Non-Defense Site Acceleration Completion

Proposed Appropriation Language

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for non-defense environmental management site acceleration completion activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, $170,875,000, to remain available until expended.

Note.—A regular 2003 appropriation for this account had not been enacted at the time the budget was prepared; therefore, thisaccount is operating under a continuing resolution (P.L. 107–229, as amended). The amounts included for 2003 in this budget reflect the Administration's 2003 policy proposals.

Explanation of Change

This appropriation reflects EM's new budget structure supporting the budget formulation and execution of the accelerated risk reduction and cleanup initiative. The new budget structure focuses resources on risk reduction and closure and clearly delineates how resources will be utilized (i.e., for direct cleanup activities or for other activities only indirectly related to cleanup activities.) In the FY 2004 budget, this appropriation consolidates into a single appropriation funding for direct non-defense related accelerated cleanup and risk reduction activities.

Non-Defense Site Acceleration Completion

Program Mission

The Environmental Management (EM) program is responsible for managing and addressing the environmental legacy resulting from the production of nuclear weapons and nuclear research. The nuclear weapons complex generated waste, pollution, and contamination which pose unique problems, including unprecedented volumes of contaminated soil and water, radiological hazards from special nuclear material, and a vast number of contaminated structures. Factories, laboratories, and thousands of square miles of land were devoted to the enterprise of producing tens of thousands of nuclear weapons in support of national security. Much of this massive infrastructure, waste, and contamination still exists, much of which is now the responsibility of the EM program to manage and remediate. EM's responsibilities include facilities and areas at 114 geographic sites. These sites are located in 31 states and one territory and occupy an area equal to that of Rhode Island and Delaware combined -- or about two million acres.

Environmental Management manages and remediates sites used for civilian, energy research, and non-defense related programs under this appropriation.

The FY 2004 request for the Non-Defense Site Acceleration Completion appropriation is $170,875,000, a decrease of $3,294,000, from the comparable FY 2003 Request of $167,581,000.

Program Strategic Performance Goals

Environmental Management is aggressively transitioning from a program based on risk management and containment to one focused on accelerated risk reduction and cleanup. Performance measurement is integral to the success of the EM program in achieving its accelerated risk reduction and cleanup objectives. Environmental Management's Program Strategic Performance Goals which reflects the new EM focus on accelerated risk reduction and cleanup are:

1. Complete geographic site cleanup at 89 of the 114 cleanup sites by the end of FY 2006. Continue cleanup at the remