Low-Level Waste [ID-WM-101] (cont'd)			

Treatment
- In FY 1997, 132.48 m^3 of MLLW were treated.
- In FY 1998, 121 m^3 of MLLW will be treated.
- In FY 1999, 113 m^3 of MLLW will be treated.

Storage
- In FY 1997, 1,295 m^3 of MLLW were stored.
- In FY 1998, 1,110 m^3 of MLLW will be stored.
- In FY 1999, 1,086 m^3 of MLLW will be stored.

Disposal
- In FY 1997, 53.25 m^3 of MLLW were disposed on-site/commercial; 3 m^3 were shipped to a DOE site for disposal.
- In FY 1998, 50 m^3 of MLLW will be disposed on-site/commercial; 2 m^3 will be shipped to a DOE site for disposal.
- In FY 1999, 50 m^3 of MLLW will be disposed on-site/commercial; 2 m^3 will be shipped to a DOE site for disposal.

Subtotal, Mixed Low-Level Waste	**$17,974**	**$14,475**	**$17,486**

Low-Level Waste [ID-WM-101]

Over forty years of nuclear energy research at INEEL has generated contact and remote handled low-level waste (LLW) requiring disposal. The Waste Experimental

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Low-Level Waste [ID-WM-101] (cont'd)			
Reduction Facility (WERF) treats backlogged and newly generated LLW to reduce volumes by incineration, compaction, and size reduction. Treated LLW is a more stable form for disposal and minimizes void spaces and future subsidence problems; and reduces packing and transportation cost to an offsite disposal facility. Use of offsite commercial LLW treatment to supplement WERF is necessary to reduce significant LLW backlog. The LLW is disposed in the Subsurface Disposal Area (SDA) of the Radioactive Waste Management Complex (RWMC). Consolidated disposal in the RWMC SDA provides a single location where risks associated with radionuclide migration can be controlled and monitored. The LLW generated after 2006 will be transferred to other DOE Complex facilities or to private disposal facilities beginning in 2007. As a result, offsite treatment and disposal capabilities will have to be developed and maintained until current activities and future programs end in 2050.	$11,283	$5,694	$6,842

- In FY 1997:
  - Completed assessment of impacts from 1993 Beryllium Block disposal.
  - Disposed of approximately 1,293 m^3 onsite.
- In FY 1998:
  - Complete Implementation of procedures for LLW storage at the INEEL.
  - Renew offsite LLW treatment subcontract.
  - Develop environmental monitoring plan for SDA.
  - Develop a waste stabilization plan.
  - Continue activities to prepare a comprehensive Closure/Post Closure plan.
  - Dispose of approximately 1,775 m^3 of contact handled LLW in the SDA.
  - Prepare (receive, sort, and repackage) approximately 1,700 m^3 of solid LLW for shipment to an appropriate facility.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999

Low-Level Waste [ID-WM-101] (cont'd)

- In FY 1998: (cont'd)
  - Treat approximately 3,977.34 m^3 of LLW.
  - Submit Composite Analysis for DOE-HQ review as a part of Performance Assessment (PA) process.
  - Issued RWMC Performance Assessment addendum, ALARA analysis on the PA, developed disposal limits of LLW disposal facilities in accordance with DNFSB 94-2 implementation plan.
  - Treated approximately 4,298.61 m^3 of LLW.
- In FY 1999:
  - Dispose approximately 1,751 m^3 of contact handled LLW in the SDA.
  - Dispose of up to approximately 31 m^3 of RH LLW.
  - Complete LLW inventory tracking system.
  - Treat approximately 7,886.69 m^3 of LLW.
  - Complete volume reduction of the LLW backlog.
  - Complete testing at Engineered Barrier Test Facility and update RWMC PA to include the completed testing.
  - Prepare Final PA prior to closure of CH LLW activities.
  - Prepare Final Closure Plan for active LLW disposal facility.

Treatment

- In FY 1997, 4,298.61 m^3 of LLW were treated.
- In FY 1998, 3,977.34 m^3 of LLW will be treated.
- In FY 1999, 7,886.69 m^3 of LLW will be treated.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Low-Level Waste [ID-WM-101] (cont'd)			
Storage			
• In FY 1997, 9,731 m^3 of LLW were stored.			
• In FY 1998, 8,695 m^3 of LLW will be stored.			
• In FY 1999, 3,678 m^3 of LLW will be stored.			
Disposal			
• In FY 1997, 1,293.59m^3 of LLW were disposed on-site/commercial;			
• In FY 1998, 1,777.05 m^3 of LLW will be disposed on-site/commercial; 2.4 m^3 will be shipped to a DOE site for disposal.			
• In FY 1999, 1,784.87 m^3 of LLW will be disposed on-site/commercial; 2.4 m^3 will be shipped to a DOE site for disposal.			
Subtotal, Low-Level Waste	**$11,283**	**$5,694**	**$6,842**

* Note: Consistent with Performance Measure reporting the LLW metrics include the Special Case Waste (SCW) metrics listed in the "Other Waste" section. The funding for SCW is provided only in the "Other Waste" section.

Hazardous Waste [ID-WM-101]

The overall approach for hazardous waste is to utilize existing INEEL, DOE Complex, or commercial treatment capabilities wherever possible. These treatment processes will be designed for batch processing and have a small treatment capacity. Several treatment processes will be operated within the same confinement area within a given year. Beginning in 2004, WROC and

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Hazardous Waste [ID-WM-101] (cont'd)			
ICPP hazardous and mixed low-level waste (MLLW) storage will be consolidated into a single facility and managed under the Post 2006 Completion budget.	$272	$272	$379

- In FY 1997:
  - Completed RCRA closure of the hazardous waste storage facility.
  - Operated and maintained four facilities for hazardous waste and MLLW for all INEEL users.
  - Performed RCRA Closure of the Waste Engineering Development Facility.
- In FY 1998:
  - Treat and dispose approximately 34.5 MT of hazardous waste.
  - Continue to operate and maintain four facilities for hazardous waste and MLLW.
- In FY 1999:
  - Treat and dispose approximately 30 MT of hazardous waste.
  - Continue to operate and maintain the four facilities for hazardous waste and MLLW.

Treatment
- In FY 1997, 0 metric tons of hazardous waste were treated.
- In FY 1998, 34.5 metric tons of hazardous waste will be treated.
- In FY 1999, 30 metric tons of hazardous waste will be treated.

Storage
- In FY 1997, 25.58 metric tons of hazardous waste were stored.
- In FY 1998, 0 metric tons of hazardous waste will be stored.
- In FY 1999, 0 metric tons of hazardous waste will be stored.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Hazardous Waste [ID-WM-101] (cont'd)			
Disposal • In FY 1997, 29.55 metric tons of hazardous waste was disposed. • In FY 1998, 0 metric tons of hazardous waste will be disposed. • In FY 1999, 0 metric tons of hazardous waste will be disposed.			
Subtotal, Hazardous Waste	**$272**	**$272**	**$379**
Other Waste [ID-WM-101]			
This mission provides for the safe management of sanitary, industrial, and special case waste (SCW). Sanitary and industrial wastes are treated and disposed, as generated, to on and offsite facilities. These activities will continue for the life cycle of the INEEL. SCW are radioactive wastes that do not fit into current DOE management plans, or that have limited or no planned disposal alternatives. As needed, SCW is inventoried, characterized, and managed for efficient disposition. This provides reduced overall management costs and increased worker and environmental safety. In the year 2006, the majority of special performance assessment required SCW sealed sources will have been transferred to consolidated onsite storage and/or recycled offsite. By 2006, the Power Burst Facility Canal and Test Area North Pool SCW will be processed, volume reduced, packed at maximum volume efficiency into containers, and placed in interim dry storage. After 2006, the remaining work scope for SCW will be managed under the Post 2006 Completion budget.	$544	$612	$635

- In FY 1997:
  - Disposed approximately 1 m^3 of SCW.
  - Recycled approximately 58 m^3 of scrap metal and wood boxes.

SITE/PROJECT COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Other Waste [ID-WM-101] (cont'd)			
• In FY 1998:			
- Dispose approximately 2 m^3 of SCW offsite.			
- INEEL excess sealed source management program will begin operations.			
- Estimate the generation of facilities INEEL reactor component for SCW requiring special performance assessment.			
- Collect, monitor, package and dispose of approximately 2,120 m^3 of solid industrial waste.			
• In FY 1999:			
- Dispose 3 m^3 of SCW onsite or at a commercial facility.			
- Collect, monitor, package, and dispose of approximately 5,738 m^3 of solid industrial waste.			
Subtotal, Other Waste	**$544**	**$612**	**$635**
Program Support			
INEEL TRU Waste Program Support [ID-WM-103]	$2,848	$6,208	$2,000
• In FY 1997, FY 1998, and FY 1999, provide for compliance with the requirements in the state Settlement Agreement and Consent Order for TRU and TRU mixed waste, such as safety analyses reports, TRU database maintenance, and preparation of RCRA permit applications.			
Subtotal, Program Support	**$2,848**	**$6,208**	**$2,000**
TOTAL, IDAHO	**$105,669**	**$106,630**	**$100,583**

SITE/PROJECT COMPLETION - DEFENSE - IDAHO (cont'd)

Explanation of Funding Changes from FY 1998 to FY 1999:

Remedial Action/Release Sites: Funding decreases as the number of completions at WAG 1, 4, and 5 increase, and less new assessments and cleanups are begun.	$-3,366
Facilities Deactivation: The decrease in Facilities Deactivation funding is attributable to the completion of the Rover Facility deactivation project and its associated surveillance and maintenance costs at ICPP.	$-1,189
Spent Nuclear Fuel Stabilization: The decrease in Spent Nuclear Fuel Stabilization funding is attributable to progress towards completion of two line-item construction projects, the ICPP Security Facility Consolidation and Electrical Utilities Upgrade projects.	$-6,853
Landlord: Increase due to the completion of title design activities, and the initiation of construction activities for the INEEL Road Rehabilitation project and the start of title design for Health Physics Instrumentation Laboratory. In addition, the INEEL Electrical Distribution Upgrade Project will be completed in FY 1999.	$+5,429
Transuranic Waste: No significant change.	$-149
Mixed Low-Level Waste: Increase of funds reflect that in the FY 1998 Budget, 30 percent of the WERF budget was assumed to come from payments for offsite generators. However, a full recovery charge back system is not expected to be implemented until FY 2000. Another increase occurs as lead cask dismantlement resumes in FY 1999. Additionally, there is an increase as the macro-encapsulation facility will begin operations in FY 1999, and treatability studies on legacy wastes will be completed.	$+3,011
Low-Level Waste: Increase in amount of waste treated and disposed from FY 1998 to FY 1999 cause the increase in funding.	$+1,148

Explanation of Funding Changes from FY 1998 to FY 1999: (cont'd)

Hazardous Waste: Reflects increase in cost of hazardous waste handling and disposal.	$+107
Other Waste: Increase due to escalation.	$+23
Program Support: Decrease of funding reflects targeted increase in efficiency and streamlining of the accounting structure for TRU waste. INEEL has reviewed and is committed to reducing the support cost base from the current level for FY 1999 and beyond.	$-4,208
Total Funding Change, Idaho	$-6,047

SITE/PROJECT COMPLETION - DEFENSE

OAKLAND

I. Mission Supporting Goals and Objectives

MISSION

The Defense Environmental Management (EM) Program managed through the Oakland Operations Office (OAK) supports activities at three sites in the State of California. These sites are the Lawrence Livermore National Laboratory (LLNL) consisting of the Livermore Site and Site 300; and the Energy Technology Engineering Center (ETEC) - a small portion of the Santa Susana Field Laboratory (SSFL). Technical support efforts are also carried out by the Oakland Operations Office. The EM objective is to manage the risks associated with sites contaminated with various hazardous and radioactive materials. This includes responsibility for the assessment and remediation of contaminated sites and facilities; characterization, treatment, minimization, storage, and disposal of hazardous and radioactive waste; development, demonstration, testing, and evaluation of new cleanup technologies; environmental safety; and completion of decontamination and decommissioning of surplus facilities currently included in the EM baseline plan. In addition to managing the restoration, waste management, and stabilization activities at the various California sites, the Oakland Operations Office administers grants for the State of California for their oversight activities.

2006 STRATEGY

In carrying out the vision of the Draft 2006 Plan, OAK is committed to maintaining compliance with all regulatory requirements and agreements, and to address any urgent risks in an expeditious manner. Oakland is committed to working with regulators and stakeholders, where needed, to explore more appropriate options and will not implement any changes until they are agreed to formally. Despite the challenges, OAK plans to achieve its mission by taking an integrated approach to perform, schedule, and assess the work while balancing them against risk, mortgage reduction, compliance, cost efficiency, and stakeholder input. The efficiency related savings necessary to achieve the EM goals is on the average of about 14 percent through 2006, and as high as 17 percent for FY 1999, as reported in the OAK Draft 2006 Plan. It is our intent that these sites will either be restored to conditions that meet stakeholder, regulator, and DOE needs, or to a point where a minimal cost ground water cleanup/monitoring system will be in place. All of the legacy waste will be characterized and shipped to the appropriate disposal sites by 2006.

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM

The LLNL, a multi-disciplinary research laboratory specializing in weapons research and development, occupies two sites in northern California. Both LLNL sites are on the Environmental Protection Agency (EPA) National Priorities List (NPL). nvironmental Restoration (ER) activities at LLNL are focused primarily on identifying contaminated ground water and soil from past operations and implementing appropriate remedial actions. The Livermore Site has an area of approximately one square mile and is located 40 miles east of San Francisco in the Livermore-Amateur Valley, just east of the city of Livermore. Site 300 is comprised of approximately 11 square miles and is located 15 miles southeast of the Livermore Site. The Environmental Restoration activities at LLNL have been divided into eight different operable units (OU) 1 at the Livermore Site; and 8 at Site 300. The Lawrence Livermore National Laboratory is comprised of 193 release sites, of which 115 were completed by the end of FY 1997. One assessment and 6 additional release sites were completed in FY 1997 and 13 release sites are scheduled for completion in FY 1998. During FY 1999, wells are to be installed at several new extraction locations to enhance removal of contamination from source areas at the Livermore Site and the development of final regulatory documentation at Site 300 is scheduled for completion. In addition 5 additional release sites will be completed. These activities support the completion of the cleanup work at LLNL within the time frame outlined in the Draft 2006 Plan with continued operation and maintenance of ground water treatment systems for both LLNL Sites.

Compliant storage, treatment, and off-site shipment for disposal of both legacy and currently generated hazardous and radioactive waste is the focus of the waste management activities at LLNL. Legacy waste characterization and off-site disposal will be completed by 2002. The Decontamination and Waste Treatment Facility (DWTF) will provide new, centralized and integrated facilities for waste management activities and construction continues through FY 1999. Costs for construction and operation of DWTF is distributed across all waste types. The distribution of costs for each waste type is dependent upon unit cost for treatment of that waste type and its volume.

The SSFL, a 2,700 acre site located in Simi Valley, California, is privately-owned and operated. Although the Rockwell Hot Laboratory is not a DOE facility and is not part of the DOE leased portion of the Site (ETEC), DOE is funding its cleanup because 90 percent or more of the work performed at the Hot Laboratory was in support of past DOE programs. Cleanup is being managed by ETEC. The Rockwell Hot Laboratory is the only facility which is Defense funded. Decontamination and

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM (cont'd)

decommissioning of theHot Laboratory wascompleted in FY 1997, except for final site restoration which will be completed during FY 1998 using FY 1997 obligated carryover funds.

The Oakland Operations Office has identified several innovative technologies to be evaluated and used at LLNL. For example, field demonstrations using innovative technologies in situ hydrous pyrolysis, Electrical Resistance Tomography (EPT), and biofiltration will begin in FY 1998 at the LLNL Main Site. Another innovative approach being considered is the Engineered Plume Collapse strategy which will demonstrate a system of these and other technologies to remove organic contaminants from ground water more rapidly than baseline conventional pump and treat approach. The current Interim Record of Decision for Building 834 Site 300 specifies an evaluation of various technologies for remediation of TCE plume and DNAPL sources. To date, surfactant testing has been completed and analyses are ongoing. At the LLNL Main Site waste treatment, storage and disposal cost reductions will be achieved through the use of the Expedited Technology Demonstration Project (ETDP). The ETDP, to be implemented in FY 1998, uses a molten salt treatment methodology.

COMPLIANCE DRIVERS

Major legal drivers at Oakland sites include RCRA, the Toxic Substances Control Act, the California Porter-Cologne Act, Nuclear Regulatory Commission license termination requirements, and the Clean Water Act. The current funding request for Defense activities at OAK meets compliance with all these State and Federal Regulations.

SITE/PROJECT COMPLETION - DEFENSE - OAKLAND (cont'd)

II. Funding Schedule

Program Activity	FY 1997	FY 1998	FY 1999	$ Change	% Change
Remedial Action/Release Site	$ 23,680	$ 21,685	$ 22,322	$ +637	+3%
Facility Decommissioning	1,760	0	0	0	0%
Transuranic Waste	3,899	3,786	3,447	-339	-9%
Mixed Low-Level Waste.	6,880	6,732	5,696	-1,036	-15%
Low-Level Waste	5,778	5,493	4,389	-1,104	-20%
Hazardous Waste	12,246	11,486	9,411	-2,075	-18%
Other Waste	5,212	5,361	5,889	+528	+10%
Program Support	3,794	1,271	600	-671	-53%
TOTAL, Oakland	$ 63,249	$ 55,814	$ 51,754	$ -4,060	-7%

III. Performance Summary - Accomplishments

[PBS Numbers are Bracketed in the Text]	**FY 1997**	**FY 1998**	**FY 1999**
Remedial Action/Release Sites			
Carry out activities at the LLNL Site [OK-001]	$10,988	$11,587	$14,850

- In FY 1997:
  - Conducted Federal Facilities Agreement (FFA) regulatory compliance activities, such as monitoring, sampling, community relations, risk analysis, and report preparation.
  - Continued operation and maintenance of five permanent ground water treatment facilities.
  - Installed hookups and began operation of portable treatment units (PTUs) at three new locations (Treatment Facility East-E (TFE-E), Treatment Facility-C-SE (TFC-SE), Treatment Facility-D-W (TFD-W); began remediation in source areas with PTUs.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			

Carry out activities at the LLNL Site [OK-001] (cont'd)

- In FY 1997: (cont'd)
  - Completed and issued contingency plan and Remedial Design Report Number 4 to the regulators.
  - Began five-year review of Record of Decision (ROD) as required under CERCLA process since signing ROD in 1992.
  - Completed assessment and removal action of polychlorinated biphenyls (PCB) capacitors at the National Ignition Facility release site.
- In FY 1998:
  - Conduct FFA and ROD regulatory compliance activities, such as monitoring, sampling, community relations, risk analysis, and report preparation.
  - Support operation and maintenance of all stationary, portable treatment facilities, and soil vapor extraction systems.
  - Begin operation of two ground water PTUs (Building 518, TFE-N) and Trailer 5475 Ground Water Treatment Facility (GWTF).
  - Continue to focus pumping strategies on removal of contaminated source areas using innovative technologies such as in situ hydrous pyrolysis and electrical resistance tomography at the TFD area.
  - Finalize efforts in support of five-year ROD reviews.
  - Complete six release sites.
- In FY 1999:
  - Continue to meet FFA and ROD regulatory compliance requirements such as monitoring sampling, community relations, risk analysis, and document reporting.
  - Support Treatment Facility operation and maintenance.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
Carry out activities at the LLNL Livermore Site [OK-001] (cont'd)			
• In FY 1999: (cont'd)			
- Begin operation of PTUs at three new locations (TFD-S, TFE-NW, TFG-2) and Trailer 5475 vapor extraction system.			
- Maintain progress directed toward source removal using successful application of innovative technologies from previous years.			
- Complete action at one release site.			
Conduct activities at the LLNL Site 300 [OK-002]	$12,692	$10,098	$7,472
• In FY 1997:			
- Continued ground water sampling and analysis and water level measurements to monitor site hydrogeology.			
- Completed ROD for the General Services Area Operable Unit (OU) and implemented final remedial action.			
- Began capping of Pit 6.			
- Completed Engineering Evaluation/Cost Analysis (EE/CA) for Building 815.			
- Continued operation of the ground water Treatment Facilities.			
- Tested technologies to monitor cleanup progress at Building 834.			
- Completed Building 823 removal action.			
- Submitted treatability work plan for Building 832 Canyon.			
- Finalized the High Explosive (HE) Burn Pit Closure Plan procurement bid package.			
- Completed five release sites.			
• In FY 1998:			
- Continue ground water sampling and analysis and water level measurements to monitor site hydrogeology.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Remedial Action/Release Sites (cont'd)			
Conduct activities at the LLNL Site 300 [OK-002] (cont'd)			
• In FY 1998: (cont'd)			
- Continue pump and treat as remedial action for Eastern and Central General Services Areas for contaminate isolation, removal and treatment.			
- Complete capping of Pit 6 and rebuild rifle range.			
- Submit Engineering Evaluation/Cost Analysis, hold public workshop, submit draft action memorandum for Building 815 removal action.			
- Begin High Explosive Burn Pit Closure.			
- Begin Building 832 treatability study and characterization of Building 850 area.			
- Submit Building 854 pathway letter and continue Building 834 technology testing/demonstration.			
- Seven release sites are planned for completion.			
• In FY 1999:			
- Continue regulatory compliance monitoring and sampling.			
- Continue operation and maintenance of the Ground Water Treatment Facility at GSA.			
- Submit proposed plan for Building 834, recommending successful tested innovative technology as remedial alternative.			
- Submit final action memorandum for Building 815.			
- Submit final EE/CA and action memorandum for Building 850/Pits 3 and 5.			
- Submit draft feasibility study for Building 832.			
- Four release sites proposed for completion.			
Subtotal, Remedial Activities	**$23,680**	**$21,685**	**$22,322**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facility Decommissioning			
Carry out activities at Santa Susana Field Laboratory [OK-007]	$1,760	$0	$0
• In FY 1997:			
- Completed demolition of below grade portion of the Rockwell Hot Laboratory D&D.			
• In FY 1998:			
- Final survey, independent verification, release, waste disposal and site regrading will be completed with FY 1997 obligated carryover funds .			
• FY 1999:			
- No activity.			
Subtotal, Facility Decommissioning	**$1,760**	**$ 0**	**$ 0**
Transuranic Waste			
The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level and hazardous wastes. Management of TRU activities involve the storage and repackaging of TRU waste at the LLNL. Construction of the Decontamination and Waste Treatment Facility (DWTF) will continue. [OK-021, 026, 027, 041]	$3,899	$3,786	$3,447
• In FY 1997:			
- Continued managing, storage, and repackaging of new and legacy waste.			
• In FY 1998:			
- Continue managing, storage, and repackaging of new and legacy waste.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Transuranic Waste (cont'd)			
• In FY 1999: - Continue managing storage and repackaging of new and legacy waste. - Obtain Carlsbad Area Office shipping program certification. - Complete design and initiate construction of the large container packaging and processing unit (LCPPU) for oversized TRU containers at LLNL.			
Treatment • In FY 1997, no TRU waste was treated. • In FY 1998, no TRU waste will be treated. • In FY 1999, no TRU waste will be treated.			
Storage • In FY 1997, 286 cubic meters of TRU waste was stored. • In FY 1998, 341 cubic meters of TRU waste will be stored. • In FY 1999, 384 cubic meters of TRU waste will be stored.			
Disposal • In FY 1997, no TRU waste was disposed. • In FY 1998, no TRU waste will be disposed. • In FY 1999, no TRU waste will be disposed.			
Subtotal, Transuranic Waste	**$3,899**	**$3,786**	**$3,447**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Mixed Low-Level Waste			
The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level and hazardous wastes. Management of Mixed Low-Level waste activities involve the management, treatment, and disposal of mixed low-level waste at LLNL. Construction of the DWTF will continue. [OK-021, 026, 027, 041]	$6,880	$6,732	$5,696

- In FY 1997:
  - Continued management and storage of new waste, treatment of aqueous and commercial disposal of waste.
  - Initiated construction of Expedited Technology Demonstration Project (ETDP). A two-year pilot project to demonstrate Molten Salt Oxidation as a MLLW treatment technology.
- In FY 1998:
  - Continue management and storage of new waste, treatment of aqueous, and commercial disposal of waste.
  - Completion of construction and initiate startup of ETDP for testing MLLW treatment technologies.
- In FY 1999:
  - Continue management and storage of new waste, treatment of aqueous, and commercial disposal of waste.

Treatment

- In FY 1997, 315 cubic meters of MLLW were treated.
- In FY 1998, 220 cubic meters of MLLW will be treated.
- In FY 1999, 282 cubic meters of MLLW will be treated.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Mixed Low-Level Waste (cont'd)			
Storage • In FY 1997, 592 cubic meters of MLLW were stored. • In FY 1998, 431 cubic meters of MLLW will be stored. • In FY 1999, 290 cubic meters of MLLW will be stored.			
Disposal • In FY 1997, 269 cubic meters of MLLW were disposed off-site. • In FY 1998, 220 cubic meters of MLLW will be disposed off-site. • In FY 1999, 282 cubic meters of MLLW will be disposed off-site.			
Subtotal, Mixed Low-Level Waste	**$6,880**	**$6,732**	**$5,696**
Low-Level Waste			
The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level and hazardous wastes. Management of Low-Level Waste activities involvethe management, storage, treatment, and disposal of low-level waste at LLNL. Construction of the DWTF will continue. [OK-021, 027]	$5,778	$5,493	$4,389
• In FY 1997: - Managed new waste, continued treatment of aqueous waste, and disposal of legacy waste. • In FY 1998: - Manage new waste, continue treatment of aqueous waste, and disposal of legacy waste. • In FY 1999: - Manage new waste, continue treatment of aqueous waste, and accelerate legacy waste disposal.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Low-Level Waste (cont'd)			
Treatment			
• In FY 1997, 172 cubic meters of LLW were treated.			
• In FY 1998, 45 cubic meters of LLW will be treated.			
• In FY 1999, 43 cubic meters of LLW will be treated.			
Storage			
• In FY 1997, 1,719 cubic meters of LLW were stored.			
• In FY 1998, 1,536 cubic meters of LLW will be stored.			
• In FY 1999, 1,346 cubic meters of LLW will be stored.			
Disposal			
• In FY 1997, 637 cubic meters of LLW were disposed off-site.			
• In FY 1998, 697 cubic meters of LLW will be disposed off-site.			
• In FY 1999, 744 cubic meters of LLW will be disposed off-site.			
Subtotal, Low-Level Waste	**$5,778**	**$5,493**	**$4,389**
Hazardous Waste			
The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level and hazardous wastes. Management of Hazardous Waste activities involvethe management, interim storage and disposal of hazardous waste at LLNL. Construction of the DWTF will continue. [OK-021, 026, 027]	$12,246	$11,486	$9,411
• In FY 1997:			
- Managed and disposed of newly generated waste.			
• In FY 1998:			
- Manage and dispose of newly generated waste.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Hazardous Waste (cont'd)			
• In FY 1999:			
- Manage and dispose of newly generated waste.			
Treatment			
• In FY 1997, 1,531 cubic meters of hazardous waste were treated.			
• In FY 1998, 795 cubic meters of hazardous waste will be treated.			
• In FY 1999, 755 cubic meters of hazardous waste will be treated.			
Storage			
• In FY 1997, 70 cubic meters of hazardous waste were stored.			
• In FY 1998, 70 cubic meters of hazardous waste will be stored.			
• In FY 1999, 70 cubic meters of hazardous waste will be stored.			
Disposal			
• In FY 1997, 2,042 cubic meters of hazardous waste were disposed off-site.			
• In FY 1998, 1,060 cubic meters of hazardous waste will be disposed off-site.			
• In FY 1999, 1,007 cubic meters of hazardous waste will be disposed off-site.			
Subtotal, Hazardous Waste	**$12,246**	**$11,486**	**$ 9,411**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Other Waste			
Conduct management and disposal of special category waste at LLNL. Construction of the DWTF will continue. [OK-021, 027]	$5,212	$5,361	$5,889
• In FY 1997: - Managed and disposed of special category waste. • In FY 1998: - Manage and dispose of special category waste. • In FY 1999: - Manage and dispose of special category waste.			
Subtotal, Other Waste	**$5,212**	**$5,361**	**$5,889**
Program Support			
Provide program management for all Oakland environmental management activities, including; Compliance; Quality; Safety and Health; Technical Project Support; Environmental Sciences; Sample and Data Management; Design Support; Regulatory Support; Project and Program Support including Procurement, External Affairs, Records and Document Control; and Planning and Controls including Budget Planning, Baseline Management, Project Control Systems, and Performance Measures. [OK-046, 040]	$3,794	$1,271	$600
• In FY 1997: - Funded crosscutting requirements for the Pete Tribal College initiative and Hispanic Scholarship Fund. (Activities will continue in FY 1998 using Non-Defense funds.) - Provided technical programmatic support for cost estimating, various reporting requirements, and technical reviews.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Program Support (cont'd)			
• In FY 1997: (cont'd)			
- Provided funding to the State of California agencies through a grant for oversight activities.			
- Supported the Federal Facility Compliance Act (FFCA) activities.			
• In FY 1998:			
- Continue technical programmatic support for cost estimating, various reporting requirements, and technical reviews.			
- Continue funding to the State of California agencies through a grant for oversight activities.			
- Support the Federal Facility Compliance Act activities.			
• In FY 1999:			
- Provide funding to the State of California agencies through a grant for oversight activities.			
Subtotal, Program Support	**$3,794**	**$1,271**	**$600**
TOTAL, OAKLAND	**$63,249**	**$55,814**	**$51,754**

SITE/PROJECT COMPLETION - DEFENSE - OAKLAND (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Remedial Action/Release Site: An increase in the Remedial Action/Release Site activities at LLNL is attributed to installation of portable treatment units and extraction locations in source areas.	$+637
All Waste Activities: Decrease in construction costs for DWTF (construction project for processing TRU, MLLW, LLW, HAZ, and other waste) at LLNL.	$-4,026
Program Support: Reduction in funding due to decrease in FFCA activities and reporting requirements/technical reviews.	$-671
Total Funding Change, Oakland	**$-4,060**

SITE/PROJECT COMPLETION - DEFENSE

RICHLAND

I. Mission Supporting Goals and Objectives

MISSION

The Richland Operations Office (RL) manages the Hanford site, which is located on 560 square miles (1,450 square kilometers) in southeastern Washington. Hanford was among the first facilities constructed by the Manhattan Project for the production of plutonium for national defense. Historically, the Hanford mission was plutonium production, reactor and processing operations, and research related to advanced reactors, energy technologies, and basic sciences. All production activities ceased in 1989 leaving a legacy of significant quantities of hazardous and nuclear waste. Today the Hanford sites's mission is to safely and efficiently store, manage, treat, and cleanup the site's legacy waste and to develop and deploy science and technology.

FY 2006 STRATEGY

The vision for carrying out this mission is that by 2006 EM will eliminate urgent risks, reduce the majority of the costly mortgages, be in process of immobilizing tank wastes, and remediate high priority waste sites in the 100 Areas along the Columbia River. The *Hanford Federal Facility Agreement and Consent Order* (commonly referred to as the "Tri-Party Agreement") is the basis for the Accelerating Cleanup: Focus on 2006 path forward for this mission. The agreement, originally signed in 1989, is between the DOE, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology. It is the legal document that binds the U.S. Department of Energy to actions that comply with the *Resource Conservation and Recovery Act of 1976 (RCRA)*; the *Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)*; and the Washington State *Hazardous Waste Management Act*.

The two major elements of the vision are:

Urgent risk reduction:

- Stabilize the inventory of surplus plutonium stored in the Plutonium Finishing Plant (PFP) in accordance with the scope identified in the Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-1. In FY 1999, complete plutonium metal stabilization, continue plutonium residue cementation, and begin processing plutonium solutions.

I. Mission Supporting Goals and Objectives

FY 2006 STRATEGY (cont'd)

- Stabilize and dry store 2,100 metric tons of spent nuclear fuel which is now slowly corroding in temporary wet storage less than a quarter mile from the Columbia River by November 2002.
- Remove large quantities of dispersible and fixed radioactive materials with high specific activity from Buildings 324 and 327 through clean out and deactivation. These buildings are in close proximity to the City of Richland and the Columbia River.
- Spent Nuclear Fuel will be removed from the T-Plant in 2001 to safer dry storage, stored solid waste will be reduced.

Mortgage Reduction:

- The Plutonium-Uranium Extraction (PUREX) Plant deactivation was completed in FY 1997. PUREX is in a low-cost surveillance and maintenance mode. By accelerating deactivation activities at PUREX in FY 1997, the deactivation work is completed one-year ahead of schedule and the annual surveillance and maintenance costs at the facility were reduced from $17 million to less than $1 million per year. The PUREX accelerated deactivation is used as the model for nuclear deactivation at Hanford.
- The B-Plant facility is scheduled to be deactivated by the end of calendar year (CY) 1998. Surveillance and maintenance at the plant will be reduced from approximately $20 million per year to less than $1 million per year. The B-Plant facility will be deactivated four years ahead of the original deactivation baseline, resulting in approximately $100 million in savings over the original FY 1995 plan.
- The K-Basin is scheduled for deactivation, which will provide significant (on the order of $16 million) further annual savings in surveillance and maintenance costs. The two-year deactivation is expected to begin in FY 2002.
- The Plutonium Finishing Plant (PFP) is scheduled for deactivation. Surveillance and maintenance at the plant can be reduced from approximately $60 million per year to less than $1 million per year. The three-year deactivation is expected to begin in FY 2001.
- Savings from mortgage reduction activities, coupled with enhanced operational efficiencies, will be needed to ensure the environmental management program is compliant with the Tri-Party Agreement and the regulatory requirements. The Department met with its regulators and stakeholders in July 1997 to identify and agree upon the needed efficiencies to cover any projected compliance shortfalls. The Department will strive to attain these efficiencies and will continue to work with the regulators and stakeholders to address this issue.

I. Mission Supporting Goals and Objectives

FY 2006 STRATEGY (cont'd)

- Mortgage reduction activities, such as accelerated deactivation, during an era of declining budgets makes it possible for the Department to increase out year cost savings and allow for more expeditious cleanup.

FY 1999 PROGRAM

Included in the budget are activities related to Spent Nuclear Fuel, Facility Stabilization efforts for B-Plant, PUREX, and PFP, the 300 Area Special Nuclear Materials, Transition Project Management, Advanced Reactor Transition, Accelerated Deactivation, an the Hanford Surplus Facilities Program.

The FY 1999 budget also reflects transfer of funds from the Defense Programs to the Environmental Management (EM) program for the management of nuclear materials, including the Plutonium-Beryllium Neutron Source Program at Los Alamos, that are excess to national security requirements. This completed the transfer of ownership of these materials, begun in FY 1998, at the Fernald Environmental Management Project, Idaho Chemical Processing Plant, Hanford Site, Los Alamos National Laboratory, Rocky Flats Environmental Technology Site, and the Savannah River Site. Environmental Management shall be responsible for planning, funding, and managing all activities required for the safe and secure storage of excess national security materials until removed from the sites and disposed.

The FY 1999 Environmental Management Program at Hanford will make significant progress towards accomplishing the 2006 vision outlined above. Specific measures of that progress are summarized below:

Urgent Risk Reduction:

- Commence stabilization of pure plutonium solutions and continue installation of Plutonium Stabilization and Packaging System.
- Continue removal of spent fuel from K-Basins.
- Contaminated equipment and 86 percent of the high activity dispersible contaminants removed from 324 B-Cell (1.2M curies).

SITE/PROJECT COMPLETION - DEFENSE - RICHLAND (cont'd)

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM (cont'd)

Mortgage Reduction:

- Complete B-Plant deactivation.
- Shutdown 340 Liquid Handling Facility.
- No funding is required in FY 1999 because N-Area facilities are transitioned to surveillance and maintenance as N-Area deactivation is completed in FY 1998.

II. Funding Schedule

Program Activity	FY 1997	FY 1998	FY 1999	$ Change	% Change
Facility Decommissioning	$ 13,515	$ 6,900	$ 0	$ -6,900	-100%
Facilities Deactivation	96,050	87,618	125,348	+37,730	+43%
Nuclear Materials Stabilization	17,586	28,011	41,069	+13,508	+47%
Spent Nuclear Fuel Stabilization	170,035	147,866	173,038	+25,172	+17%
Program Support	8,669	3,573	10,690	+7,117	+199%
TOTAL, Richland	$ 305,855	$ 273,968	$ 350,145	$ +76,177	+28%

III. Performance Summary - Accomplishments
[PBS Numbers are Bracketed in the Text]

	FY 1997	FY 1998	FY 1999
Facility Decommissioning			
Deactivation of N-Area facilities including clean out of N Basins [ER09]	$13,515	$6,900	$0
Subtotal, Facility Decommissioning	**$13,515**	**$6,900**	**$0**

- In FY 1997:
  - Continued high and low dose hardware, water, and sediment removal from the N Basin.
  - Removed 1314-N water and transported to 200 Area Effluent Treatment Facility.
  - Removed 1310-N water and transported to 200 Area Effluent Treatment Facility.
  - Installed geomembrane at Emergency Dump Basin.
  - Decontaminated 1722-N, 151-N, and parts of 105-N.
- In FY 1998:
  - Complete N-Area deactivation including removal of hardware, water, and sediment from the N Basin.
  - Plan to deactivate the N Basin, 105-N, 1722-N, 153-N facilities and the 107-N tanks.
  - Transition N-Area facilities to surveillance and maintenance.
- In FY 1999:
  - No activity, as all activities completed in FY 1998.

Facilities Deactivation [TP01, 03, 04, 05, 07, 08, 09, 10, 14]

Includes activities related to the deactivation of surplus nuclear facilities such as PUREX, B-Plant, PFP, Buildings 324/327. This work is generally associated with the concept of mortgage reduction, which basically reduces the high annual surveillance and maintenance costs associated with these nuclear facilities. Additional benefit is gained through deactivation by the reduction of risks and reduced exposure to hazards inherent in aging, deteriorating facilities. Also included

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facilities Deactivation [TP01, 03, 04, 05, 07, 08, 09, 10, 14] (cont'd)			
are the activities associated with maintaining the minimum level of surveillance and maintenance to maintain facility safety. Facility surveillance and maintenance activities are generally driven by maintaining the safety basis as required by the Facility Safety Activity Report, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, and facility maintenance.	$96,050	$87,618	$125,348

- In FY1997:
  - Provided surveillance and maintenance activities for the following projects: PUREX, B Plant, 300 Area Fuel Supply, and 324/327 Facility Transition.
  - PUREX--completed all deactivation activities including: deactivated 25 buildings for a total of 58 in post-deactivation monitoring, reduced the remaining 10 percent (15,000 square feet) of contaminated areas
  - 300 Area Fuel Supply--completed Building 313 portion of Waste Acid Treatment System (WATS) Closure. Two of a total of 18 buildings are in post-deactivation monitoring.
  - B Plant--deactivated 7 buildings with 33 remaining to be deactivated, and completed removal of legacy organics from B Plant canyon.
  - Building 324/327--transferred 34 (total inventory) of vitrified high heat source containers (German logs) from the 300 Area to Interim Storage in the 200 Area, packaged and transferred 13 (total inventory) of cesium capsules from 327 building basin to interim storage in the more remote Hanford 200.
  - PFP--completed standby diesel generator Phase 1 upgrade, security inspection and evaluation, and an annual International Atomic Energy Agency inventory verification.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facilities Deactivation [TP01, 03, 04, 05, 07, 08, 09, 10, 14] (cont'd)			

- In FY 1998:
  - Continue surveillance and maintenance activities (excluding PUREX) described for FY 1997.
  - PUREX--complete closure of the Tri-Party Agreement (TPA) milestones for transitioning the facility to a long-term low-cost surveillance and maintenance state.
  - B Plant--deactivate remaining 26 of 33 buildings, eliminate all liquid discharges to B Pond; retired HEPA and sand filters will be isolated and existing B Plant stack will be shutdown (completing project 97-D-457).
  - Building 324/327--collect and containerize 66 percent of the remaining disposable material containing approximately 1.5 million curies of radioactivity from the B-Cell floor, containerize cesium powder and pellets and the Nordion Capsule for Shipment to interim storage, process the remaining dry cell fuel remnants within the 327 building and containerize for shipment to 200 Area Interim Storage.
  - PFP--complete facility re-engineering analysis and implement recommendations.
- In FY 1999:
  - Continue those surveillance and maintenance activities, excluding PUREX, described for FY 1997.
  - 300 Area Fuel Supply--complete RCRA closure of Building 303K and WATS.
  - B Plant--complete transition of B Plant to the Hanford Surplus Facilities Program.
  - Building 324/327--remove all remaining dispersibles and associated equipment with B-Cell (TPA Milestone M-89-04), complete packaging of B-Cell fuel to allow shipment to the interim 200 Area storage site, increase pre-deactivation activities in the facilities.
  - Upgrade PFP Continuous Air Monitors and increase shipments in cementation materials and pre-deactivation activities at 324 and 327 facilities.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facilities Deactivation [TP01, 03, 04, 05, 07, 08, 09, 10, 14] (cont'd)			

- In FY 1999: (cont'd)
  - Continue activities described in FY 1998.
  - Begin management of excess SNM and vault operations with funding transferred from Defense Programs.
  - Continue B-Cell clean-out effort formerly funded in the non-defense budget.
  - Provides for cost of transition programs' portion of potential contract award fee.

Deactivation
- In FY 1997, 32 facilities were deactivated.
- In FY 1998, 26 facilities will be deactivated.
- In FY 1999, 0 facilities will be deactivated.

Low-Level Waste Storage [TP-01]
- In FY 1997, 0 cubic meters of LLW were stored.
- In FY 1998, 11 cubic meters of LLW will be stored.
- In FY 1999, 0 cubic meters of LLW will be stored.

Subtotal, Facilities Deactivation	**$96,050**	**$87,618**	**$125,348**

Nuclear Materials Stabilization [TP06]

Nuclear Materials Stabilization is converting or moving surplus nuclear materials to a form/condition or location that is safe for interim storage, or maintaining those materials in a stable state. Included in this category are activities directed under the Implementation Plan for the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-1, the Plutonium Vulnerability Management Plan, and other directives related to nuclear materials.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Materials Stabilization [TP06] (cont'd)			
Also included are the surveillance and maintenance activities associated with stabilization of specific nuclear material, compliance activities, radiation protection provisions, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, utilities, and maintenance of the stabilization system. Nuclear material stabilization activities at Plutonium Finishing Plant (PFP) are carried out in accordance with the Implementation Plan for DNFSB Recommendation 94-1. Includes funding for the design and installation of a plutonium stabilization and handling system (98-D-453) to prepare and stabilize PFP plutonium metal and oxides consistent with DNFSB Recommendation 94-1.	$17,586	$28,011	$41,069

- In FY1997:
  - Continued installation of solution stabilization vertical denitration calciner at PFP.
  - Completed cementation/discard or disposition of 8 Kg plutonium (Pu) residues at PFP.
  - Continued material stabilization related surveillance and maintenance activities at the Plutonium Finishing Plant (PFP) including safe and secure nuclear material storage, surveillance of safety controls, maintenance of fire, safety and life support systems; provided building support and essential services specified by Operational Safety Requirements. This workscope also included system/facility monitoring, corrective and preventive maintenance, safeguards and security, and International Atomic Energy Agency (IAEA) activities.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Materials Stabilization [TP06] (cont'd)			

- In FY 1998:
  - Stabilize 946 kg of Pu residues, out of 3,543 kgs at PFP.
  - Begin definitive design for procurement of Pu stabilization and packaging system at PFP.
  - Continue those surveillance and maintenance activities described in FY 1997.
  - Make ready for disposition 16 Kg Pu currently held in residue form.
  - Make ready for disposition 3.5 metric tons of uranium material in the 300 Area.
- In FY 1999:
  - Continue procurement and installation of the Pu stabilization and packaging system at PFP.
  - Make disposition ready 19kg (1,106 kg bulk) of Pu residue material.
  - Start stabilization of 352 metal items at PFP.
  - Will continue those surveillance and maintenance activities described for FY 1998.
  - Make ready for disposition 290 metric tons of uranium material in the 300 Area.

Materials Stabilized
- In FY 1997, 8 kilograms of nuclear material was stabilized.
- In FY 1998, 946 kilograms of nuclear material will be stabilized.
- In FY 1999, 668 kilograms of nuclear material will be stabilized.

Make Disposition Ready
- In FY 1997, 0 kilograms of nuclear material was made disposition ready.
- In FY 1998, 3,476 kilograms of nuclear material will be disposition ready.
- In FY 1999, 293,610 kilograms of nuclear material will be disposition ready.

Subtotal, Nuclear Materials Stabilization	**$17,586**	**$28,011**	**$41,069**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization [WM-01]			
The Spent Nuclear Fuel Project was formed in early 1994 to manage Hanford's spent nuclear fuel and to address the urgent need to move the metal fuel from the present degraded storage conditions in K Basins, 400 yards from the Columbia River, to stabilized interim storage on the 200 Area plateau, until final disposition is decided at the national level. About 80 percent of the U.S. Department of Energy's spent nuclear fuel inventory (2,100 Metric tons of Heavy Metal) is located at the Hanford K Basins. Commitments to complete this work have been made in the Hanford Tri-Party Agreement and in the Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 94-1.	$170,035	$147,866	$173,038

- In FY 1997:
  - Activities included the surveillance of safety controls and maintenance of fire, safety and life support systems, and buildings support and essential services performed as specified by Technical Safety Requirements. Other activities included system/facility monitoring, corrective and preventive maintenance, and safeguards and security support.
  - Accomplished major progress to support fuel movement, including: continued construction of Canister Storage Building (CSB), 96-D-406, and start of its subproject for construction of the Cold Vacuum Drying (CVD) Facility.
  - Completed design of the Multi-Canister Overpacks (MCO) and Cask/Transportation systems and fabricated the first cask/transporter.
  - Complete design of the Fuel Retrieval System.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization [WM-01] (cont'd)			

- In FY 1998:
  - Complete CSB and CVD construction.
  - Complete installation of the K West Fuel Retrieval Equipment and Integrated Water System.
  - Initiate fabrication of the MCOs and continue Cask Transportation System fabrication.
  - Initiate operational readiness activities supporting startup of fuel removal operations.
  - Continue surveillance and maintenance activities described for FY 1997 and increase S&M required to support facility upgrades for fuel removal.
- In FY 1999:
  - Complete activities to support the start of fuel removal operations.
  - Operations of Fuel Retrieval System, CVD and CSB will be initiated.
  - Begin installation of Hot Conditioning System (HCS) equipment and sludge loadout equipment.
  - Will continue the S&M activities described in FY 1998 to operate during fuel removal.
  - Procure multi-canister overpacks for fuel conditioning and interim storage.

Spent Nuclear Fuel Stabilized
- In FY 1997, 1.45 metric tons heavy metal were stabilized.
- In FY 1998, 0.23 metric tons heavy metal will be stabilized.
- In FY 1999, 20 metric tons heavy metal will be stabilized.

Subtotal, Spent Nuclear Fuel Stabilization	**$170,035**	**$147,866**	**$173,038**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Program Support			
Provides centralized program, project and business management to plan, execute, and control the Facility Stabilization Project (FSP). It provides for common safeguard and security (SAS) support; centralized coordination of environmental, safety, health, radiological control and quality assurance; systems engineering (SE); new technology development and implementation support; policies and procedure development; excess facility and material planning (includes development of special projects such as K Basin deactivation project; Hanford Surplus Facility Program, 300 Area Revitalization project; Accelerated Deactivation project, etc); FSP strategic planning; procurement support; management of Special Nuclear Material (SNM); and operations integration support. Support for technical development of 200 Area Canyon Entombment, and Fluor Daniel Hanford, Inc. (FDH) project management direction is also provided.	$8,669	$3,573	$10,690

- In FY 1997:
  - Supported site-wide deactivation planning through facility assessments of candidate deactivation projects and development of end-point criteria, S&M plans, regulatory documentation, facility deactivation designs, and facility turnover packages, and developed and maintained an executable technical, schedule, and cost baseline for the Facility Stabilization Project.
- In FY 1998:
  - Continue those activities described for FY 1997. In addition, will provide funding for accelerating deactivation planning and management activities associated with the transition of contaminated surplus facilities.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Program Support (cont'd)			
• In FY 1999: - Will continue those activities described for FY 1998. - Reflects consolidation of senior management expenses to this area of the budget.			
Subtotal, Program Support	**$8,669**	**$3,573**	**$10,690**
TOTAL, RICHLAND	**$305,855**	**$273,968**	**$350,145**

Explanation of Changes from FY 1998 and FY 1999:

Facility Decommissioning: Decrease is due to completion of N Area Deactivation in FY 1998.	$-6,900
Facilities Deactivation: Increase is due to 1) transfer of vault operations funding from the Defense Programs to the Environmental Management program, 2) B-Cell clean-out funding transferred from Non-Defense in FY 1998 to Defense in FY 1999, and 3) transition programs portion of potential contract award fee will be directly funded in the Facility Deactivation account in FY 1999.	$+37,730
Nuclear Materials Stabilization: Increase is due to construction , procurement, and installation of the PFP Plutonium Stabilization and Handling System.	$+13,058
Spent Nuclear Fuel Stabilization: Increase is due to procurement of multi-canister overpacks for fuel conditioning and interim storage.	$+25,172

Explanation of Changes from FY 1998 and FY 1999: (cont'd)

Program Support: Reflects a shifting and consolidation of senior management expenses to this area of the budget.	$-7,117
Total Funding Change, Richland	$+76,177

SITE/PROJECT COMPLETION - DEFENSE

SAVANNAH RIVER

I. Mission Supporting Goals and Objectives

MISSION

The Savannah River Cleanup Program (SRCP) has as its mission the elimination of the legacy that resulted from the production of nuclear materials during the Cold War. This legacy includes contaminated facilities and land areas, many of which still contain nuclear materials and wastes. The Savannah River Site (SRS), located near Aiken, South Carolina, covers over 300 square miles and includes five nuclear reactors, two chemical separations facilities, fuel and target fabrication facilities, tritium processing facilities, a heavy water facility, two high-level waste tank farms, low-level waste storage and disposal facilities, a high-level waste treatment facility (Defense Waste Processing Facility [DWPF]), the Savannah River Technology Center (SRTC), and numerous administrative and technical support facilities. Additionally, these facilities have varying degrees of environmental contamination (soil and groundwater); the majority of which will require some remedial action to address environmental and health risks. In a broad sense, dealing with these problems is considered "cleanup" of the Cold War legacy.

The Savannah River Cleanup Program is composed of the following major elements: Spent Nuclear Fuel Disposition (complete in 2035), Nuclear Materials and Spent Nuclear Fuel Stabilization (complete in 2004), Waste Management (high-level, transuranic, hazardous, mixed low-level, low-level, and other) (complete in 2035), Deactivation (complete in 2020), and Landlord. The Site/Project Completion account funds all nuclear materials stabilization activities at SRS, as well as the spent nuclear fuel stabilization activities and construction line-item projects which will be completed by 2006. All other activities are funded in the Post 2006 Completion account.

2006 STRATEGY

The 2006 strategy is to stabilize the spent nuclear fuel, nuclear materials, and all types of wastes using currently available (or near-term) technology and facilities. Eventually, the nuclear materials would be dispositioned (using a technology to be determined), and the remaining spent nuclear fuel and wastes would be sent to geologic repositories. To the extent possible (to be determined through technical analyses, the National Environmental Policy Act [NEPA], and the regulatory process), SR may be able to assist other sites in eliminating their Cold War "legacies". Savannah River site personnel will stabilize all spent

I. Mission Supporting Goals and Objectives

2006 STRATEGY (cont'd)

nuclear fuel requiring stabilization and all other nuclear materials (currently scheduled to be received or already received at SR) by 2006. Achievement of this effort depends on attainment of productivity enhancements through 2006.

FY 1999 PROGRAM

In FY 1999, construction of a new vault, Actinide Packaging and Storage Facility (APSF), Project 97-D-450, will continue, and modification to the K-Area facilities will begin so that the site can provide safe, secure, interim and long-term storage for stabilized nuclear materials. Fire protection retrofits of SRTC, 703-A, 703-B and N-Area water supplies will be completed. Chiller retrofits will be completed for F-Canyon and Analytical Laboratories.

COMPLIANCE DRIVERS

Savannah River will be in compliance with all regulatory commitments for FY 1999. This includes the environmental restoration activities and the High-Level Waste program commitments cited in the Federal Facility Agreement (FFA), Resource Conservation and Recovery Act (RCRA) permit, and the waste management activities commitments in the Site Treatment Plan Consent Order. In some instances, options are being considered which may have short- and long-term advantages over the baseline planning assumptions in current commitment documents. SRS will continue its ongoing dialogue with appropriate regulatory agencies to optimize solutions to environmental problems and resolve other program issues consistent with the established regulatory process defined in the agreements. SRS has also made a number of other commitments in implementation plans responding to recommendations made by the Defense Nuclear Facilities Safety Board (DNFSB). While not subject to formal enforceable action, these commitments are treated with the same high priority as legal obligations.

MAJOR PROGRAM ELEMENTS

The goal of the Spent Nuclear Fuel (SNF) program is to support the U.S. nonproliferation policy through implementing the Foreign Research Reactor (FRR) Spent Fuel Acceptance program and to manage the SNF currently at the site (foreign and

I. Mission Supporting Goals and Objectives

MAJOR PROGRAM ELEMENTS (cont'd)

domestic research reactor SNF, as well as SRS production reactor SNF) by stabilizing the fuel or preparing it for long-term disposition in a Federal repository. Some of the SNF currently onsite (aluminum based or de-clad SNF in a degraded condition) is considered to be "at-risk" and is scheduled to be shipped to the canyon facilities for reprocessing. Potentially difficult to dispose of SNF is currently being evaluated for reprocessing in the canyons for preparation for eventual disposition. Savannah River plans to prepare other intact fuel for ultimate disposal in a geologic repository through a program in which the intact fuel is treated by one of two alternative candidate technologies (direct co-disposal or dilution by melting followed by co-disposal). To support this approach, SRS initiated an FY 1998 project to obtain, through privatization, transfer and storage services to receive, treat, and/or package SNF in canisters and safely dry-store this SNF in a "road-ready" form until a geologic repository is available. This would permit an accelerated closure of the reactor basins and the Receiving Basin for Offsite Fuel (RBOF) which are being used for wet storage on an interim basis.

Although DOE has ceased production of nuclear materials for defense purposes, and all SRS reactors are shut down, there remains a significant amount of legacy nuclear materials in the "pipeline", both at SR and across the DOE complex. These legacy nuclear materials, in various enrichments, concentrations, compounds, forms, and storage configurations, require further treatment/handling in order to place them in a form which can be safely stored until disposition or disposal. Stabilization means that changes must be made (conversion from a liquid to a solid, removal of reactive and other constituents, repackaging, etc.) in the form and/or storage conditions for nuclear materials such that they can be stored with minimal risk to workers, the public, and/or the environment until disposition. As long as significant quantities of nuclear materials in liquid or unstable forms continue to reside in the production facilities, all the attributes of an operating facility must be maintained including security, radiation protection, material control and accountability, trained and certified operator and maintenance personnel, essential safety system operation, emergency response capability, sampling and monitoring, configuration management, fire protection, maintenance of the safety authorization basis, etc. Thus, the cost of continuing to store these materials in their current condition (surveillance and maintenance part of the budget) is very high and approaches the cost of operating the facilities for the "cleanup" mission.

I. Mission Supporting Goals and Objectives

MAJOR PROGRAM ELEMENTS (cont'd)

The two chemical processing canyons at SRS, and the related support facilities, provide the capability to stabilize the SRS legacy materials (as well as some of the legacy materials from other sites in the DOE complex) for long-term storage. As of late 1997, these facilities had stabilized 3,500 gallons of Pu-242 solutions, 80,000 gallons of Pu-239 solutions, 16,000 corroding targets from the L-Reactor basin, and 82 canisters of failed or de-clad spent fuel. Firm missions for the canyons include 34,000 liters of Pu-239 bearing solutions, 228,000 liters of enriched uranium bearing solutions, 14,000 liters of Americium/Curium solution, 6,100 liters of neptunium solutions, 1,900 assemblies of SR fuels, 62 canisters of Taiwan Research Reactor (TRR) fuel, 1,800 items of other aluminum-clad fuel and targets, and 2,800 packages of plutonium and uranium vault materials. Stabilization of those SRS materials scheduled for F-Canyon is expected to be complete in FY 2000, and those SRS materials scheduled for H-Canyon is expected to be complete in FY 2004. Proposed missions include preparing for disposition 19 metric tons of heavy metal (MTHM) of difficult to dispose of SRS SNF and 472 Kg of residues from Rocky Flats. Beginning in FY 2002, nuclear materials stabilized in the canyons will be stored in the Actinide Packaging and Storage Facility until dispositioned.

Deactivation begins once the bulk nuclear materials are stabilized/removed from a facility and consists of activities such as removal of hazardous chemicals, flushing and cleanout of systems and equipment, etc., to the point that little contamination or safety risk to workers, the public, and the environment exists. As this is achieved, the attributes of an operating nuclear facility described above (security, radiation protection, material control and accountability, etc.) can be eliminated or substantially curtailed resulting in major reductions in surveillance and maintenance costs. Although additional deactivation would result in significant savings, extensive deactivation of the reactors (C, P and R-Areas), heavy water production (D-Area) ,and fuel fabrication facilities (M-Area) has resulted in major reductions in the annual surveillance and maintenance costs for these facilities. Deactivation is yet to be substantially undertaken in K- and L-Areas, Separations (F and H Areas), and the waste management facilities in S-Area since these facilities still contain substantial quantities of nuclear materials or wastes.

The High-Level Waste program includes support for construction line-item projects, such as Waste Management Upgrades (96-D-408); H-Tank Farm Storm Water Systems Upgrades (98-D-401); and Tank Farm Support Services F and H Area (99-D-402).

I. Mission Supporting Goals and Objectives

MAJOR PROGRAM ELEMENTS (cont'd)

The Landlord program includes support for construction line-item projects, such as Plantwide Fire Protection, (90-D-149); CFC HVAC Chiller Retrofit (96-D-471) and Regulatory Monitoring and Bioassay Laboratory (97-D-470).

The Savannah River Cleanup Program (SRCP) is integrated and dedicated to elimination of the legacy that resulted from production of nuclear materials in the Cold War era. While many "at-risk" materials and wastes have been stabilized, many facilities deactivated, and several land areas remediated, much work remains to be done. The overall scope of the program is such that it is expected to be "long-term" and last well beyond FY 2006.

II. Funding Schedule

Program Activity	FY 1997	FY 1998	FY 1999	$ Change	% Change
Facilities Deactivation	$ 14,699	$ 5,778	$ 2,590	-3,188	-55%
Nuclear Materials Stabilization	323,819	344,412	415,366	+70,954	+21%
Spent Nuclear Fuel Stabilization	52,243	44,240	42,100	-2,140	-5%
Landlord	22,697	19,814	18,862	-952	-5%
High-Level Waste	7,148	7,940	13,349	+5,409	+68%
TOTAL, Savannah River	$420,606	$422,184	$492,267	$+70,083	+17%

III. Performance Summary - Accomplishments

[PBS Numbers are Bracketed in the Text]	FY 1997	FY 1998	FY 1999
Facilities Deactivation			
Heavy Water Processing [SR-SF04, SR-SF05]			
The heavy water processing project provides for the consolidated storage of heavy water into K-Reactor. The K-Reactor was previously modified to provide storage of 3,000 drums of heavy water. Heavy water is an ionically formed water (2 neutrons) used as a moderator in reactors--heavier than tap water.	$14,699	$5,778	$2,590

- In FY 1997:
  - Supported surveillance and maintenance associated with the storage of over 1,000 drums.
  - The heavy water processing facilities operated to purify and isotopically upgrade heavy water remaining from reactor operations. This cleanup removes corrosives and reduces volume by removing light water (one neutron). This is done to allow the safest and least expensive storage of the heavy water.
- In FY 1998:
  - Continue the consolidated storage and the associated surveillance and maintenance. Once completed, this consolidation will reduce site operating expense funds by allowing the shutdown of systems in remote areas (ventilation and heating) required only for heavy water storage.
  - Continuation to upgrade heavy water is contingent upon reimbursement for services.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Facilities Deactivation (cont'd)			
• In FY 1999:			
- Continue the consolidated storage and the associated surveillance and maintenance. Once completed, this consolidation will reduce site operating expense funds by allowing the shutdown of systems in remote areas (ventilation and heating) required only for heavy water storage, thereby reducing surveillance and maintenance costs.			
- Continuation to upgrade heavy water is contingent upon reimbursement for services.			
Subtotal, Facilities Deactivation	**$14,699**	**$5,778**	**$2,590**

Nuclear Material Stabilization

F-Area Stabilization Project [SR-NM01]

This project involves converting SRS "at-risk" nuclear materials into stable forms suitable for interim to long-term storage using the F-Canyon, FB-Line, and supporting facilities. Additionally, a limited quantity of certain offsite nuclear materials from the Rocky Flats Environmental Technology Site (RFETS) are proposed to be stabilized using these facilities. The Department is preparing an Environmental Impact Statement (EIS), *Management of Certain Plutonium Residues and Scrub Alloy Stored at the Rocky Flats Environmental Technology Site*, to consider management alternatives for these RFETS materials. This EIS should be completed in 1998. The majority of the SRS materials stabilization activities are in accordance with the DNFSB Recommendation 94-1 (Improved Schedule for Remediation in the Defense Nuclear Facilities Complex). Additional nuclear materials proposed to be processed in the F-Canyon facilities include a limited quantity of spent nuclear fuel that will be difficult to dispose of in a geologic

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Material Stabilization (cont'd)			
F-Area Stabilization Project [SR-NM01] (cont'd)			
repository without extensive pre-treatment or reprocessing. A decision for the management of these fuels is projected for 1998 following the completion of the *SRS Spent Nuclear Fuel Management EIS*.	$171,688	$194,546	$177,900

- In FY 1997:
  - Continued the operation and maintenance of F-Area facilities and the stabilization of on-site nuclear materials.
  - Major accomplishments included: completed the stabilization of the 16,000 Mark-31 target slugs, and completed the stabilization of 81 canisters of failed Taiwan Research Reactor (TRR) spent nuclear fuel and 1 failed canister of Experimental Breeder Reactor-II slugs -- these materials were processed in F-Canyon, and the recovered plutonium was converted to stable metal in FB-Line.
  - Initiated the stabilization of 9 (of the 62) canisters of TRR spent nuclear fuel.
  - Initiated the stabilization of sand, slag, and crucible (SS&C) plutonium-bearing residues.
  - Installed the bagless transfer (repackaging) line in the FB-Line facility.
  - Initiated repackaged on-site plutonium metal for long-term storage.
  - Continued activities for the decontamination and removal (D&R) of obsolete Multi-Purpose Processing Facility (MPPF) equipment in the F-Canyon, design work, fabrication, and testing of melter and process equipment in preparation for americium/curium (Am/Cm) solution stabilization.
  - Began depleted uranium solutions transfer from F-Area to H-Area to blend down existing highly enriched uranium solutions to low enriched uranium.
  - Continued F-Area vault (FB-Line and Building 235-F) storage, transfer, and receipt of stabilized and unstabilized plutonium and other actinide materials in accordance with nuclear material management and stabilization activities.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999

Nuclear Material Stabilization (cont'd)

F-Area Stabilization Project [SR-NM01] (cont'd)

- In FY 1998:
  - Complete stabilization of the remaining 53 canisters of TRR fuel.
  - Continue stabilization of the SRS SS&C.
  - Continue the repackaging of SRS plutonium metal for long term storage.
  - Dependent upon decisions to be made in 1998 following the completion of the RFETS EIS on scrub alloy and residues, some (dependent upon NEPA process) RFETS plutonium-bearing materials stabilization at the SRS could begin in 1998.
  - Continue preparations for the stabilization of the Am/Cm solution with the D&R of obsolete MPPF equipment and the development and testing of the new vitrification process equipment.
  - Initiate installation of the FB-Line characterization and repackaging line. The FB-Line will allow the inspection, repackaging, and if necessary, preparation for stabilization processing, of approximately 2,800 containers of plutonium-bearing residues at the SRS.
  - Transfer of F-Area depleted uranium solutions to H-Area will continue in 1999 for the down-blending of highly enriched uranium.
  - Continue F-Area vault storage, transfer, and receipt of stabilized and unstabilized plutonium and other actinide materials in accordance with nuclear material management and stabilization activities.
- In FY 1999:
  - Complete stabilization of the SRS SS&C and start and complete stabilizing miscellaneous SRS plutonium-bearing metals.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Material Stabilization (cont'd)			
F-Area Stabilization Project [SR-NM01] (cont'd) • In FY 1999: (cont'd) - Possibly continue and complete, dependent upon decisions made in 1998, stabilization processing of proposed RFETS plutonium-bearing materials. - Continue the development, fabrication, and testing of new vitrification process equipment for Am/Cm solution stabilization. - Complete the FB-Line characterization and repackaging line to support SRS plutonium-bearing residue stabilization. - Continue the transfer of depleted uranium solutions to H-Area for down-blending highly enriched uranium. - Continue F-Area vault storage, transfer, and receipt of stabilized and unstabilized plutonium and other actinide materials in accordance with nuclear material management and stabilization activities. - Perform Nuclear Material Stabilization and Stewardship Program (NMSS) activities.			
H-Area Stabilization Project [SR-NM02] The purpose of the H-Area Stabilization project is to stabilize "at risk" nuclear materials and spent fuel followed by the deinventory HB-Line and H-Canyon and transition them to minimum surveillance and maintenance status until they can be turned over for final decontamination and decommissioning. To accomplish this, nuclear materials that remained in the processing pipeline at the end of the cold war must be converted to stable forms. These activities will take place in accordance with the Department's implementation plan for DNFSB Recommendation 94-1 and the Savannah River Site Interim Management of Nuclear Materials Environmental Impact Statement. Other drivers for these activities are the Plutonium and Highly Enriched Uranium Vulnerability Assessments and Materials Disposition Environmental Impact Statements.	$140,262	$127,753	$148,430

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999

Nuclear Material Stabilization (cont'd)

H-Area Stabilization Project [SR-NM02] (cont'd)

The following stabilization activities remain for H-Area:

- Reprocess Mk 16 and 22 spent nuclear fuel and separate the highly enriched uranium;
- Reprocess miscellaneous spent nuclear fuels;
- Dissolve Pu-239 residues in HB-Line;
- Convert Pu-239 solution to oxide in HB-Line;
- Deinventory HB-Line vault;
- Blend existing highly enriched uranium solutions and those created from processing of Mk 16 and 22 spent fuels with depleted uranium solutions to create low enriched uranium for potential use in commercial reactor fuel.
- Convert Neptunium-237 solutions to oxide in HB-Line.
- Dissolve low assay Pu-238 residues.

- In FY 1997:
  - Converted all 13,000 liters of Pu-242 solutions to oxide and shipped the resulting product to the Los Alamos National Laboratory.
  - Completed H-Canyon Phase I Startup (spent fuel dissolution).
  - Dissolved approximately 3 batches (amount of material placed in a dissolver) of spent nuclear fuel.
- In FY 1998:
  - Startup HB-Line to process Pu-239 sweepings and turnings; dissolve approximately 140 containers.
  - Continue dissolution of spent nuclear fuel, dissolve approximately 24 batches.
  - Startup H-Canyon Phase II (1st cycle).

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Material Stabilization (cont'd)			
H-Area Stabilization Project [SR-NM02] (cont'd) • In FY 1999: - Startup H-Canyon Phase III (2nd cycle). - Continue dissolution of spent nuclear fuel. - Complete dissolution of Pu-239 sweepings and turnings in HB-Line (total approximately 200 containers). - Begin solidification of Pu-239 to oxide in HB-Line. - Dissolve low-assay Pu-238 in HB-Line and send to the high-level waste tanks. - Begin dissolving Pu-239 mixed scrap in HB-Line.			
Actinide Packaging and Storage Facility (97-D-450) [SR-NM03] This project will provide interim and long-term storage and handling capability for stabilized SRS, Rocky Flats and Hanford nuclear materials awaiting disposition (should a decision be made pursuant to National Environmental Policy Act (NEPA) reviews to send the Rocky Flats material to SRS sooner than planned. This project consists of two subprojects: the Actinide Packaging and Storage Facility (APSF) which will store (and repackage, as necessary) the stabilized plutonium. The K-Area facilities subproject will store stabilized plutonium from Rocky Flats and is needed to sufficiently accelerate RF shipments to SRS for closure by 2006. (This funding level reflects plant and operating expense funds).	$11,374	$21,286	$83,236

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Material Stabilization (cont'd)			

Actinide Packaging and Storage Facility (97-D-450) [SR-NM03] (cont'd)

- In FY 1997:
  - Completed 40 percent detailed design on APSF.
  - Started design on British Nuclear Fuel Laboratory (BNFL) plutonium stabilization and packaging equipment for APSF.
- In FY 1998:
  - Complete detailed design of APSF and BNFL equipment, place long-lead item procurements for APSF equipment, and issue construction contract and start construction for APSF.
  - Complete NEPA review for K-Area facilities.
  - Begin detail design assuming successful reprogramming of $2 million in FY 1998.

- In FY 1999:
  - Proceed with APSF construction.
  - Receive BNFL and long-lead item APSF equipment for installation.
  - Complete detail design for K-Area facilities modifications and begin construction activities. (This assumes successful reprogramming of $2 million in FY 1998. Refer to the Construction Project Data Sheet for additional details.)

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Nuclear Material Stabilization (cont'd)			
F and H Canyon Exhaust Upgrades System (92-D-140) [SR-NM04]			
This project replaces the aging critical electrical and mechanical exhaust equipment in both F- and H-Canyons that will provide for reliable contamination control consistent with SRS safety criteria and Federal and State air exhaust and underground tank regulations. The project scope is divided into three design packages (DP): DP-1 covers the rerouting of the canyon recycle vessel vent systems, DP-2 removes and replaces the six underground diesel fuel storage tanks, and DP-3 replaces the existing canyon exhaust fan and diesel houses. Total SRS Plutonium inventory stabilization is projected to be completed in FY 2003. FY 1999 funding is required to complete the project and cover procurements which substantially exceeded the original cost estimates. (This funding level reflects plant and operating expense funds).	$495	$827	$5,800
• In FY 1997:			
- Completed DP-1 and DP-2 scopes of work.			
• In FY 1998:			
- Begin DP-3 scope of work which includes construction of new diesel generator buildings and procurement of canyon exhaust fans and power distribution equipment.			
• In FY 1999:			
- Complete construction of new diesel generator buildings.			
- Complete procurement of canyons exhaust fans and power distribution equipment.			
Subtotal, Nuclear Materials Stabilization	**$323,819**	**$344,412**	**$415,366**

NOTE: The metrics for nuclear materials stabilization are classified and can be provided upon request.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization			
K-Reactor Spent Nuclear Fuel Project [SR-SF01]			
The K-Reactor spent nuclear fuel (SNF) project provides basin storage of SRS SNF awaiting stabilization, as well as storage for heavy water and nuclear materials awaiting disposition. K-Area also serves as an administrative and operational support location for all spent nuclear fuel storage activities.	$31,680	$23,336	$32,100

- In FY 1997:
  - Initiated 12 shipments (variable amounts) of DNFSB 94-1 material (MK16-22).
  - Continued storage of unirradiated Highly Enriched Uranium (HEU) and heavy water.
  - Continued surveillance and maintenance, as well as security costs.
- In FY 1998:
  - Continue 30 shipments of DNFSB 94-1 material (MK16-22) to the canyons and storage of HEU and heavy water.
  - Continue surveillance and maintenance, as well as security costs.
- In FY 1999:
  - Continue 57 shipments of DNFSB 94-1 material (MK16-22) to the canyons.
  - Continue storage of HEU and heavy water (HW) pending decision on ultimate disposition and storage locations of these materials.
  - Continue surveillance and maintenance, as well as security costs.

NOTE: The metrics for spent nuclear fuel are classified and can be provided upon request.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization (cont'd)			
Alternative Technology Project [SR-SF04, SR-SF06]			
The purpose of the Alternative Technology project is to develop alternative treatment and packaging technologies for aluminum-based research reactor SNF, with specific focus on direct co-disposal with high-level waste and melt and dilute/poison technologies, that would put the SNF in a form suitable for geologic disposal without necessarily separating the fissile materials.	$12,901	$16,350	$10,000

- In FY 1997:
  - Supported the Idaho National Environmental and Engineering Laboratory's Spent Fuel Management task team's strategic program plan development.
  - Provided technical support and information for input into the draft SRS-specific SNF EIS and for use at public forums regarding the EIS.
  - Completed design and issued specifications of the validation canister to predict performance of aluminum-based SNF in a direct disposal repository environment.
  - Completed preliminary material castings for the initial examinations of melt and dilute concepts.
  - Received National SNF program RW-0333P repository quality assurance certification of the SRS Quality Assurance (QA) program for alternate technology development.
  - Finalized all Technical Task Plans (TTP) and technology development work scopes and issued the bi-annual Technology Development Status Report.
  - Completed the preliminary draft "Request for Proposal" (RFP) for the services associated with a Transfer and Storage Service (T&SS) and facility.
  - Issued the "SRS Spent Nuclear Fuel Interim Management Plan" in FY 1997.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization (cont'd)			

Alternative Technology Project [SR-SF06, SR-SF09] (cont'd)

- In FY 1998:
  - Determine the off-gas system performance requirements of a melt and dilute facility, place SNF into a test canister, continue waste form performance protocol development.
  - Recommend the preferred alternative treatment for disposal of aluminum-based SNF.
  - Support the evaluation, through the NEPA process, of those few fuel types that present difficult technical challenges for simple treatment (currently estimated to be about three percent of the total SRS volume) that may require disposition in existing SRS facilities.
  - Issue Interim Technical Report II, November 1997.
  - Issue Direct/Co-Disposal Criticality Analysis, December 1997.
  - Complete Melt and Dilute Bench Scale Testing, December 1997.
  - Issue Final Waste Form Technical Report, June 1998.
- In FY 1999:
  - Continue development of the preferred technology to be used in conjunction with packaging of aluminum-based SNF for co-disposal with defense HLW (i.e., direct disposal and/or melt and dilute treatment).
  - Continue the support for the NEPA process for development of the T&SS and facility.
  - Continue the development of Alternative Technology for the disposition of aluminum-based SNF, including the conceptual design of a prototype melt and dilute facility, in the event that this concept is selected in lieu of the direct co-disposal concept.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Spent Nuclear Fuel Stabilization (cont'd)			
Disassembly Basin Upgrade Project (95-D-158) [SR-SF07]	$7,662	$4,554	$ 0

- In FY 1997:
  - Completed the original scope of the project.
  - Expanded the project to include modifications to L-Basin to support receipt of additional types of casks of spent nuclear fuel.
- In FY 1998:
  - Shipping the new shipping casks directly to the L-Reactor bypassing Receiving Basin for Offsite Fuels (RBOF), thereby reducing handling costs.
- In FY 1999:
  - No activity.

Subtotal, Spent Nuclear Fuel Stabilization	**$52,243**	**$44,240**	**$42,100**
Landlord			
Completed Construction Projects [SR-D0001, SR-IN02, SR-IN03, SR-IN04, SR-IN07, SR-IN08]	$7,042	$3,120	$ 0

- In FY 1997:
  - Completed five construction line-item projects and funded activities for closeout: 92-D-151, Plant Maintenance and Improvements ($154); 92-D-143, Health Physics Instrument Calibration Facility ($110); 89-D-140, Additional Separations Safeguards ($707); 93-D-147, Upgrade Domestic Water System Phase I&II ($1,847); and 95-D-155, Upgrade Site Road Infrastructure ($4,224).
- In FY 1998:
  - Closeout of projects.
- In FY 1999:
  - No activity.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Landlord (cont'd)			
Radio Trunking System Project (95-D-156) [SR-IN06]	$350	$20	$0

- In FY 1997:
  - Installed the tower, controls, base radios with controllers, testing of radios, and training of maintenance and operation personnel.
- In FY 1998:
  - Complete radio testing, complete training for maintenance and operation of system, setup of trunking system, procurement of spare parts, complete project construction, and project financial closure.
- In FY 1999:
  - No activity.

Plantwide Fire Protection Project (90-D-149) [SR-IN01]	$0	$0	$1,089

- In FY 1997:
  - Uncosted balances used for completing construction of the H-Canyon alarm and detection upgrades, the B-Area outside underground fire water distribution system, the N-Area outside underground fire water distribution system, the 703-A/736-A/713-1N fire protection upgrades, the tritium facility fire protection upgrades, and the HB-Line alarm and detection upgrades. Started the design for the SRTC fire protection upgrades, to establish baselines for the H-Canyon and HB-Line suppression systems, and to financially closeout projects for reactor water supplies, separations water supplies, C-Area domestic water supplies, and K-Reactor detection and suppression.
- In FY 1998:
  - Uncosted balances used for completing construction of suppression upgrades in the H-Canyon and HB-Line.
  - Complete the design for fire protection upgrades in SRTC and other small tasks.
  - Close the project for the HB-Line alarms and detection.

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Landlord (cont'd)			
Plantwide Fire Protection Project (90-D-149) [SR-IN01] (cont'd)			
• In FY 1999:			
- Project closure for fire protection upgrades for 703-A, B-Area water supplies, N-Area water supplies, and SRTC (operating expense funds).			
CFC HVAC Chiller Retrofit Project (96-D-471) [SR-IN05]	$10,271	$10,491	$10,400
• In FY 1997:			
- Completed facility plan for F-Area.			
- Completed Tritium Phase II Design.			
- Construction started for Tritium Phase II.			
- Completed facility plan for H-Canyon.			
• In FY 1998:			
- Complete F-Area Design and start construction.			
- Complete facility plan for 299-H.			
- Complete facility plan for 235-F.			
- Complete H-Canyon design and start construction.			
- Complete Tritium Phase II construction.			
- Award Tritium Phase III subcontract for design/build.			
• In FY 1999:			
- Complete Tritium Phase III construction.			
- Complete F-Area construction.			
- Complete H-Canyon construction.			
- Complete 235-F construction.			
- Complete 299-H construction.			
- Complete facility plan for D-Area.			
- Complete facility plan for A-Area.			

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
Landlord (cont'd)			
Regulatory Monitoring and Bioassay Laboratory (97-D-470) (Previously Health Physics Support Facility/Environmental Monitoring Lab [97-D-473 and 97-D-470]) [SR-IN09 and SR-IN10]	$5,034	$6,183	$7,373
• In FY 1997:			
- Funded initiation of A/E Title I & II for construction line-item projects 97-D-470, Health Physics Site Support Facility, and 97-D-473, Environmental Monitoring Laboratory.			
- Completed Title I design for both projects.			
• In FY 1998:			
- Consolidation of the two projects into one laboratory project within Project 97-D-470, Regulatory Monitoring and Bioassay Laboratory.			
- Complete conceptual design and as A/E Title I & II design for the construction line-item.			
• In FY 1999:			
- Provide funding for initiation of construction of the Regulatory Monitoring and Bioassay Laboratory.			
Subtotal, Landlord	**$22,697**	**$19,814**	**$18,862**

III. Performance Summary - Accomplishments

	FY 1997	FY 1998	FY 1999
High-Level Waste [SR-HL09, SR-HL10, SR-HL11]			
The funding supports three high-level waste (HLW) line item construction projects: - Waste Management Upgrades (96-D-408) - H-Tank Farm Storm Water System Upgrades (98-D-401) - Tank Farm Support Services F&H Area (99-D-402)	$7,148	$7,940	$13,349
• In FY 1997: - Replaced service piping and gang valve systems for four HLW tanks. - Continued to provide design and construction of waste removal facilities and infrastructure. • In FY 1998: - Replace service piping and gang valve systems for three HLW tanks. - Initiate design of H-Tank Farm Storm Water System Upgrade. • In FY 1999: - Complete Tank Farm, F&H Service Upgrades. - Commence construction of H-Tank Farm Storm Water System Upgrade. - Start Title I Design for Tank Farm F&H Support Services.			
Subtotal, High-Level Waste	**$7,148**	**$7,940**	**$13,349**
TOTAL, SAVANNAH RIVER	**$420,606**	**$422,184**	**$492,267**

Explanation of Funding Changes from FY 1998 to FY 1999:

Facility Deactivation: Overall decrease due to shutdown of systems in remote areas required only for heavy water storage.	$-3,188
Nuclear Materials Stabilization: ($+70,954)	
Increase attributed to continuation of activities for APSE and procurement of long-lead items; and initiation of K-Area facilities modifications to accelerate receipt of Pu from Rocky Flats.	$+61,950
Increase in the F- and H-Canyon Exhaust Upgrades project based on completion of the project and procurement exceeding the original cost estimate.	$+4,973
Increase in funds to run additional portions of the canyon facilities.	$+4,031
Spent Nuclear Fuel: ($-2,140)	
Increased the SNF shipments of DNFSB 94-1 material (MK 16-22) from the reactors to the canyons.	$+8,764
Reduction in the Alternative Technology Development Program as technical issues are resolved.	$-6,350
Decrease reflects completion of the Disassembly Basin Upgrade Construction Project in FY 1998.	$-4,554
Landlord: Decrease in construction line-item activities due to completion of construction ($-3,140) and continuation of on-going construction projects ($+2,188).	$-952
High-Level Waste: Increase in funding associated with construction line-item projects.	$+5,409
Total Funding Change, Savannah River	**$+70,083**

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Dollars in thousands)

SITE/PROJECT COMPLETION
CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY

Capital Operating Expenses	FY 1997	FY 1998	FY 1999	$ Change	% Change
GPP	$2,737	$4,939	$7,890	+$2,951	+60%
AIP	0	0	0	0	0%
Capital Equipment	27,190	32,131	11,026	-21,105	-66%
Project Related Costs					
1. CDRs	0	0	0	0	0
2. "Bridge" Costs	0	0	0	0	0

Construction Project Summary

Project Number	Project Title	TEC	Previous Approp.	FY 1997 Approp.	FY 1998 Approp.	FY 1999 Request	Unapprop Balance
99-D-402	Tank Farm Support Services, F&H Area, SR	$22,073	$ 0	$ 0	$ 0	$2,745	$19,328
99-D-404	Health Physics Instrumentation Laboratory, ID	11,900	0	0	0	950	10,950
98-D-401	H-Tank Farm Storm Water Systems Upgrade, SR	8,934	0	0	1,000	3,120	4,814
98-D-453	Plutonium Stabilization and Handling System for PFP, RL	36,600	0	0	8,136	26,814	1,650
98-D-700	INEEL Road Rehabilitation, INEEL	10,800	0	0	500	7,710	2,590
97-D-450	Actinide Packaging and Storage Facility, SR	198,000	0	7,900	18,000	79,184	92,916
97-D-451	B-Plant Safety Class Ventilation Upgrades, RL	3,917	0	1,917	2,000	0	0
97-D-470	Regulatory Monitoring and Bioassay Laboratory, SR	30,280	0	2,500	5,600	7,000	15,180
97-D-473	Health Physics Site Support Facility, SR	17,200	0	2,000	0	0	15,200

CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY - SITE/PROJECT COMPLETION (continued)

Construction Project Summary (Continued)

Project Number	Project Title	TEC	Previous Approp.	FY 1997 Approp.	FY 1998 Approp.	FY 1999 Request	Unapprop Balance
96-D-406	Spent Nuclear Fuels Canister Storage and Stabilization Facility, RL	165,397	43,000	60,672	16,744	38,680	6,301
96-D-408	Waste Management Upgrades, Various Locations[a]						
	Kansas City Plant Subproject	2,400	200	[b] 2,200	0	0	0
	Savannah River Subproject	13,544	215	5,017	3,800	4,512	0
96-D-461	Electrical Distribution Upgrade, INEEL	10,756	1,039	6,790	2,927	0	0
96-D-464	Electrical and Utility Systems Upgrade, INEEL	53,452	4,512	10,440	14,985	11,544	11,971
96-D-471	CFC HVAC/Chiller Retrofit, SR	45,000	1,500	8,541	8,500	8,000	18,459
95-D-155	Upgrade Site Road Infrastructure, SR	10,500	3,650	4,137	2,713	0	0
95-D-158	Disassembly Basin Upgrade, K, L, P, SR	19,300	13,000	6,300	0	0	0
95-D-456	Security Facilities Consolidation, INEEL	15,100	9,368	4,645	602	485	0
94-D-401	Emergency Response Facility, INEEL	11,430	10,883	547	0	0	0
92-D-140	F&H Canyon Exhaust Upgrades, SR	25,567	21,900	0	0	3,667	0
92-D-172	Hazardous Waste Treatment and Processing Facility, Pantex Plant, AL	6,000	1,000	0	5,000	0	0
92-D-181	INEEL Fire and Life Safety Improvements, ID	27,583	27,083	500	0	0	0
86-D-103	Decontamination and Waste Treatment Facility, LLNL	62,362	32,372	10,000	11,250	4,752	3,988
Subtotal, Construction Funded		n/a	$169,722	$134,106	$101,757	$199,163	n/a

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[a] See Post 2006 Completion section of Defense Environmental Restoration and Waste Management for remaining subprojects.

[b] Prior year funding has been adjusted by $3.1M for uncosted offset.

CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY - SITE/PROJECT COMPLETION (continued)

Project Number	Project Title	TEC	Previous Approp.	FY 1997 Approp.	FY 1998 Approp.	FY 1999 Request	Unapprop Balance
Operating Expense Funded							
	Expedited Technology Demonstration Project, LLNL, CA	$25,894	$28,247	$2,000	$2,000	$ 0	$ 0
	Americum/Curium Vitrification, Savannah River Site, South Carolina	34,044	6,355	5,640	3,559	10,873	7,617
Subtotal, Operating Expense Funded		$59,938	$34,602	$7,640	$5,559	$10,873	$7,617
Total, Project Funding-Defense Site/Project Completion		n/a	$204,324	$141,746	$107,316	$210,036	n/a

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
Changes from the FY 1998 Congressional Budget Request and denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1.	Title and location of project:	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.
	Construction Funded		

SIGNIFICANT CHANGES

- No significant changes.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and location of project: Construction Funded	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E work Initiated, (Title I Design Start Scheduled):	2nd Qtr. FY 1999	N/A	2nd Qtr. FY 1999
3b. A-E work (Title I & Title II) Duration: 15 Months		15 Months	N/A
4a. Date Physical Construction Starts:	4th Qtr. FY 2000	N/A	4th Qtr. FY 2000
4b. Date Construction Ends:	3rd Qtr. FY 2002	N/A	3rd. Qtr. FY 2002

	Preliminary Estimate	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC) --	$11,900	N/A	$11,900
6. Total Project Cost (TPC) --	$12,670	N/A	$12,670

1.	Title and location of project:	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.
	Construction Funded		

7. Financial Schedule (Federal Funds)

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1999	$ 950	0	$950	$900
2000	7,200	0	7,200	2,100
2001	3,069	0	3,069	6,600
2002	681	0	681	2,300

8. Description, Justification and Scope

This project provides for the design, procurement, and construction activities to provide for a new Health Physics Instrument laboratory (HPIL) at the Idaho National Engineering and Environmental Laboratory (INEEL). Because of the nature of business at the INEEL, radioactive detection services and personnel dosimeters are required to ensure a safe and healthful workplace for INEEL workers. This project will provide a new facility for the servicing calibrating, and testing of radiation detection instruments used in radioactive environments. The purpose of the HPIL is to provide, repair, and maintain radiation detection instruments; evaluate newly developed instruments; and research and develop new methods of radiation detection. The project will also support needs for the irradiating, calibration, quality control, and quality assurance of electronic dosimeters.

This facility provides laboratories for the neutron, gamma, alpha, and beta calibration and irradiation of instrumentation. A low energy x-ray system will provide for low energy photon characterization and irradiation. The primary sources that will be used for the isotopic calibrations are Cesium-137, Plutonium-239. Californium-252, and Cobalt-60. Several other low activity isotopes will be used for general characterization of the instruments.

8. Description, Justification and Scope (cont'd)

The facility will respond to site users' requirements by providing for quick response for calibration, irradiation, and turn around of dosimeters and radiological instrumentation. The assumption used to develop project, scope, schedule, and cost are:

a. The new HPIL facility will be required to meet American National Standards Institute (ANSI) N232 guidelines as specified by DOE Order 5480.11. "Radiation Protection for Occupational Workers."
b. The new facility is based on code requirements for safe/handling of radioactive sources, operations associated with equipment testing and calibration, functional layout of the building, shielding requirements for each radioactive source and surrounding areas.
c. The cost estimate is based on preliminary building layouts and construction techniques associated with radioactive shielding as developed by the operating program.
d. The construction schedule is consistent with historical construction at the INEEL.
e. Studies may be required during the execution of this project to ensure that all requirements associated with this facility are met and scope may need to be modified as studies recommend.

The continued use of the existing HPIL facility results in excessive maintenance and operational costs. The current deficiencies with ANSI, NEC, and OSHA standards, as well as DOE Orders, require significant resources of time and money to correct. Expenditure of the required resources is not a viable solution due to the age of the facility, which is planned for demolition. The inadequate space, design, structure, systems, and age of the current HPIL facility pose the following operational limitations and inherent safety and code deficiencies:

a. Inadequate number and design of shielded rooms for performance of x-ray, gamma, and neutron source calibrations. These calibrations are required to be performed under compliance with ANSI N323. N42.17A and N43.5 guidelines.
b. Absence of environmental testing capabilities to meet ANSI N323.
c. Inadequate environmental control, leading to wide fluctuations in temperature throughout the facility. ANSI N323 and MIL-SID-45662A require a properly controlled environment for the calibration of radiation detection instruments.

8. Description, Justification and Scope (cont'd)

d. Significant safety concerns such as asbestos in walls, floor tiles, and ceiling materials throughout the building: inadequate coverage by fire sprinkler system, in violation of NFPA Standards; numerous electrical safety problems, in violation of OSHA Standard 1910.303 and NEC; lead based paint on all painted surfaces; and significant roof leakage. Numerous deficiencies were identified in the Occupancy Readiness Review conducted on CF-633 in 1991.
e. Lack of proper shielding in rooms used for performing calibrations, significantly increasing personnel radiation exposure rates at several locations accessible to personnel during performance of calibrations, identified by Tiger Team Corrective Action Plan Number EGG1/RP.89.1.CP01 "Upgrade HPIL Capabilities for Space and Testing Standards." The shielding does not meet As Low As Reasonably Achievable (ALARA) requirements.
f. Insufficient work space to consolidate all INEEL instrument calibrations in the HPIL to obtain site-wide standardization of calibrations. This issue was raised in Tiger Team Corrective Action Plan Number EGG1/RP.8.1.CP01 "Upgrade HPIL Capabilities for Space and Testing Standards."

The deficiencies noted above contribute to the inability of HPIL to perform its function in a compliant manner. Due to the age and deteriorated condition of the building, future additions and modifications are cost prohibitive. The facility has been identified for closure and demolition; however, until a replacement facility can be provided for the HPIL operations, the CFA-633 phase out cannot occur. Construction of a new HPIL facility will eliminate the excessive maintenance and repair expense necessary to bring the existing facility into compliance and will avoid the additions to the deteriorated building that would be required to comply with ANSI N323. A HPIL type facility would still be required on-site regardless of obtaining off-site calibration services. The on-site facility would be required to provide a centralized service for performing as-found inspections, shipping, receiving, and verification of the instrumentation calibration. All off-site suppliers use a disclaimer that states the calibrations were performed to the required specification, but do not warranty that the instrument remains properly calibrated after shipping. In addition, differing atmospheric conditions can impact the accuracy of the instruments. These situations require that some calibration capability must be maintained at the INEEL to verify instrument calibrations. During the design phase of this project, INEEL mission needs will be reviewed and changes made to effectively address facility requirements.

1.	Title and location of project: Construction Funded	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.

The requested FY 1999 budget appropriation will authorize the subcontractors to start work.

1.	Title and location of project:	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.
	Construction Funded		

9. Details of Cost Estimate

	Item Cost	Total Cost
a. Design Phase		$ 895
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	$ 659	
2. Design Management costs @ 35.8 percent of 9.a.1	236	
b. Construction Phase		8,420
1. Land and Land Rights	0	
2. Buildings & Improvements to Land	5,465	
3. Specialized Equipment	2,237	
4. Other (major utilities/comp items, specialized facilities, etc.)	194	
5. Removal costs less salvage	0	
6. Inspection, design and project liaison, testing, checkout and acceptance	299	
7. Construction Management @ 2.7 percent of 9.b	225	
c. Contingencies at approximately 28 percent of above costs		2,585
1. Design Phase	775	
2. Construction Phase	1,810	
d. Total Line-Item costs (Section 11.a.1)		$ 11,900
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirement (TEC)		$ 11,900

1.	Title and location of project:	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.
	Construction Funded		

10. Method of Performance

The Department of Energy Idaho Operations Office (DOE-ID) shall be responsible for implementation of the project, including selection of principal contractors and approval of specified procurement actions. DOE-ID project management shall be performed by the office of infrastructure management. Safety, environmental, and other project support shall be furnished to the project on matrix basis by the DOE-ID organization.

Lockheed Martin Idaho Technologies Company (LMITCO), as operating contractor, shall provide project management services to coordinate all project activities. LMITCO shall be responsible for the development of the project's technical requirements, completion of the Architectural and Engineering Design, review and management of the engineering and construction activities, coordination of long-lead procurement of construction materials and equipment, construction subcontracting, coordination of the activities of construction subcontractors, checkout of systems, and turnover of the completed project.

1. Title and location of project:	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.
Construction Funded		

11. Schedule of Project Funding and Other Related Funding Requirements

	Prior Years	FY 1999	FY 2000	FY 2001	FY 2002	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a & Section 9.c.1))	$ 0	$ 900	$ 770	$ 0	$ 0	$ 1,670
b) Construction (Section 9.b & Section 9.c.2) . .	0	0	1,330	6,600	2,300	10,230
c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories	0	0	0	0	0	0
Total facility costs (Federal and Non-Federal	$ 0	$ 900	$ 2,100	$ 6,600	$ 2,300	$11,900
2. Other project costs						
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	200	0	0	0	0	200
c) Decontamination & Decommissioning (D&D)		0	0	0	0	0
0						
d) NEPA documentation costs	30	25	20	10	10	95
e) Other ES&H costs	0	0	0	0	0	0
f) Other project-related costs (Define in Section 12)	50	75	90	110	150	475
g) Total other project costs	$ 280	$ 100	$ 110	$ 120	$ 160	$ 770
Total project costs (TPC)	$ 280	$ 1,000	$ 2,210	$ 6,720	$ 2,460	$ 12,670
3. LESS: Non-Agency contribution (define Federal vs Non-Federal)	0	0	0	0	0	0

1.	Title and location of project: Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.	
	Construction Funded		

Agency total project costs (TPC)	$ 280	$ 1,000	$ 2,210	$ 6,720	$ 2,460	$ 12,670

1.	Title and location of project:	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.
	Construction Funded		

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated life of project 4 years)

1. Annual facility operating costs (staff, utilities, etc)	$ 0
2. Annual facility maintenance/repair costs	1,416
3. Annual programmatic effort related to facility	0
4. Other Annual Costs (define in Section 12)	0
Total Annual related lifecycle costs	$ 1,416

12. Narrative explanation of total project funding and other related funding requirements

a. Total Project funding
   1. Total facility costs
      a) Line item - None.
      b) PE&D--None.
      c) Operating expense funded equipment--None.
      d) Inventories--None.

12. Narrative explanation of total project funding and other related funding requirements (cont'd)

2. Other project costs
   a) R&D necessary to complete construction--None.
   b) Conceptual design-- $200,000 - The Conceptual Design cost represents the FY 1997 and FY 1998 operating funding which was and will be expended for the preparation of Mission Need Statement, the Conceptual Design Report (CDR) which includes the following studies: Facility Siting Study, Existing Facility Study, HPIL Construction Justification Study. HPIL Equipment Study, Radiation Shielding Study, Emergency and standby Power Study, Fire Protection Study, Underground Utility Tie-In Study, HVAC Size and Configuration Study, Energy Conservation Study, Value Engineering of Conceptual Design.
   c) Decontamination and Decommissioning (D&D)--None.
   d) NEPA documentation--The project NEPPA cost for this period includes Environmental Checklist Verification that facility descoping did not change the approved FONSI/EA on HPIL. Environmental activities during this period includes state air permit preparation and preliminary storm water pollution plan development $95,000.
   e) Other project related costs--This category includes $475,000 associated with the preparation of the Project Management Plan, operationally funded formal design reviews, safety and quality support during design and construction, relocation of equipment that will serve the same function as in its' original location. System Operational Testing, Operational Readiness Reviews, Occupational Readiness Reviews, move-in costs, and operationally funded configuration management activities for the completed facility.

b. Related annual costs
   1. Facility operating costs--The annual operating cost for the HPIL operations as stated is based on the FY 1998 budget.
   2. Facility maintenance and repair costs - $1,416,000.
   3. Programmatic operating expenses directly related to the facility--None.
   4. Capital equipment requirements for programmatic support--None.
   5. GPP or other construction related to the programmatic effort--None.
   6. Utility Costs--None.
   7. Other Costs--None.

1.	Title and location of project: Construction Funded	Health Physics Instrumentmentation Laboratory, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 99-D-404 2b.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION FUND

1. Title and Location of Project:		Plutonium Stabilization and Handling
System	2a.	Project No. 98-D-453
	for PFP, Richland, Washington	2b. Construction Funded

SIGNIFICANT CHANGES

o The TEC increase of $9,400,000 is based on the conceptual design estimate. The preliminary estimate was made prior to three key events: start of the project conceptural design, the Record of Decision for the Plutonium Disposition Environmental Impact Statement, and formation of the EM-66 Plutonium Stabilization and Packaging (PuSAP) team which led to the national PuSAP procurement contract DE-AC03-SF20948. The packaging equipment is considerably more automated and complex than originally envisioned.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request and denoted by a vertical line in the left margin.

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION FUND

1. Title and Location of Project: Plutonium Stabilization and Handling System 2a. Project No. 98-D-453
for PFP, Richland, Washington 2b. Construction Funded

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):	2nd Qtr. FY 1998	2nd Qtr. FY 1998	2nd Qtr. FY 1998
3b. A-E Work (Titles I and II) Duration:	18 Months	18 Months	18 Months
4a. Date Physical Construction Starts:	1st Qtr. FY 1999	1st Qtr. FY 1999	1st Qtr. FY 1999
4b. Date Construction Ends:	4th Qtr. FY 2000	4th Qtr. FY 2000	4th Qtr. FY 2000

	Preliminary Estimate	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC) --	$27,200	$27,200	$36,600
6. Total Project Cost (TPC) --	$38,270	$44,100	$44,100

1. Title and Location of Project:		Plutonium Stabilization and Handling
System	2a.	Project No. 98-D-453
	for PFP, Richland, Washington	2b. Construction Funded

7. Financial Schedule (Federal Funds):

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1998	$ 8,136	0	$8,136	$ 8,136
1999	26,814	0	26,814	26,814
2000	1,650	0	1,650	1,650
2001	0	0	0	0
2002	0	0	0	0

8. Project Description, Justification and Scope

In May 1994, the Defense Nuclear Facilities Safety Board (DNFSB) issued Recommendation 94-1 which stated that by May 2002, the U.S. Department of Energy should stabilize and store all of its surplus plutonium to meet plutonium storage standards. The Department of Energy accepted DNFSB Recommendation 94-1, and outlined its corrective actions in a February 1995 Implementation Plan. In January 1995, Department of Energy Technical Standard DOE-STD-3013-96 was issued as the basis for 50-year storage of surplus plutonium with a plutonium content greater than 50 percent by weight. This standard requires that the plutonium-bearing material be thermally stabilized at 1000ºC with a loss-on-ignition of less than 0.5 percent by weight. Following thermal stabilization, the material must be packaged in a standardized package configuration capable of keeping the material in a safe and stable state for the full time period. A national consensus team has designed the standardized package with two welded stainless steel containers surrounding a stainless steel convenience can compatible with mechanized handling.

The Plutonium Finishing Plant (PFP) currently does not have a system capable of stabilizing or packaging large quantities of plutonium-bearing solids to these specifications. Vault fixtures in the PFP secure vaults and related laboratory equipment are not large enough to accommodate the standardized containers, and the cooling capacity of vault air conditioning units is at maximum.

8. Project Description, Justification and Scope (cont'd)

This project will allow the PFP to meet the requirements of DOE-STD-3013-96 via an automated Stabilization and Packaging System (SPS) that is capable of stabilizing and packaging the current inventory of >50 percent plutonium-bearing material currently stored in the plant's vaults into the standardized packages. To accommodate the new standardized container configuration, this project will also modify selected PFP vault fixtures and upgrade nondestructive assay (NDA) measurement systems such as calorimetry and isotopic measurement systems, to measure package plutonium content. Without this stabilization and packaging capability, and corresponding vault and equipment modifications, it will be impossible to meet the Department of Energy's commitment to safely store plutonium in the standardized container designed to comply with DOE-STD-3013-96 by May 2002.

The scope of this project is to procure and install an SPS unit via existing national procurement contract DE-AC03-SF20948, to modify selected PFP vault fixtures and to upgrade NDA measurement systems. Facility infrastructure will be modified to support this new stabilization and packaging system and the standardized container configuration.

The SPS will be installed in the PFP Plutonium Storage Vault complex, Building 2736-ZB. Deliverables associated with the SPS procurement include the following:

- Engineering, analysis, design, fabrication, delivery, and testing of the SPS equipment;
- Utility interface requirements;
- System safety basis;
- Operating, maintenance, and training procedures and manuals;
- Testing and startup procedures;
- Design, testing and procurement of a small initial quantity of standardized package components;
- Personnel training and technical assistance during startup.

The SPS will have the capability to receive and unload plutonium containers; prepare plutonium metal for packaging; stabilize plutonium oxides; package plutonium metals and oxides; meet material control and accountability requirements; and provide radiological containment and shielding. Detailed design, equipment procurement, and installation of the system will be complete by February 2000, and will be ready for beneficial use by August 2000.

8. Project Description, Justification and Scope (cont'd)

This project also makes the necessary facility modifications to support installation and operation of the SPS and storage of the standardized containers. Modifications to 2736-ZB Building include:

- Capacity and control upgrade of the ventilation fan and exhaust filtration systems;
- Addition of support services for the SPS such as bottled gas supplies for package inerting and welding, dry air for glovebox inerting, off gas treatment, stack constant air monitoring capability, electrical supply upgrades and closed loop cooling for laser welder;
- Rearrangement of facility functions currently housed in the proposed location for the SPS;
- Upgrade of laboratory equipment for calorimetry, gamma spectroscopy, radiography;
- Architectural modifications of office areas and air locks to allow SPS operations.

The 2736-Z Building modifications include:

- Modification of selected PFP vault fixtures to store the new standardized package;
- Modification of vault security equipment related to storage fixtures;
- Upgrade of cooling capacity to accommodate the standardized containers in an efficient configuration.

The FY 1998 appropriation was used to begin definitive design required prior to SPS procurement, and to compile the technical specification for the procurement. Procurement will be initiated as early as possible in FY 1999. The 1999 appropriation will be used to complete definitive design, initiate construction, and install the SPS.

1. Title and Location of Project:		Plutonium Stabilization and Handling	
System	2a.	Project No. 98-D-453	
	for PFP, Richland, Washington	2b.	Construction Funded

9. Details of Cost Estimate

	Item Cost	Total Cost
a. Design Phase		$ 2,510
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	$ 2,250	
2. Design Management costs @ 11.6 percent of 9.a.1	260	
b. Construction Phase		27,190
1. Land and Land Rights	0	
2. Buildings & Improvements to Land	5,750	
3. Specialized Equipment	18,430	
4. Other (major utilities/comp items, specialized facilities, etc.)	340	
5. Removal cost less salvage	0	
6. Inspection, design and project liaison, testing, checkout and acceptance	770	
7. Construction Management @ 7.0 percent of 9.b	1,900	
c. Contingencies at approximately 23 percent of above costs		6,900
1. Design Phase	1,000	
2. Construction Phase	5,900	
d. Total line-item cost (Section 11.a.1.)		36,600
e. LESS: Non-Agency contribuiton (Define in Section 12)		0
f. Total Agency Requirement (TEC)		$ 36,600

10. Method of Performance

Design and inspection will be performed by the onsite engineer-construction contractor. Construction work will be performed to the maximum extent possible by fixed-price contractors. The operating contractor will provide project management during design, procurement, and construction of the project.

1. Title and Location of Project:		Plutonium Stabilization and Handling
System	2a.	Project No. 98-D-453
	for PFP, Richland, Washington	2b. Construction Funded

11. Schedule of Project Funding and Other Related Funding Requirements

	FY 1997	FY 1998	FY 1999	Outyears	Total
a. Total project costs (Agency Requirements)					
1. Total facility costs and construction					
a) Design (Section 9.a & Section 9.c.1)	$ 0	$3,136	$ 374	$ 0	$3,510
b) Construction (Section 9.b & Section 9.c.2) . . .	0	5,000	26,440	1,650	33,090
c) Plant, Engineering and Design (PE&D) .	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	
e) Inventories	0	0	0	0	0
Total facility cost (Federal and Non-Federal) .	$ 0	$ 8,136	$ 26,814	$ 1,650	$36,600
2. Other project costs					
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	900	0	0	0	900
c) Decontamination and Decommissioning (D&D)	0	0	0	0	0
d) NEPA documentation costs	0	0	30	0	30
e) Other ES&H	0	0	0	0	0
f) Other project costs (Define in Section 12) . . .	$ 251	$ 641	$ 3,989	$ 1,689	$ 6,570
g) Total other project costs	$1,151	$ 641	$4,019	$ 1,689	$ 7,500
Total project cost	$1,151	$ 8,777	$ 30,833	$ 3,339	$44,100
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	0	0	0	0	0
Agency total project costs (TPC)	$ 1,151	$ 8,777	$ 30,833	$3,339	$44,100

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated life of project-- years)

1. Annual facility operating costs (staff, utilities, etc.)	$ 0
2. Annual factility maintenance/repair costs	0
3. Annual programmatic effort related to facilityperating expenses directly related to the facility	0
4. Other Annual Costs (define in Section 12)	0
Total Annual related lifecycle costs	$ 0

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

a. Total project funding
1. Total facility costs
   a) Line item--$36,600,000; these funds will be used for design, equipment procurement, construction, and project management.
   b) PE&D--None.
   c) Operating expense funded equipment--None.
   d) Inventories-- None.
2. Other project costs
   a) R&D necessary to complete construction--None.
   b) Conceptual design--$900,000.
   c) Decontamination and Decommissioning (D&D)--None.
   d) NEPA documentation--Workscope was included in the Environmental Impact Statement for the PFP; $30,000 is for the NEPA documentation for the infrastructure upgrades.
   e) Other project related costs--$6,570,000; these costs include PFP Engineering and Operational support during design, construction, and startup/operational readiness review. They also include permitting, safety documentation, and International Atomic Energy Agency (IAEA) and stakeholder interfaces. The material cost for the procurement of the DOE-STD-3013 containers for the Hanford Site ($2,700,000) is also included in these costs.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

b. Related annual costs
1. Facility operating costs--None.
2. Facility maintenance and repair costs--None.
3. Programmatic operating expenses directly related to the facility--None.
4. Capital equipment requirements for programmatic support--None.
5. GPP or other construction related to the programmatic effort in the facility--None.
6. Utility costs--None.
7. Other costs--None.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
Changes from the FY 1998 Congressional Budget Request and denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1.	Title and location of project:	INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 98-D-700 2b.
	Construction Funded		

SIGNIFICANT CHANGES

- No significant changes.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and location of project: INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 98-D-700	
Construction Funded	2b.	

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E work Initiated, (Title I Design Start Scheduled):	2nd Qtr. FY 1998	2nd Qtr. FY 1998	2nd Qtr. FY 1998
3b. A-E work (Title I & Title II) Duration: 12 Months		12 Months	12 Months
4a. Date Physical Construction Starts:	3rd Qtr. FY 1999	3rd Qtr. FY 1999	3rd Qtr. FY 1999
4b. Date Construction Ends:	3rd Qtr. FY 2001	3rd Qtr. FY 2001	3rd Qtr. FY 2001

	Preliminary Schedule	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC) --	$10,800	$10,800	$10,800
6. Total Project Cost (TPC) --	$11,400	$11,400	$11,400

1. Title and location of project:	INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 98-D-700 2b.
Construction Funded		

7. Financial Schedule (Federal Funds)

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1998	$ 500	0	$500	$411
1999	7,710	0	7,710	5,943
2000	2,590	0	2,590	4,151
2001	0	0	0	295

8. Description, Justification and Scope

This project provides for the design, procurement, and rehabilitation of approximately 45 miles of existing roadways and approximately 27,000 square yards of parking areas within the Idaho National Engineering and Environmental Laboratory (INEEL). The rehabilitation actions include the redesign and constructon of intersections to reduce safety concerns during waste transportation and other vehicle traffic, widening of roadways, modification of drainage patterns, resloping of shoulders, and renovation of roadways and parking lots. The following methods of construction will be utilized according to the degree of deterioration:

a. Excavation and reconstruction of the roadway from the base up through the paved surface.
b. Base removal and construction, on sections of roadways where base deterioration has occurred, and application of an asphalt overlay.
c. Application of an asphalt overlay to the roadway.
d. Application of an open graded plant mix seal coat.
e. Application of a seal coat, including crack repair.

8. Description, Justification and Scope (cont'd)

The INEEL has over 87 miles of paved roads within its 890 square mile boundary. In addition to this primary transportation network, over 100 miles of unpaved service roads allow access to remote areas for security, environmental experiments and sampling, maintenance activities, and emergency vehicles. Road construction projects are part of a continuing program to preserve/extend the useful life and upgrade the INEEL transportation infrastructure. This project is necessary to provide for safe and effective programmatic support. During the 1980's, the INEEL received sufficient funding to sustain the road program; however, no significant projects have been completed since 1990.

This project is necessary to continue to provide support for all present and future INEEL activities. It supports DOE's mission to provide safe and environmentally compliant transportation routes for waste shipments in support of the October 17, 1995 court order and transportation of soil barrow to meet various INEEL regulatory and compliance issues under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), and other authorities. The project directly supports the Sitewide specific planning goal of providing roads which meet the State of Idaho Highway Construction Specifications, American Association of State Highway and Transportation Officials (AASHTO), and the INEEL engineering standards.

The INEEL uses the U.S. Army Corps of Engineers' computerized pavement management system, "PAVER," to assess the condition of the paved roadway network. This information will be used in conjunction with the transportation routes addressed above to determine priorities and rehabilitation efforts.

The LMITCO Retirement Unit Catalog (CFO-FSD-CNM-98-002) was used for making the correct funding determination and proper capitalization decision. The project is a Betterment and Improvement to property record units or retirement units that cost $25,000 or more and extends the useful life of the record/retirement unit.

The requested FY 1999 budget appropriation will authorize the subcontractors to start work.

1. Title and location of project:	INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 98-D-700 2b.
Construction Funded		

9. Details of Cost Estimate

	Item Cost	Total Cost
a. Design Phase		$ 457
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	$ 364	
2. Design Management costs @ 25.5 percent of 9.a.1	93	
b. Construction Phase		8,393
1. Land and Land Rights	$ 0	
2. Buildings & Improvements to Land	7,510	
3. Specialized Equipment	0	
4. Other (major utilities/comp items, specialized facilities, etc.)	132	
5. Removal costs less salvage	0	
6. Inspection, design and project liaison, testing, checkout and acceptance	209	
7. Construction Management @ 6.5 percent of 9.b	542	
c. Contingencies at approximately 22 percent of above costs		$1,950
1. Design Phase	86	
2. Construction Phase	1,864	
d. Total Line Item costs (Section 11.a.1)		$ 10,800
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirement (TEC)		$ 10,800

1.	Title and location of project:	INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 98-D-700 2b.
	Construction Funded		

10. Method of Performance

The Department of Energy Idaho Operations Office (DOE-ID) shall be responsible for implementation of the project, including selection of principal contractors and approval of specified procurement actions. DOE-ID project management shall be performed by the Construction Management Group in the Office of Program Execution. Safety, environmental, and other project support shall be furnished to the project on an as-needed basis by the DOE-ID matrix organization.

The design, project management, and construction management shall be performed under a negotiated contract with the operating contractor. Construction and procurement shall be accomplished by fixed price contracts awarded on the basis of competitive bidding. Inspection may be performed by another agent. Check-out of systems, and maintenance of the completed project shall be performed by the operating contractor.

The INEEL operating contractor Project Manager shall be responsible for the entire project: design, all construction activities at the INEEL site, construction subcontracting, direction of the activities of construction subcontractors, and performance and management of construction activities as required to complete the project in a timely, safe, and cost-effective manner.

1. Title and location of project: INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho

2a. Project No.: 98-D-700

2b.

Construction Funded

11. Schedule of Project Funding and Other Related Funding Requirements

	Prior Years	FY 1997	FY 1998	FY 1999	Outyears	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a & Section 9.c.1))	$ 0	$ 0	$ 411	$ 132	$ 0	$ 543
b) Construction (Section 9.b & Section 9.c.2) . .	0	0	0	5,811	4,446	10,257
(c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories	0	0	0	0	0	0
Total facility costs (Federal and Non-Federal	$ 0	$ 0	$ 411	$5,943	$ 4,446	$10,800
2. Other project costs						
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	0	0	0	0	0	0
c) Decontamination & Decommissioning (D&D)		0	0	0	0	0
0						
d) NEPA documentation costs	0	0	0	0	0	0
e) Other ES&H costs	0	0	0	0	0	0
f) Other project-related costs (Define in Section 12)	0	0	100	374	126	600
g) Total other project costs	$ 0	$ 0	$ 100	$ 374	$ 126	$ 600
Total project costs (TPC)	$ 0	$ 0	$ 511	$ 6,317	$ 4,572	$ 11,400
3. LESS: Non-Agency contribution (define Federal vs Non-Federal)	0	0	0	0	0	0
Agency total project costs (TPC)	$ 0	$ 0	$ 511	$ 6,317	$ 4,572	$ 11,400

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs

1.	Annual facility operating costs (staff, utilities, etc)	$ 0
2.	Annual facility maintenance/repair costs	153
3.	Annual programmatic effort related to facility	0
4.	Other Annual Costs (define in Section 12)	0
	Total Annual related lifecycle costs	$ 153

12. Narrative explanation of total project funding and other related funding requirements

a. Total Project funding

1. Total facility costs
   a) Line item - The cost is based upon the conceptual design that was completed in March 1996. The Conceptual Design cost estimate was prepared utilizing the INEEL Cost Estimating Manual and DOE Order 5700.2C.
   b) PE&D--None.
   c) Operating expense funded equipment--None.
   d) Inventories--None.

2. Other project costs
   a) R&D necessary to complete construction--None.
   b) Conceptual design--
   c) Decontamination and Decommissioning (D&D)--None.
   d) NEPA documentation--None.
   e) Other project related costs--This category includes the costs associated with the preparation of the Project Execution Plan, Readiness Reviews, OC Construction Support, Quality and Safety audits, document control, design and constructability review, Configuration Management Plan, and project closeout.

1.	Title and location of project:	INEEL Road Rehabilitation, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 98-D-700 2b.
	Construction Funded		

12. Narrative explanation of total project funding and other related funding requirements (cont'd)

b. Related annual costs

1. Facility operating costs--None.
2. Facility maintenance and repair costs - Cost of $153,000 is based upon FY 1996 Roads and Grounds Maintenance and Repair budget, escalated to the fiscal year that construction is completed.
3. Programmatic operating expenses directly related to the facility--None.
4. Capital equipment requirements for programmatic support--None.
5. GPP or other construction related to the programmatic effort--None.
6. Utility Costs--None.
7. Other Costs--None.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1.	Title and Location of Project:		Spent Nuclear Fuels Canister Storage
and	2a.	Project No.: 96-D-406	Stabilization Facility,
	2b.	Construction Funded	Richland, Washington

SIGNIFICANT CHANGES

- Total estimated cost increased from $120,416,000 to $165,397,000 to provide for: 1) a more sophisticated shield plug design for the Canister Storage Building (CSB), capable of dealing with Multiple Canister Overpack (MCO) over pressurization; 2) additional CSB safety analysis submittal; 3) higher MCO Handling Machine (MHM) costs for over pressurization, inerting gas system, seismic deflection and exchange fixture requirement; 4) significantly more complex process equipment for both the Cold Vacuum Drying (CVD) and Hot Conditioning System (HCS), including higher levels of safety class and safety significant componentry; and (5) CVD facility safety class changed from non-safety to safety significant.

- Total project cost increased from $157,278,000 to $203,114,000 for the same effort as mentioned above.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project: Spent Nuclear Fuels Canister Storage Stabilization Facility, Richland, Washington

and 2a. Project No.: 96-D-406

2b. Construction Funded

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):			
Canister Storage Bldg (W-379)	1st Qtr. FY 1996	1st Qtr. FY 1996	1st Qtr. FY 1996
Cold Vacuum Drying Fac.(W-441)	2nd Qtr. FY 1996	2nd Qtr. FY 1996	2nd Qtr. FY 1996
Hot Conditioning Fac. (W-484)	4th Qtr. FY 1996	4th Qtr. FY 1996	4th Qtr. FY 1996
3b. A-E Work (Titles I & II) Duration:	24 Months	24 Months	24 Months
4a. Date Physical Construction Starts:	2nd Qtr. FY 1996	2nd Qtr. FY 1996	2nd Qtr. FY 1996
4b. Date Construction Ends:	2nd Qtr. FY 2000	2nd Qtr. FY 2000	2nd Qtr. FY 2000

	Preliminary Estimate	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC)	$135,830	$112,416	$165,397 a/

6. Total Project Cost (TPC)	$180,780	$147,263	$203,114 a/

1. Title and Location of Project:		Spent Nuclear Fuels Canister Storage
and 2a.	Project No.: 96-D-406	
	Stabilization Facility,	2b.
Construction Funded		
	Richland, Washington	

7. Financial Schedule (Federal Funds)

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1996	$ 42,000	$ 1,000 b/	$ 43,000	$ 31,988
1997	60,672		60,672	51,589
1998	16,744		16,744	36,839
1999	38,680		38,680	38,680
2000	6,301		6,301	6,301

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a/ The TEC and TPC is increased from $120,416,000 to $165,397,000 and $157,278,000 to $203,114,000, respectively. This increase is to provide for: 1) a more sophisticated shield plug design for the Canister Storage Building (CSB), capable of dealing with Multiple Canister Overpack (MCO) over pressurization; 2) additional CSB safety analysis submittal; 3) higher MCO Handling Machine (MHM) costs for over pressurization, inerting gas system, seismic deflection and exchange fixture requirement; 4) significantly more complex process equipment for both the Cold Vacuum Drying (CVD) and Hot Conditioning System (HCS), including higher levels of safety class and safety significant componentry; and 5) CVD facility safety class changed from non-safety to safety significant.

b/ FY 1996 internal reprogramming to provide for additional concrete pouring required to maintain higher heat control to store both Spent Nuclear Fuel and Tank Waste Remediation System Canisters.

1. and 2a.	Title and Location of Project:	Project No.: 96-D-406 Stabilization Facility, Richland, Washington	Spent Nuclear Fuels Canister Storage 2b.
	Construction Funded		

8. Project Description, Justification and Scope

This Major System Acquisition (MSA) project consists of all the activities necessary to safely stabilize and store approximately 2,100 metric tons of spent N-Reactor fuel currently stored at the 100 K East and West facilities. There are three specific subprojects within this MSA as follows:

a. Subproject #01 - Canister Storage Building (CSB) (W-379)

	TEC	FY 1996	FY 1997	FY 1998	FY 1999	Construction Start - Completion Dates	
*	$105,528	$39,900	$44,051	$ 7,825	$13,752	2nd Qtr. FY 1996	3rd Qtr. FY 1999

The Canister Storage Building (CSB) from Hanford's Waste Vitrification Plant (HWVP) Project will be modified to also provide long-term, dry storage for spent fuel removed from the 100 K East and West basins. The fuel will be stored in
* Multiple Canister Overpacks (MCO's) at the CSB. MCO pressurization implementation dictate that the CSB and its operating equipment be designed and built to accommodate blowdown of an MCO. The facility will also serve as a staging area for the fuel prior to final conditioning.

This facility is envisioned to consist of 2,900 square meters (31,580 square feet), of which approximately 2,310 square meters (23,160 square feet) will be available for storage and 590 square meters (6,420 square feet) for loading, handling and service
* areas. The NRC Equivalency Requirement Implementation necessitates that the CSB be designed and constructed to
* withstand tornado loadings which result in design and construction of "hardened" elements of the CSB.

Following hot conditioning, fuel will be returned to the CSB vault area where it will be placed, via a MCO handling machine, in storage positions and cooled by natural outside air circulation. The fuel could remain in storage for up to 40 years or until a suitable repository becomes available. Following fuel removal, the facility will be deactivated and decommissioned.

8. Project Description, Justification and Scope (cont'd)

Currently, spent Hanford N-Reactor fuel is stored in unlined, concrete water-filled basins that are not seismically qualified and are located approximately 93.3 meters (100 yards) from the Columbia River. Any significant seismic event could cause a very serious hazard to the environment and potentially place the health and well being of the surrounding community in jeopardy.

The FY 1999 appropriation will be used to complete Canister Storage Building construction, including the procurement and installation of tube shield plugs and impact absorbers.

Conditioning Facilities

Planned conditioning provides facilities and process equipment which reduces N-Reactor spent nuclear fuel volatility in preparation for dry stockpiling at Hanford's Canister Storage Building.

These conditioning activities will consist of a cold vacuum drying and hot conditioning process.

b. Subproject #02 - Cold Vacuum Drying Facility (W-441)

TEC	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Construction Start - Completion Dates	
$30,581	$ 2,152	$11,115	$ 8,724	$3,590	$ 5,000	1st Qtr. FY 1997	1st Qtr. FY 1999

Spent nuclear fuel presently stored in K-basins will be removed from existing storage canisters, washed to minimize loose particulate (sludge), and reracked into MCO's prior to removal from the Basins. The MCO's then will be transferred to a cold vacuum drying module located in the 100 K Area. Bulk water will be removed and the fuel will be vacuum dried. Next, the MCO's will be transported to the CSB, located in the central 200 area, where containers will be staged to wait for hot

conditioning. The hot conditioning process will remove chemically bound water and facilitate the decomposition of uranium hydride, thereby preparing the fuel for storage.

8. Project Description, Justification and Scope (cont'd)

The FY 1999 appropriation will be used to complete construction.

c. Subproject #03 - Hot Conditioning Facility (W-484)

*	TEC	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Construction Start - Completion Dates	
*	$29,288	$ 948	$ 5,506	$ 195	$ 21,338	$ 1,301	2nd Qtr. FY 1999	2nd Qtr. FY 2000

Hot conditioning will take place in an annex that is contiguous with the CSB. The MCO's will be transported by a MCO handling machine to a work station where they will be connected for hot conditioning. This conditioning process will consist of heating spent fuel to approximately 300 degrees celsius, placing it under a vacuum which removes chemically bonded water, and facilitating the decomposition of uranium hydride. Following hot conditioning, MCO's will be returned to the CSB for placement into storage. All work on the Hot Conditioning Facility has been deferred until FY 1999 pending the results of a reevaluation of the system requirements. This evaluation is currently underway.

* The FY 1999 appropriation will be used to continue construction.

1. Title and Location of Project:		Spent Nuclear Fuels Canister Storage
and 2a.	Project No.: 96-D-406	
	Stabilization Facility,	2b.
Construction Funded		
	Richland, Washington	

9. Details of Cost Estimate

	Item Cost	Total Cost
a. Design Phase		$ 54,190
1. Preliminary and Final Design costs, Design, Drawings, and Specifications)	$28,789	
2. Design Management costs @ 88.2 percent of 9.a.1	25,401	
b. Construction Phase		108,515
1. Land and Land Rights	0	
2. Buildings & Improvements to Land	64,701	
3. Specialized Equipment	34,116	
4. Other (major utilities/comp items, specialized facilities, etc.)	0	
5. Removal cost less salvage	2,700	
6. Inspection, design and project liaison, testing, checkout and acceptance	0	
7. Construction Management @ 6.4 percent of 9.b	6,998	
c. Contingencies at approximately 2 percent of above costs		2,692
1. Design Phase	921	
2. Construction Phase	1,771	
d. Total line item cost (Section 11.a.1.)		$165,397
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirement (TEC).		$165,397

1. and 2a.	Title and Location of Project:	Project No.: 96-D-406 Stabilization Facility, Richland, Washington	Spent Nuclear Fuels Canister Storage 2b. Construction Funded

10. Method of Performance

Design and inspection shall be performed under a negotiated contract with an architect/engineer. Construction and procurement will be accomplished by fixed-price contracts and subcontracts awarded on the basis of competitive bidding.

1. Title and Location of Project:		Spent Nuclear Fuels Canister Storage
and 2a.	Project No.: 96-D-406	
	Stabilization Facility,	2b.
Construction Funded		
	Richland, Washington	

11. Schedule of Project Funding and Other Related Funding Requirements

	Prior Years	FY 1997	FY 1998	FY 1999	Outyears	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a. & Section 9.c.1).	$ 31,988	$ 51,589	$36,839	$38,680	$ 6,301	$165,397
b) Construction (Section 9.b & Section 9.c.2) . . .	0	0	0	0	0	0
c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories						
Total facility costs (Federal and Non-Federal)	$ 31, 988	$51,589	$36,839	$38,680	$ 6,301	$165,397
2. Other project costs						
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	2,970	0	0	0	0	2,970
c) Decontamination and Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	475	629	245	0	0	1,349
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Sec. 12)	9,025	7,481	13,100	2,847	945	33,398
g) Total other project costs	$ 12,470	$ 8,110	$13,345	$ 2,847	$ 945	$ 37,717
Total project costs (TPC)	$ 44,458	$59,699	$50,184	$41,527	$ 7,246	$203,114
3. LESS: Non-Agency contribution (define Federal vs non-federal)	0	0	0	0	0	0
Agency total project costs (TPC)	$44,458	$59,699	$50,184	$41,527	$ 7,246	$203,114

1. Title and Location of Project:		Spent Nuclear Fuels Canister Storage
and 2a.	Project No.: 96-D-406	
	Stabilization Facility,	2b.
Construction Funded		
	Richland, Washington	

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated life of project--40 years)

1. Annual facility operation costs (staff, utilities, etc.)	$2,743	a/
2. Annual facility maintenance/and repair costs	0	
3. Annual programmatic effort related to facility	0	
4. Other Annual Costs (define Section 12).	0	
Total Annual related lifecycle costs	$2,743	

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

a. Total project funding
   1. Total facility costs
      a) Line item--$165,397,000 is the total estimated cost for the facility including the buildings, grounds and equipment and utilities.
      b) PE&D--None.
      c) Operating expense funded equipment--None.
      d) Inventories--None.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

2. Other project costs
   a) R&D necessary to complete construction--None.
   b) Conceptual design--Costs of approximately $2,970,000 to develop the scope of the project, design parameters, technical feasibility, and to improve the project cost and schedule estimates.
   c) Decontamination and Decommissioning (D&D)--None.
   d) NEPA documentation--$1,349,000. The Canister Storage Building will be discussed in the K-Basins EIS. The Record of Decision has been issued in March 1996.
   e) Other project related costs--Costs of approximately $33,398,000 are expected to perform startup functions and to develop the functions and requirements, Safety and Regulatory, and validation documentation.

b. Related annual costs
1. Facility operating costs--Facility operating costs are expected to start in FY 2000 at $ 9,837,000, increase to $10,979,000 in FY 2001, then start to decrease to $ 5,026,000 in FY 2002 and $3,865,000 in FY 2003 with continued decrease to about $2,000,000 in FY 1995 dollars over approximately the next 40 years. These estimated costs do not include shipping to the repository or repository fees; costs associated with the receipt of the SNF into 200 Interim Storage Area (ISA); or costs associated with immobilized high level waste. The Canister Storage Building replaces 100 K area basins, which currently requires in excess of $44,000,000 to operate. The cost of the Canister Storage Building operations, both near and long term, are considerably less than the K-Basin operations costs.
2. Facility maintenance and repair costs--The facility maintenance and repair costs are included in the operating costs.
3. Programmatic operating expenses directly related to the facility--None.
4. Capital equipment requirements for programmatic support--None.
5. GPP or other construction related to the programmatic effort in the facility--None.
6. Utility costs--None.
7. Other costs--None.

1. Title and Location of Project:		Spent Nuclear Fuels Canister Storage
and 2a.	Project No.: 96-D-406	
	Stabilization Facility,	2b.
Construction Funded		
	Richland, Washington	

a/ The estimated facility operating costs have been averaged over a 40 year total service life period.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1.	Title and Location of Project: Project No.: 96-D-408 Various Locations	Waste Management Upgrades,	2a.
		2b.	Construction
Funded			

SIGNIFICANT CHANGES

- Increase to total estimated cost (TEC) on Subproject #2 reflects an accelerated two-year construction duration to limit cost growth and plant outages.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project: Waste Management Upgrades, a/
2a. Project No.: 96-D-408
Various Locations 2b. Construction Funded

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):	2nd Qtr. FY 1996	2nd Qtr. FY 1996	2nd Qtr. FY 1996
3b. A-E Work (Titles I & II) Duration:	9 Months	9 Months	9 Months
4a. Date Physical Construction Starts:	1st Qtr. FY 1997	1st Qtr. FY 1997	1st Qtr. FY 1997
4b. Date Construction Ends:	3rd Qtr. FY 1999	3rd Qtr FY 1999	4th Qtr. FY 1999

	Preliminary Estimate	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC) --	$26,470	$26,470	$28,744
6. Total Project Cost (TPC) --	$33,629	$33,629	$35,903

a/ The Site/Project Completion section of the Defense Environmental Restoration and Waste Management also provides funds for this project.

1. Title and Location of Project: Waste Management Upgrades, 2a.
Project No.: 96-D-408
Various Locations 2b. Construction
Funded

7. Financial Schedule (Federal Funds)

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1996	$ 5,615	$(3,100) a/	$ 2,515	$ 2,256
1997	11,246	2,100 b/	13,346	8,792
1998	8,200	0	8,200	8,200
1999	4,683	0	4,683	9,496

8. Project Description, Justification and Scope

This project line-item is the result of the FY 1996 Appropriation, in which Congress has provided greater flexibility to manage multiple projects of similar nature at various location. The subprojects will be addressed individually in the construction project data sheet, and must undergo the same review process as any other construction line item proposed in this budget. Since these changes occur on a real-time basis and cannot be anticipated, this consolidated line item approach will provide DOE the flexibility to react to significant technical, programmatic and regulatory changes that impact the individual subprojects, making the most effective use of the funds available.

a. Subproject #01 - Replace Industrial Waste Piping, Kansas City Plant

TEC	PREV.	FY 1997	FY 1998	FY 1999	OUTYEAR	CONSTRUCTION START - COMPLETION DATE	
$2,400	$ 200	$ 2,200	$ 0	$ 0	$ 0	4th Qtr. FY 1997	3rd Qtr. FY 1998

a/ Use of uncosted prior year balances to offset FY 1997 appropriation.

1.	Title and Location of Project: Waste Management Upgrades, Project No.: 96-D-408 Various Locations	2a.	2b. Construction Funded

b/ Reflects internal reprogramming.

8. Project Description, Justification and Scope (cont'd)

This project will replace the overhead industrial waste piping system at the Kansas City Plant (KCP) including dilute acid, caustic, cyanide chrome, and industrial waste lines from the main manufacturing building and five other small buildings to the Industrial Waste Pretreatment Facility (IWPF). The project includes phased demolition and construction to replace the nine separate overhead industrial waste system pipe lines which together convey virtually all process wastes from the operating buildings to the IWPF. All of the pipe lines are located on an outdoor overhead pipe bridge. The new piping will be installed in the same location as the existing piping. Minor modification will be made to the existing bridge to strengthen the pipe anchor points to accommodate thermally induced loads. The total length of piping is approximately 6,700 feet.

In FY 1998 prior year carry-over funds will be used for project management activities and to complete construction.

b. Subproject #02 - T-Plant Secondary Containment and Leak Detection Upgrades, Richland

TEC	PREV.	FY 1997	FY 1998	FY 1999	OUTYEAR	CONSTRUCTION START - COMPLETION DATE
$12,800	$ 2,100	$ 6,129	$ 4,400	$ 171	$ 0	1st Qtr. FY 1997 - 1st Qtr. FY 1999

The T-Plant is the primary decontamination facility for the Hanford Site. The decontamination activities support Hanford Site environmental restoration activities and waste management programs. This project will modify T-Plant facilities to comply with the State of Washington and Federal environmental regulations for secondary containment and leak detection.

This project will provide a functional on-line facility to support major decontamination activities as required by the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestone M-32-03, "Complete T-Plant Tank Actions."

The upgrades provided by this project are installation of a liquid waste collection, containment, leak detection, and transfer system for handling decontamination solutions in the 2706-T and 2706-TA facility.

8. Project Description, Justification and Scope (cont'd)

The FY 1997 adjustment to baseline is to account for site allocation changes for property, equipment, and management. The FY 1998 appropriation will be used for construction and project management support.

c. Subproject #03 - Tank Farm Services Upgrades, Savannah River

TEC	PREV.	FY 1997	FY 1998	FY 1999	OUTYEAR	CONSTRUCTION START - COMPLETION DATE
$13,544	$ 215	$ 5,017	$ 3,800	$4,512	$ 0	4th Qtr. FY 1996 - 4th Qtr. FY 1999

The Tank Farm Services Upgrade project consists of improvements to three different areas of the Tank Farm. These improvements will include service piping upgrades in the H-Area Tank Farm (West Hill), Electrical upgrades in the F-Area Tank Farm, and a cooling systems upgrade in the H-Area Tank Farm (East Hill). The upgrades to the service piping are necessary to support the continued and expanding tank farm operations. The cost of repairing leaks in buried pipes has been approximately $4 million over the past four years. Detecting and repairing the leaks is very difficult.

The electrical upgrades in F-Area will consist of the addition or replacement of automatic transfer switches (ATS) and cable which will correct the electrical low voltage situation in the F-Area Tank Farm eight. Low voltage situations are causing power interruptions in the F-Area Tank Farm. This project will provide and install a new automatic transfer switch in 241-64F compressor house. The project will replace the overloaded automatic transfer switch in Building 241-74F. The existing normal power supply and load cables in Building 241-74F will be replaced. The standby source and cables will not be changed.

8. Project Description, Justification and Scope (cont'd)

The cooling system upgrade will provide adequate cooling to support In-Tank Precipitation (ITP) and Extended Sludge Processing (ESP), which will feed Saltstone and Defense Waste Processing Facility (DWPF). Due to changes in the site mission, the cooling requirements for the Tank Farm have changed. The new mission is to remove waste, which will generate heat from slurry pump operation and tank transfers. The process facilities will require lower tank temperatures. To provide adequate cooling, a heat exchanger and a new chromate cooling water pump will be added to the system. The existing cooling pumps will be upgraded. An upgraded outdoor diesel generator may be provided as a stand-by power source and replace the existing 500 KW diesel generator. This project will prevent additional underground piping leaks in contaminated soil, which disrupt operations and expose personnel to radiation. These leaks are difficult to locate and costly to repair. The F-Area low voltage situations would continue to cause service disruptions and unplanned outages. The existing East Hill system will not meet the waste removal processes cooling requirements for the current site mission. Operation of new facilities such as In-Tank Precipitations (ITP) and Extended Sludge Processing (ESP) would be administratively controlled (i.e., operate only when air temperature is sufficiently low, during winter months or at night). Operation of Saltstone and Defense Waste Processing Facility could experience limitations.

*
* The mechanical services in the H-Area Tank Farm need to be replaced due to damage to the service caused by age. These upgrades are required to support the tank farm operations. This project will replace buried service piping in H-Area with piping in trenches or on pipe racks and provide three new gang valve assemblies with double contained steam supply. The new gang valve assemblies with double contained pipe to Tanks 35 through 37 will reduce the possibilities of back flow in the steam supply lines from occurring again. The assemblies will give better environmental control and implement the ALARA philosophy. The existing lines will be capped and abandoned in place. The gang valve house will be abandoned. The existing gang valve house (GVH) and steam transfer line are not in compliance with DOE Order 5820.2A "Radioactive Waste management", and pose a threat to the environment and personnel. The majority of replacement piping provided by this project will be routed around the perimeter of the tank farm on pipe racks or in trenches provided by other projects. Service piping will be extended routed from the perimeter "header" systems to tanks tops (Tanks 29-32 and 35-37) diversion boxes (HDB4 and HDB6) and gang valve houses (Tanks 35-37) using pipe supports provided by this project. Currently tanks 35-37

1.	Title and Location of Project: Project No.: 96-D-408 Various Locations	Waste Management Upgrades,	2a.
2b.	Construction	Funded	

are serviced by gang valves located in a common location building 241-H. Back flow from Tank 37 has contaminated the steam supply line (Tank 37) connecting the gang

8. Project Description, Justification and Scope (cont'd)

valves to the tank transfer jets. These steam supply lines are the only lines for Type III waste tanks that do not have secondary containment. The upgrade of the new GVHs and associated piping will include replacement of the steam lines including secondary containment provisions between the GVHs and the tanks.

The FY 1999 funds will be used to finish construction on the gang valve house scope, design and initiate construction on the cooling scope and design and initiate construction of the F-area electrical scope. The gross annual operating expense for this facility is estimated to be $150,000.

1. Title and Location of Project: Waste Management Upgrades, 2a.
Project No.: 96-D-408
Various Locations 2b. Construction
Funded

9. Details of Cost Estimate a/ b/

	Item Cost	Total Cost
a. Design Phase		$ 6,130
1. Preliminary and Final Design costs, ((Design, Drawings, and Specifications)	$ 4,400	
2. Design Management costs @ 39.3 percent of 9.a.1	1,730	
b. Construction Phase		17,090
1. Land and Land Rights	0	
2. Buildings and Improvements to Land	2,100	
3. Specialized Equipment	0	
4. Other (major utilities/comp items, specialized facilities, etc.)	5,610	
5. Removal cost less salvage	8,610	
6. Inspection, design, and project liaison, testing, checkout, and acceptance	0	
7. Construction Management @ 4.5 percent of 9.b	770	
c. Contingencies at approximately 24 percent of above costs		5,524
1. Design Phase	1,586	
2. Construction Phase	3,938	
d. Total line-item cost (section 11.a.1.)		$ 28,744
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirement (TEC)		$ 28,744

a/ Subproject 2 portion of this estimate is based on the final revised two year construction estimate dated May 27, 1997.

1.	Title and Location of Project: Project No.: 96-D-408 Various Locations	Waste Management Upgrades,	2a. 2b. Construction Funded

b/ Escalation rates were calculated from the January 1997 update of the economic escalation price change indices for DOE construction projects as published by the “Office of Infrastructure Acquisition, FM-50."

1.	Title and Location of Project: Waste Management Upgrades, Project No.: 96-D-408 Various Locations	2a.	
		2b.	Construction Funded

10. <u>Method of Performance</u>

Design, inspection, procurement, and construction shall be performed under a negotiated contract with the offsite engineer-constructor contractor. The operating contractor will support the project by providing input to design revisions as well as overall project management through the duration of the project.

1. Title and Location of Project: Waste Management Upgrades, 2a.
Project No.: 96-D-408
Various Locations 2b. Construction
Funded

11. Schedule of Project Funding and Other Related Funding Requirements

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a & Section 9.c.1)	$ 1,033	$ 2,705	$ 2,165	$ 227	$ 0	$ 6,130
b) Construction (Section 9.b & Section 9.c.2)	1,223	6,087	6,035	9,269	0	22,614
c) Plant, Engineering, and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funding equipment	0	0	0	0	0	0
e) Inventories	0	0	0	0	0	0
Total facility costs (Federal and Non-Federal)	$ 2,256	$8,792	$ 8,200	$ 9,496	$ 0	$28,744
2. Other project costs						
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	1,666	274	0	0	0	1,940
c) Decontamination & Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	5	0	0	0	0	5
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Sec. 12)	526	124	863	1,096	2,605	5,214
g) Total other project costs	$ 2,197	$ 398	$ 863	$ 1,096	$ 2,605	$ 7,159
Total project cost (TPC)	$ 4,453	$9,190	$ 9,063	$10,592	$ 2,605	$35,903
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	0	0	0	0	0	0
Agency total project costs (TPC)	$ 4,453	$9,190	$ 9,063	$10,592	$ 2,605	$35,903

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Life cycle costs (estimated life of project-- 20-30 years for all subprojects)

1. Annual facility operating costs (staff, utilities, etc.)	$ 3,992
2. Annual facility maintenance/repair costs	1,859
3. Annual programmatic effort related to facility	3,426
4. Other Annual costs (define in Section 12)	500
Total Annual related Life cycle costs	$ 9,777

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

a. Total project funding
1. Total facility costs
a) Line-Item -- Total cost of construction is $28,744,000; these funds will be used for design, procurement, construction, and project management.
b) Plant engineering & design -- No narrative required.
c) Operating expense funded equipment -- No narrative required.
d) Inventories -- No narrative required.

2. Other project costs
a) R&D necessary to complete construction -- No narrative required.
b) Conceptual design -- Will be completed at an approximate cost of $1,940,000.
c) Decontamination & Decommissioning (D&D) -- No narrative required.
d) NEPA documentation -- National Environmental Policy Act (NEPA) activities and documentation are expected to cost approximately $5,000 for Richland.

1.	Title and Location of Project: Project No.: 96-D-408 Various Locations	Waste Management Upgrades,	2a.
2b.	Construction	Funded	

e) Other project related costs -- Costs of approximately $5,214,000 for various project support activities, including value engineering session, site evaluation, project and quality assurance plans, design and quality assurance reviews, inventories for startup, readiness reviews, and health physics technician and plant personnel report.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

b. Related annual costs
   1. Facility operating costs -- Costs of approximately $3,992,000 for operations, maintenance, and utilities for the facilities provided by the Subprojects.
   2. Facility maintenance and repair costs -- $1,859,000; assumes a share of the total maintenance outlay.
   3. Programmatic operating expenses directly related to the facility -- Includes T-Plant waste management, operational safety, facility operations, engineering procedures/drawings, waste assessments and rail car transfers; $3,426,000.
   4. Capital equipment requirements for programmatic support -- costs of $400,000.
   5. GPP or other construction related to programmatic effort -- Costs of $100,000.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project:	Electrical and Utility Systems Upgrade, Idaho Chemical Processing Plant, Idaho National Engineering Laboratory, Idaho	2a. Project No.: 96-D-464 2b. Construction Funded

SIGNIFICANT CHANGES

- No significant changes.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project:	Electrical and Utility Systems Upgrade, Idaho Chemical Processing Plant, Idaho National Engineering Laboratory, Idaho	2a. Project No.: 96-D-464 2b. Construction Funded

		Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a.	Date A-E Work Initiated, (Title I Design Start Scheduled):	2nd Qtr. FY 1996	2nd Qtr. FY 1996	2nd Qtr. FY 1996
3b.	A-E Work (Titles I and II) Duration:	30 Months	30 Months	30 Months
4a.	Date Physical Construction Starts:	3rd Qtr. FY 1997	3rd Qtr. FY 1997	3rd Qtr. FY 1997
4b.	Date Construction Ends:	1st Qtr. FY 2002	1st Qtr. FY 2002	1st Qtr. FY 2002

		Preliminary Schedule	Title I Baseline	Current Baseline Schedule
5.	Total Estimated Cost (TEC) --	$62,280	$53,452	$53,452 a/
6.	Total Project Cost (TPC) --	$76,690	$67,849	$67,849 a/

1. Title and Location of Project:		Electrical and Utility Systems Upgrade,
2a.	Project No.: 96-D-464	
	Idaho Chemical Processing Plant,	2b. Construction Funded
	Idaho National Engineering Laboratory, Idaho	

7. Financial Schedule (Federal Funds)

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1996	$ 4,952	$ -440 b/	$ 4,512	$ 2,756
1997	10,440	0	10,440	7,439
1998	14,985	0	14,985	12,595
1999	11,544	0	11,544	12,419
2000	11,971	0	11,971	9,073
2001	0	0	0	4,315
2002	0	0	0	4,855

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a/ The TEC and TPC have been reduced (TEC $62,280,000 to $53,452,000 and TPC $76,690,000 to $67,849,133). The reductions are a result of reevaluation of lower risk/lower priority electrical workscope as well as value engineering activities to remove/eliminate the required number of substations, reduce standby power stations, and eliminate service runs which are no longer required.

b/ Directed reduction of $440,000 in FY 1996 to meet the uncosted reduction imposed by Congress.

1. Title and Location of Project:		Electrical and Utility Systems Upgrade,
2a.	Project No.: 96-D-464	
	Idaho Chemical Processing Plant,	2b. Construction Funded
	Idaho National Engineering Laboratory, Idaho	

8. Project Description, Justification and Scope

The Electrical and Utility Systems Upgrade (EUSU) project will upgrade the Idaho Chemical Processing Plant (ICPP) electrical utility system by correcting high risk life-safety, health, and environmental deficiencies. Correction of these deficiencies will reduce safety and health risks and provide safe and reliable utilities to support the ICPP mission. The ICPP electrical utility supply and distribution system provides the infrastructure necessary to support plant operations. The system is outdated, overloaded, and not in compliance with Code of Federal Regulations (CFR) for Occupational Safety and Health Act (OSHA) requirements, DOE orders, or national codes and standards. These factors, combined with plant-wide growth, have utilized the capacity of the electrical distribution system and increased the potential health and safety risks associated with long-term use and maintenance of this ICPP utility system.

The scope of this project includes upgrades to normal and standby power/electrical systems. The system upgrades, improvements, and corrections listed in order of priority, include:

a. installation of a new 13.8 kilovolt-amperes (kVA) high voltage electrical ductbank and manhole system (approximately 15,000 linear feet) to separate high-voltage power circuits from low voltage power, instrumentation, alarm, and communication circuits to correct life-safety and code compliance problems that put maintenance and construction personnel at risk;
b. upgrading, relocating, or new installation of approximately seven 13.8 kVA substations and approximately eight load centers to eliminate overloaded conditions on existing electrical distribution equipment;
c. upgrading the existing standby power network and control system and installation of one new 2,000 kVA (nominal) diesel generator (a replacement for an old, unreliable unit) to provide paralleling, synchronization, load shedding capabilities to provide reliable standby power during normal (commercial) power outages to equipment that provides for containment and control of radioactive and fissile materials, environmental monitoring, security functions, and personnel and property protection;
d. replacement of approximately two hundred 20-40 year old panelboards and associated switchgear in 15-20 existing buildings that presently present a significant fire hazard;
e. Reconfiguration of electrical service equipment in eight existing buildings to eliminate multiple electric service entrances that violate code and constitute maintenance and fire-response safety hazards.

8. Project Description, Justification and Scope (Continued)

The ICPP electrical utility system provides the electrical power infrastructure service required to support the safe operation and maintenance of the site facilities. EUSU Project feasibility studies and various operating contractor self assessment studies have shown that the electrical system at the ICPP, because of its age, use, and rapid growth in power requirements, is unsafe, unreliable, or violates CFR OSHA requirements, DOE orders, DOE-ID A-E Standards, and industry codes and standards, with significant life-safety and health implications. This utility system is also rapidly aproaching severe overload conditions. These high risk deficiencies, along with the system overload, jeopardize the ability of the electrical utility system to support the DOE mission at the ICPP to safely receive, inspect, store, and condition for disposal spent nuclear fuel and to manage radioactive wastes generated from fuel handling activities while protecting the safety of the workers, the public, and the environment.

Although the mission of the ICPP was changed in 1992 by the DOE from fuel reprocessing to waste management, electrical utility requirements are still projected to increase since the existing facilties, including the inactive fuel reprocessing facilities, will continue to use essentially the same operational quantities of electrical power to maintain safe confinement conditions until they are decommissioned. Important equipment such as heating and ventilation fans are still required to operate to maintain pressure boundaries; radiation and environmental monitoring equipment is required to operate to protect the safety and health of the workers; and a standby power system is required to operate to provide power to important equipment and instrumentation in case of loss of commercial normal power.

Upgrades to the electrical utility system thoughout the ICPP complex has been delayed for many years. The last upgrade to the electrical utility infrastructure, the Utility Replacement and Expansion Project (UREP), was completed in FY 1984 at a cost of $10,500,000. The UREP originally designed to provide the necessary electrical power requirements through 1989. This increased the electrical capacity form 4 MVA to 14 MVA. The INEEL Electrical Upgrade (FY 1993) Project installed a new 26 MVA substation to replace the overloaded 14 MVA substation. The INEEL Electrical Upgrade Project, however, did not provide any new electrical ductbanks or smaller unit substations for distribution to this power to the ICPP facilities.

8. Project Description, Justification and Scope (cont'd)

The ICPP electrical power distribution system is approaching its design capacity. In April 1992, the ICPP power usage reached its highest level (13 MVA, 93 percent of rated 14 MVA capacity) since the plant began operations, even though all fuel processing has been discontinued. The capacity of the eight existing 13.8 kV feeders in the electrical power distribution system will be overloaded or at rated capacity by 1995. These feeders are expected to become overloaded as new facilities and equipment loads are added to support the new ICPP mission. The majority of the ICPP electrical manholes presently contain a mixture of high-voltage, low-voltage power, and low-voltage non-power (communication, alarms, security) circuits without proper separation, which is prohibited by the National Electric Code (NEC) and other safety codes. Several of the existing distribution centers exceed their rated capacities during peak load periods. Several load centers have insufficient electrical current interrupting ratings which constitute a potential explosion and fire hazard. In many facilities, power is supplied to many different locations within a building representing a hazard during a fire or maintenance activities. Many of the service entrance conductors and internal distribution panels are not adequately protected against short circuit conditions. Many panels, raceways, and conductors are not installed in accordance with safe NEC required practices. Two of the four primary standby generators have connected loads several times over their continuous ratings with expected maximum demand exceeding the rated capacities. Such deficiencies represent potential safety hazards to operational and maintenance personnel. Also, many of these 40 year old facilities have deteriorating and obsolete equipment with spare parts no longer available from suppliers.

Upgrades to the ICPP electrical utility distribution system is essential to: (1) provide for safe operation of site facilities vital to the ICPP mission, (2) provide a safe work place for employees, (3) minimize risk of property damage as well as damage to the environment, and (4) provide adequate capacity to support the DOE mission.

The FY 1999 appropriation is planned to be used to continue construction work on the 13.8kv substations, loadcenters, and the stand-by power network. Construction will begin on the facility panel boards, switch gear, and service entrances.

1. Title and Location of Project: Electrical and Utility Systems Upgrade,
2a. Project No.: 96-D-464
Idaho Chemical Processing Plant, 2b. Construction Funded
Idaho National Engineering Laboratory, Idaho

9. Details of Cost Estimate

	Item Cost	Total Cost
a. Design Phase		$ 8,972
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	$ 7,252	
2. Design Management costs @ 23.7 percent of 9.a.1	1,720	
b. Construction Phase		36,196
1. Land and Land Rights	0	
2. Buildings and Improvements to Land	0	
3. Specialized Equipment	2,446	
4. Other (major utilities/comp items, specialized facilities, etc.)	0	
5. Removal cost less salvage	22,281	
6. Inspection, design and project liaison, testing, checkout and acceptance	4,693	
7. Construction Management @ 18.7 percent of 9.b	6,776	
c. Contingencies at approximately 18 percent of above costs		8,284
1. Design Phase	828	
2. Construction Phase	7,456	
d. Total line item cost (Section 11.a.1.)		$ 53,452
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirement (TEC)		$ 53,452

Note: Revised estimate based on completed design work. Escalation for each activity is calculated as the sum of the yearly allocated expenditure times the yearly compounded escalation rate of 3.0 percent.

10. Method of Performance

Design will be performed by the operating contractors Facility Engineering (design) Organization. Construction and procurement will be accomplished by fixed price contracts and subcontracts awarded on the basis of competitive bidding to the maximum extent possible. Some time and material construction contracts or force account construction work under operating contractor, direct management, may be utilized for work in areas of radiological or hazardous waste contamination. Title III inspection will be accomplished by the operating contractor.

1. Title and Location of Project: Electrical and Utility Systems Upgrade,
2a. Project No.: 96-D-464
Idaho Chemical Processing Plant, 2b. Construction Funded
Idaho National Engineering Laboratory, Idaho

11. Schedule of Project Funding and Other Related Funding Requirements

	Previous Years	FY 1997	FY 1998	FY 1999	Outyears	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs and construction						
a) Design (Section 9.a & Section 9.c.1)	$ 2,675	$ 3,152	$ 2,767	$ 401	$ 805	$9,800
b) Construction (Section 9.b & Section 9.c.2)	81	4,287	9,828	12,018	17,438	43,652
c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories	0	0	0	0	0	0
Total facility costs (Federal and Non-Federal)	$ 2 ,756	$ 7,439	$ 12,595	$ 12,419	$ 18,243	$53,452
2. Other project costs						
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	5,395	0	0	0	0	5,395
c) Decontamination and Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	83	0	0	0	0	83
e) Other ES&H costs	0	0	0	0	0	0
f) Other project costs	413	1,375	2,327	1,936	2,868	8,919
g) Total other project cost	$ 5,891	$ 1,375	$ 2,327	$ 1,936	$ 2,868	$ 14,397
Total project costs	$ 8,647	$ 8,814	$ 14,922	$ 14,355	$ 21,111	$ 67,849
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	0	0	0	0	0	0

a/Revision of costs based on Detailed Estimate to Complete prepared January 24, 1997.

1. Title and Location of Project:		Electrical and Utility Systems Upgrade,
2a.	Project No.: 96-D-464 Idaho Chemical Processing Plant, Idaho National Engineering Laboratory, Idaho	2b. Construction Funded

Agency total project costs (TPC).	$ 8,647	$ 8,814	$ 14,922	$ 14,355	$ 21,111	$ 67,849

a/Revision of costs based on Detailed Estimate to Complete prepared January 24, 1997.

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated useful life of facility--20 to 40 years)

1. Annual facility operating costs (staff, utilities, etc.)	$ 800
2. Annual facility maintenance/repair costs	750
3. Annual programmatic effort related to facility	0
4. Other Annual Costs (define in Section 12)	0
Total Annual related lifecycle costs	$ 1,550

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

a. Total project funding
1. Total facility costs
a) Line item--The TEC is based on a detailed advanced conceptual design cost estimates prepared by INEEL operating contractor cost estimators.
b) PE&D--None.
c) Operating expense funded equipment--Narrative not required.
d) Inventories--None.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

2. Other project costs
   a) R&D necessary to complete construction--None.
   b) Conceptual design--Spending in FY 1993, FY 1994, FY 1995, and FY 1996 include $5,395,000 for feasibility studies, conceptual design, advanced conceptual design, project planning, cost and schedule planning, project plan and charter, project management plan, quality assurance program plan, project design criteria, special studies, and value engineering.
   c) Decontamination and Decommissioning (D&D)--None.
   d) NEPA documentation--An Environmental Checklist/Request for Categorical Exclusion was submitted in FY 1994 ($83,000). The NEPA Categorical Exclusion (CX) was approved March 7, 1994. No further NEPA funds are anticipated for this project.
   e) Other project related costs-- $8,919,000 is to support the following activities: (1) project planning, (2) construction management planning, (3) QA/inspection planning, (4) project management for design support, construction support, testing, and startup, (5) safety analyses and reports, (6) readiness reviews for startup and operation, (7) operating tests, (8) training of operating and maintenance personnel, and (9) general technical support and (10) software development.

b. Related annual costs (estimated life of project - 20 to 40 years)
   1. Facility operating costs -- $800,000
   2. Facility maintenance and repair costs-- $750,000
   3. Programmatic operating expenses directly related to the facility--None.
   4. Capital equipment requirements for programmatic support--None.
   5. GPP or other construction related to the programmatic effort--None.
   6. Utility costs--None.
   7. Other costs--None.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project:	Security Facilities Consolidation, Idaho Chemical Processing Plant, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 95-D-456 2b.
Construction Funded		

SIGNIFICANT CHANGES

- No significant changes.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project: Construction Funded	Security Facilities Consolidation, Idaho Chemical Processing Plant, Idaho National Engineering and Environmental Laboratory, Idaho	2a. Project No.: 95-D-456 2b.

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):	. 2nd Qtr. FY 1995	2nd Qtr. FY 1995	2nd Qtr. FY 1995
3b. 45 Months	A-E Work (Titles I & II) Duration: 45 Months		45 Months
4a. Date Physical Construction Starts:	1st Qtr. FY 1996	1st Qtr. FY 1996	1st Qtr. FY 1996
4b. 2nd Qtr. FY 1999	Date Construction Ends:	2nd Qtr. FY 1999	2nd Qtr. FY 1999

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
5. Total Estimated Cost (TEC) --	$15,100	$15,100	$15,100

6. Total Project Cost (TPC) --	$18,901	$18,901	$18,901

1.	Title and Location of Project:	Security Facilities Consolidation,
2a.	Project No.: 95-D-456	
	Idaho Chemical Processing Plant,	2b.
Construction Funded		
	Idaho National Engineering and Environmental Laboratory, Idaho	

7. Financial Schedule (Federal Funds)

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
1995	$ 986	$ 0	$ 986	$ 554
1996	8,382	0	8,382	2,933
1997	4,645	0	4,645	3,837
1998	602	0	602	2,788
1999	485	0	485	4,988

8. Project Description, Justification and Scope

This project will construct new facilities and install equipment to support the Idaho Chemical Processing Plant (ICPP) security organization by resolving DOE Order compliance (DOE Orders 5632.1C and 5500.3A), inspection and evaluation, and life expectancy/life cycle replacement concerns. Construction of this project will allow deactivation of the existing security perimeter surrounding the overall ICPP site, accommodate changes to the ICPP mission, decrease plant operating costs, and support environmental remediation projects.

During the mission execution of the ICPP, Category I and II quantities of Special Nuclear Material (SNM) will be consolidated at two existing ICPP storage facilities (ICPP-651 and ICPP-749). The project will construct a new Protected Area security perimeter around ICPP-651 and provide minor modifications to existing security equipment at ICPP-749. The new perimeter will include security fencing, an intrusion detection system, lighting, closed-circuit television (CCTV) for alarm assessment, and a new access control facility with a central alarm station (CAS) and security alarm control system (SACS). The access control facility will provide space for security equipment to monitor personnel/vehicle access into the Protected Area and will be serviced with standard utilities.

8. Project Description, Justification and Scope (cont'd)

The SACS will monitor, control, and assess security alarms and video information received from new intrusion detection and CCTV systems located in the Protected Area and security systems throughout the ICPP. The SACS will consist of redundant computers, video assessment equipment (cameras, monitors, controllers, recorder, switches, fiber-optic distribution), and alarm system interfaces. Security lighting will be installed at the new Protected Area to support CCTV operations and security inspections. Security systems will be supplied with commercial, optional standby, and uninterruptible electrical power.

Classified interests located outside of the new Protected Area will be consolidated at approximately six existing facilities. Portions of these facilities will be upgraded to function as security Limited Areas in compliance with DOE Order 5632.1C.

Security requirements for three existing Protected Area access control facilities at the present ICPP security perimeter will be reduced to Property Protection Area entrances in accordance with DOE Order 5632.1C. These facilities will support required security inspections, provide radiological contamination control points, and support personnel accountability during emergency evacuations, as required by DOE Order 5500.3A.

Security facilities and equipment are required to comply with DOE Order 5632.1C. Existing security lighting, intrusion detection and assessment systems, and the SACS have reached their design life expectancies and require life cycle replacement. System manufacturers no longer support the dated equipment with service contracts or provide replacement parts. Studies, including General Accounting Office report GAO/RCED-95-183, indicate that this project will reduce security operating costs at the ICPP by approximately $3,900,000 per year and result in a project payback period of five years.

The FY 1999 funding will complete construction.

1.	Title and Location of Project:	Security Facilities Consolidation,
2a.	Project No.: 95-D-456	
	Idaho Chemical Processing Plant,	2b.
Construction Funded		
	Idaho National Engineering and Environmental Laboratory, Idaho	

9. Details of Cost Estimate

	Item Cost	Total Cost
a. Design Phase		$1,370
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	$ 1,184	
2. Design Management costs @ 15.7 percent of 9.a.1	186	
b. Construction Phase		$11,271
1. Land and Land Rights	0	
2. Buildings and Improvements to Land	1,937	
3. Specialized Equipment	5,945	
4. Other (major utilities/comp items, specialized facilities, etc)	1,817	
5. Removal costs less salvage	0	
6. Inspection, design and project liaison, testing, checkout and acceptance	745	
7. Construction Management @ 7.3 percent of 9.b	827	
c. Contingencies at approximately 19 percent of above costs		$2,459
1. Design Phase	738	
2. Construction Phase	1,721	
d. Total Line Item cost (section 11.a.1.)		$15,100
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirements (TEC)		$15,100

1.	Title and Location of Project:	Security Facilities Consolidation,
2a.	Project No.: 95-D-456	
	Idaho Chemical Processing Plant,	2b.
Construction Funded		
	Idaho National Engineering and Environmental Laboratory, Idaho	

10. Method of Performance

Design will be performed by an architectural-engineering (A-E) organization. To the extent feasible, construction and procurement shall be accomplished by fixed price contracts and subcontracts awarded on the basis of competitive bidding. Title III inspection will be accomplished by the operating contractor.

1.	Title and Location of Project:	Security Facilities Consolidation,
2a.	Project No.: 95-D-456	
	Idaho Chemical Processing Plant,	2b.
Construction Funded		
	Idaho National Engineering and Environmental Laboratory, Idaho	

11. Schedule of Project Funding and Other Related Funding Requirements

	Prior Years	FY 1996	FY 1997	FY 1998	Outyears	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a & Section 9.c.1))	$ 554	$ 250	$ 327	$ 239	$ 738	$ 2,108
b) Construction (Section 9.b & Section 9.c.2) . . .	0	2,683	3,510	2,549	4,250	12,992
c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories	0	0	0	0	0	0
Total facility cost (Federal and Non-Federal) .	$ 554	$ 2,933	$ 3,837	$ 2,788	$ 4,988	$ 15,100
2. Other project costs						
a) R&D necessary to complete project	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
b) Conceptual design costs	2,279	0	0	0	0	2,279
c) Decontamination and Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	61	0	0	0	0	61
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Section 12)	219	158	391	212	481	1,461
g) Total other project cost	$ 2,559	$ 158	$ 391	$ 212	$ 481	$ 3,801
Total project costs	$ 3,113	$ 3,091	$ 4,228	$ 3,000	$ 5,469	$ 18,901
3. LESS: Non-Agency contribution (define Federal vs non-Fed).	0	0	0	0	0	0
Agency total project costs (TPC)	$ 3,113	$ 3,091	$ 4,228	$ 3,000	$ 5,469	$ 18,901

1.	Title and Location of Project:	Security Facilities Consolidation,
2a.	Project No.: 95-D-456	
	Idaho Chemical Processing Plant,	2b.
Construction Funded		
	Idaho National Engineering and Environmental Laboratory, Idaho	

1.	Title and Location of Project:	Security Facilities Consolidation,
2a.	Project No.: 95-D-456	
	Idaho Chemical Processing Plant,	2b.
Construction Funded		
	Idaho National Engineering and Environmental Laboratory, Idaho	

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated useful life of the facility--20 to 40 years)

1. Annual facility operating costs (staff, utilities, etc.)	$ 1,020
2. Annual facility maintenance/repair costs	500
3. Annual programmatic effort related to facility	300
4. Other Annual Costs (define in Section 12)	0
Total Annual related lifecycle costs	$ 1,820

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

a. Total project funding

1. Total facility costs

a) Line item--The TEC is based on a detailed conceptual cost estimate, dated August 12, 1994. Estimate is based on conceptual drawings, vendor quotations, experience gained from prior security-related projects, and work defined by the Conceptual Design Report.

b) Plant engineering and design--None.

c) Operating expense funded equipment--None.

d) Inventories--None.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

2. Other project costs
   a) R&D necessary to complete construction--None.
   b) Conceptual design--An estimated $2,279,000 was spent on the following activities: Conceptual design, advanced conceptual design, project management plans, quality assistance program plan, feasibility studies, value engineering, and project design criteria. Conceptual design costs include costs of redesign resulting from changes to project work scope and costs for installation of security items for testing and evaluation purposes.
   c) Decontamination and decommissioning (D&D)--None.
   d) NEPA documentation--$61,000 was spent on the: Environmental checklist/categorical exclusion, air quality permits, and permits to construct.
   e) Other project related costs--An estimated $1,461,000 will be spent on the following activities: (a) testing and startup support, (b) readiness reviews for startup and operation, (c) operating tests, (d) training of operating and maintenance personnel, and (e) technical support.

b. Related annual costs
   1. Facility operating costs--include operating labor costs, $1,020,000
   2. Facility maintenance and repair costs-- $500,000
   3. Programmatic operating expenses directly related to the facility -- $300,000
   4. Capital equipment requirements for programmatic support-- None
   5. GPP or other construction related to programmatic effort--None.
   6. Other costs--None.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project: Decontamination and Waste Treatment Facility, Lawrence Livermore National Laboratory, Livermore, California	2a. Project No.: 86-D-103 PBS# OK-027 2b. Construction Funded

SIGNIFICANT CHANGES

- Decrease in total estimated cost (TEC) and total project cost (TPC), and reduced design requirements reflect latest approved baseline change.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project: Decontamination and Waste Treatment Facility, Lawrence Livermore National Laboratory, Livermore, California

2a. Project No.: 86-D-103 PBS# OK-027
2b. Construction Funded

	Preliminary Schedule	Title I Baseline	Current Baseline Schedule
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):	3rd Qtr. FY 1986	3rd Qtr. FY 1986	3rd Qtr. FY 1986
3b. A-E Work (Titles I & II) Duration:	48 months	48 months	48 months
4a. Date Physical Construction Starts:	2nd Qtr. FY 1988	2nd Qtr. FY 1998	2nd Qtr. FY 1998
4b. Date Construction Ends:	4th Qtr. FY 2002	4th Qtr. FY 2002	4th Qtr. FY 2000

	Preliminary Estimate	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC) --a/	$ 74,000	$ 68,005	$ 62,362
6. Total Project Cost (TPC) -- a/	$ 74,769	$ 68,774	$ 63,131

a/ Rebaselining has resulted in a revised scope and schedule and a $5,643,000 reduction in the TEC and TPC. The DWTF project was substantially redesigned after FY 1992. These numbers are based on the new DWTF design established after rejustification.

7. Financial Schedule (Federal Funds):

Fiscal Year	Appropriation	Adjustments	Obligations	Costs
Prior Years	$ 43,792	-27,060 b/	$ 16,732	$ 9,432
1994	10,260	-8,000 c/	2,260	74
1995	5,900	-905 d/	4,995	1,746
1996	8,885	-500 e/	8,385	7,027
1997	10,000		10,000	4,462
1998	11,250		11,250	11,183
1999	4,752		4,752	20,047
2000	2,000		2,000	5,569
2001	1,988		1,988	1,830
2002	0		0	992

b/ Reflects $25,000,000 approved FY 1990 reprogramming for the Waste Isolation Pilot Plant and an FY 1992 General Reduction of $2,060,000.

c/ Reflects prior year funds used for FY 1994 General Reduction.

d/ Use of current year funds ($905,000) for Productivity Savings.

e/ Use of prior year funds to meet uncosted offset to FY 1997 Appropriation.

1. Title and Location of Project: Decontamination and Waste Treatment Facility,
2a. Project No.: 86-D-103
Lawrence Livermore National Laboratory, 2b.
Construction Funded
Livermore, California

8. Project Description, Justification and Scope

This project has experienced a number of scope changes since its inception. The original scope in FY 1986 consisted of a Liquid Waste Processing Facility, a Decontamination Facility, an operational Support Building, mechanical/electrical utility upgrades, and site preparation. The project was located in the southeast corner of the laboratory and the Total Project Cost (TPC) was $11,700,000. Between 1987 and 1990, the location of the site was changed to the northeast corner of the laboratory, due to the potential for seismic activity. The scope was increased to include a Solid Waste Processing Building, an incinerator and burn pan, a boiler and chiller plant, a Reactive Materials Building, and a Storage Building. The TPC increased to $40,900,000. In 1990, the Lawrence Livermore National Laboratory (LLNL) Director adopted the recommendation of an internal laboratory panel to delete the incinerator and burn pan from the scope of the project due to public opposition. In 1993, a new baseline was approved which deleted the incinerator and the decontamination building, and added the Real Time Radiography Building, the Transuranic handling facility, and the upgrade of Building 494 for mixed waste process development and engineering, increasing the TPC to $74,769,000. In 1993, DOE Oakland did an Integrated Waste Management Study which evaluated the waste management needs of LLNL and concluded that the scope of the Decontamination and Waste Treatment Facility (DWTF) did not meet these needs. This resulted in the Alternative Design Review (ADR), which further evaluated the laboratory's waste management needs and compared various options for meeting these needs. The Baseline Change Proposal approved in December 1996, is based on deleting the portion of scope associated with the Mixed Waste Management Facility (MWMF). In addition, Resource Conservation and Recovery Act (RCRA) closure of the old processing areas will be required within 180 days of moving to the new facility. This revised baseline represents the final path forward for the design and construction of the facility.

The scope is described in the Construction Project Data Sheet which follows.

This project will enhance, improve, and expand hazardous waste and mixed waste management at the Laboratory through the
* construction of approximately 79,100 square feet of new, state-of-the-art facilities for decontamination and waste treatment
* processes and 5,090 square feet of modifications to an existing building. This project will provide new, centralized and integrated facilities for Hazardous Waste Management (HWM) operations that will meet the requirements for Low Hazards

1. Title and Location of Project: Decontamination and Waste Treatment Facility,
2a. Project No.: 86-D-103
Lawrence Livermore National Laboratory, 2b.
Construction Funded
Livermore, California

Category 3 Facility. The project will include the design and construction of new buildings on a nine-acre site located in the northeast sector of the Laboratory; it will share the site with existing HWM Building 693.

8. Project Description, Justification and Scope (continued)

It is anticipated that design and construction will be accomplished in seven phases to meet project schedule and funding constraints. A brief description of project scope by phase follows.

Phase 1 - Site improvements. This phase includes debris removal, excavation, grading, trenching, electrical service, underground utilities, partial paving, curb and gutter, and sidewalks.

* Phase 2 - MWMF. This phase has been deleted.

* Phase 3A - DWTF. This phase consists of construction of the Truck Bay, Solid Waste Processing Building (SWPB),
* Chemical Exchange Warehouse, High Curie Waste Storage, Radwaste Storage Building, and modifications
* to existing Building 280.

* Phase 3B - DWTF. This phase coinsists of construction of the Liquid Waste Processing Building (LWPB), Reactive
* Materials Building and Classified Waste Storage Building.

* Phase 4 - DWTF. This phase consists of construction of the Operational Support Building.

Phase 5 - Final site improvements. This phase consists of all remaining site work for the project, such as final grading, paving, parking facility, fencing, landscaping, and exterior lighting.

* Phase 6 - RCRA Closure of existing facilities.

The proposed DWTF at LLNL will continue to meet the goals of LLNL's waste management program while significantly enhancing LLNL's waste management capabilities. Enhanced capabilities provided by the revised scope include the following: repackaging of radioactive, mixed and TRU wastes, decontamination and size reduction, treatment of mixed, reactive, sewer diversion wastes and proper storage of radioactive, mixed, hazardous, and high-curie waste.

8. Project Description, Justification and Scope (continued)

- Designing mitigative and preventive features to meet current requirements of DOE Orders and LLNL Health and Safety standards in accordance with the hazardous classification.

- Consolidating the liquid waste operation into a centralized hazardous waste management facility which will optimize manpower and facility utilization.

In 1990, the RCRA land disposal restrictions became effective, prohibiting the land disposal of untreated hazardous and mixed radioactive wastes. DOE disposal facilities (such as the Nevada Test Site) that previously accepted untreated mixed wastes were no longer permitted to accept such wastes. The proposed DWTF will be capable of treating a portion of land disposal restricted mixed and hazardous wastes.

a. Liquid Waste Processing Building

The existing Liquid Waste Facility (514) is an old engine test building constructed in the 1940's for use by the U.S. Navy. The facility has been modified to process radioactive and hazardous liquid wastes through a single process line. Some of the present equipment and much of the present piping is deteriorated and requires expensive repair to maintain operations. The present location, which is separated from the other Hazardous Waste Management facilities, has insufficient space to allow for the additional expansion required to provide complying facilities. Due to the limited treatment technology employed, and excessive volume of end product that is produced it is difficult to solidify for disposal. The present radioactive and mixed wastes solidification building does not meet the ventilation, contamination, and confinement requirements of DOE Order 6430.1A. Continuing maintenance and improvement has not alleviated the situation. In addition to the liquid waste processing systems, the new building will house the analytical laboratory, maintenance shop, and a silver recovery facility. The advantages of the facility include:

- Siting the new facility in a location which meets the seismic requirement of RCRA and the State.

- Providing sufficient treatment to assure meeting the new restrictive discharge limits established by regulators.

8. Project Description, Justification and Scope (continued)

- Providing more efficient technology to minimize disposal volume to comply with environmental regulations and DOE Orders.

- Providing close capture ventilation and spill containment systems to comply with the environmental regulations which limit air emissions and prohibit liquid discharges to the environment.

b. Waste Receiving, Classification, and Solid Waste Processing Building

Receiving and Classification Area

Receiving and classification is currently being performed in an open shed with limited space resulting in many containers being stored outdoors and the remainder receiving only minimal weather protection. There are no facilities to properly segregate incompatible wastes, and nothing to contain spills or container ruptures as required by RCRA, California hazardous wastes regulations, and DOE Orders. An open area is still used. Although spills are contained, they would mix with rainwater. The new facility will provide the space necessary to receive, segregate, and store chemical and radioactive containers of all types and sizes until the proper analysis and classification is completed and a determination made on the treatment, packaging, and shipping methods required to properly prepare them for ultimate safe disposal. A work station will be included in the facility for maintaining incoming and outgoing shipping documentation and inputting data to the central computer through a terminal.

Solid Waste Processing Area

1. Title and Location of Project: Decontamination and Waste Treatment Facility,
2a. Project No.: 86-D-103
Lawrence Livermore National Laboratory, 2b.
Construction Funded
Livermore, California

Radioactive solid waste processing consists of packaging and compacting of low-level waste and transuranic (TRU) waste and is presently done in the Building 612, Dry Waste Facility which is seismically deficient and cannot meet the ALARA (As Low As Reasonably Achievable) requirements of DOE Order 6430.1A. Specific advantages of the new facility are:

- Meeting the Uniform Building Code (UBC) and LLNL seismic requirements.

8. Project Description, Justification and Scope (continued)

- Increasing processing capability with safer handling and control.
- Provides TRU size reduction, packaging, and container inspection capability.
- Designing mitigative and preventive features to meet current requirements of DOE Orders and LLNL Health and Safety standards in accordance with the hazard classification.

Container Washing Area

A container washing area will be included as part of the Waste Receiving, Classification, and Solid Waste Processing Building to provide adequate facilities for cleaning the non-radioactive waste containers and permit their reuse. This facility will assure compliance with the waste compatibility standards and container washing and rinsing requirements of RCRA.

c. Reactive Materials Building

Because the DWTF had to be relocated to the northeast corner of the laboratory, the existing Reactive Materials Building 614 cannot be used. A new facility will have to be constructed at the new DWTF site to store reactive waste and to house the process equipment which allows for the safe reaction and neutralization of small quantities of a large variety of highly reactive exotic gases and chemicals that offsite commercial disposers will not accept.

8. Project Description, Justification and Scope (continued)

d. Storage Buildings

Radioactive Waste Storage Area

Radioactive and mixed wastes stored at the present Hazardous Waste Management site are stored outside exposing them to the weather. The radioactive waste storage area is required at the new DWTF in order to provide safe and compliant storage for radioactive and mixed wastes.

Clean Storage Area

It was intended to modify existing Building 612 to provide an enclosed storage area for clean containers, treatment chemicals, and supplies. Now that the DWTF site has been relocated away from the existing Hazardous Waste Management site, a new building must be constructed to provide the necessary protection needed to maintain new waste storage containers in good condition prior to use and to assure safe and proper storage for treatment chemicals and supplies.

* Chemical Exchange Warehouse

* The Chemical Exchange Warehouse (CHEW) will house the cost cutting program which allows for programmatic chemical
* users to share chemicals and not continue to purchase chemicals that are not needed, i.e., if an experiment only requires a
* small quantity of a chemical, they may find the chemical at the CHEW and avoid purchasing a new container full. Excess
* chemicals from a program are turned into the CHEW for reassignment as necessary.
*
* Building 280 Modifications
*
* Building 280 will house the TRU, TRU mixed, and high curie waste.

8. Project Description, Justification and Scope (continued)

e. Operational Support Building

This facility will provide the following:

- o Central support for the four major operational functions; waste receiving and shipping, mixed aqueous waste treatment, solid Low-Level Waste (LLW) processing and storage.

- o Bring together the supervisory, administrative, technical support, and operational personnel currently housed in dispersed locations.

- o House the Hazardous Waste Management computer system for tracking hazardous waste and providing on-line
* information on waste material during emergency conditions and centralized library.

- o Provide a training room to meet the requirements of 40 CFR 264.16 for training of personnel in handling hazardous waste.

f. Standby Generator

The standby generator is necessary to supply standby electrical power to critical facilities and operations in the DWTF during and following an earthquake. It must be invulnerable to damage to assure sustained electric power to equipment in the moderate hazard facilities which must continue to operate, i.e., ventilation, fire protection, and alarm systems, and also allow the safe shut-down of critical hazardous waste process systems.

1. Title and Location of Project: Decontamination and Waste Treatment Facility,
2a. Project No.: 86-D-103
Lawrence Livermore National Laboratory, 2b.
Construction Funded
Livermore, California

9. Detail of Cost Estimate a/

	Item Cost	Total Cost
a. Design Phase		$ 13,730
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	$ 7,094	
2. Design Management costs @ 93.5% of 9.a.1	6,636	
b. Construction Phase		41,420
1. Land and Land Rights	0	
2. Buildings & Improvements to Land (LWPB (Process Bldg.)-37,600 sf at $238/sf; SWPB (Process (Bldg.)-11,300 sf at $205/sf; Bldg. 280 (Storage-Mod)-5,090 sf at $99/sf; Op. Support-10,500 sf at $132/sf; Class. Waste Storage-1,800 sf at $102/sf; RAD Waste Storage-10,000 sf at $77/sf; Truck Bay-3,800 sf at $64/sf; CHEW-4,100 sf at $134/sf	30,132	
3. Specialized Equipment	862	
4. Other (major utilities/comp items, specialized facilities, etc.)	6,647	
5. Removal cost less salvage	2,601	
6. Inspection, design and project liaison, testing, checkout and acceptance	0	
7. Construction Management @2.8% of 9.b	1,178	
c. Contingencies at approximately 13 percent of above costs		7,212
1. Design Phase	712	
2. Construction Phase	6,500	
d. Total line item cost (Section 11.a.1.(a))		$ 62,362
e. LESS: Non-Agency contribution (Define in Section 12)		0
f. Total Agency Requirement (TEC)		$ 62,362

1. Title and Location of Project:	Decontamination and Waste Treatment Facility,	
2a.	Project No.: 86-D-103	
Lawrence Livermore National Laboratory,	2b.	
Construction Funded		
Livermore, California		

_____

a/ The Engineering, Design and Inspection costs include the costs from the completed original design which cannot be used. These costs are unrecoverable.

10. Method of Performance

Current estimate based on re-baseline cost estimate. Escalation is applied according to LLNL Cost Estimating Procedures and LLNL approved escalation rates.

Contracting arrangements are as follows:

Design will be on the basis of a negotiated architect-engineer contract. Major equipment requiring long-lead time will be purchased by LLNL early in the project on the basis of competitive bidding. To the extent feasible, construction will be accomplished by a fixed-price contract awarded on the basis of competitive bidding. Minor architect-engineering work and activation will be performed by LLNL forces.

1. Title and Location of Project: Decontamination and Waste Treatment Facility,
2a. Project No.: 86-D-103
Lawrence Livermore National Laboratory, 2b.
Construction Funded
Livermore, California

11. Schedule of Project Funding and Other Related Funding Requirements

	Previous Years	FY 1997	FY 1998	FY 1999	Outyears	TOTAL
a. Total project costs (Agency Requirements)						
1. Total facility costs						
(a) Line item (Section 9.a & Section 9.c.1)	$ 18,279	$4,462	$11,183	$ 20,047	$ 8,391	$ 62,362
(b) Construction (Section 9.b & Section 9.c.2)	0	0	0	0	0	0
(c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
(d) Operating expense funded equipment	0	0	0	0	0	0
(e) Inventories	0	0	0	0	0	0
Total facility costs (Federal and Non-Federal)	$ 18,279	$4,462	$11,183	$ 20,047	$ 8,391	$ 62,362
2. Other project costs						
(a) R&D necessary to complete project	$ 454	$ 0	$ 0	$ 0	$ 0	$ 454
(b) Conceptual design costs	315	0	0	0	0	315
(c) Decontamination & Decommissioning (D&D)	0	0	0	0	0	0
(d) NEPA documentation costs	0	0	0	0	0	0
(e) Other ES&H costs	0	0	0	0	0	0
(f) Other project related costs (Define in Section 12) a/	0	0	0	0	0	0
(g) Total other project costs	$ 769	$ 0	$ 0	$ 0	$ 0	$ 769
Total project costs	$19,048	$4,462	$11,183	$ 20,047	$ 8,391	$63,131
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	0	0	0	0	0	0
Agency total project costs (TPC)	$19,048	$4,462	$11,183	$ 20,047	$ 8,391	$63,131

11. Schedule of Project Funding and Other Related Funding Requirements (continued)

b. Related Lifecycle costs (estimated life of project--40 years)

1. Annual facility operating costs (staff, utilities, etc.)	$ 1,155
2. Annual facility maintenance/repair costs	1,026
3. Annual programmatic effort related to facility	4,800
4. Other Annual Costs (define in Section 12)	600
Total Annual related lifecycle costs	$ 7,581

a/ National Environmental Policy Act and Environmental Permitting costs are included in construction line item. Decontamination and Decommissioning will be funded by another project.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

a. Total project funding
   1. Total facility costs
      (a) Line Item--No narrative required.
      (b) PE&D--None.
      (c) Operating expense funded equipment--None.
      (d) Inventories--None.

   2. Other project costs
      (a) R&D necessary to complete construction--Funding of $454,000 in this classification represents R&D costs required to develop project and seismic criteria.
      (b) Conceptual design--Total funding of $315,000 in this classification represents the conceptual design cost and other studies determined to be necessary.
      (c) Decontamination & Decommissioning (D&D)--None.
      (d) NEPA documentation--None.
      (e) Other project related costs--None.

b. Related annual costs
   1. Facility operating costs--Based on projected space recharge of $10.00 per square foot -- operating costs of the facility in 1999 are estimated to be $1,155,000 per year including escalation. The funds for these cost are a normal part of the past and current programs.
   2. Facility maintenance and repair costs--Labor is estimated at 7.6 FTEs to support the operations at approximately $135,000 per year for a total annual cost of $1,026,000. The funds for these people are a normal part of the past and current programs.
   3. Programmatic operating expenses directly related to the facility--This estimate is for 30 Hazardous Waste Management operating and support personnel at $4,050,000 in FY 2000, and for an estimated annual cost of $750,000 for

chemicals, drums, pumps, spare parts, equipment replacement, etc. The operating funds for these people are a normal part of the past and current programs.

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (continued)

4. Capital equipment requirements for programmatic support--This is an average annual estimate which includes both the small items needed for continuous operation of the facility and the occasional large item (over $200,000) which cannot be described at this time, but can be predicted as needed to maintain technical excellence in efforts conducted in the facility ($400,000).
5. GPP or other construction related to programmatic effort--Initially no GPP costs are anticipated, but to keep abreast of technology, presently undefined alterations will likely be required in the future ($200,000).
6. Utility costs--Included in the space recharge itemized in Facility operating costs.
7. Other costs--None.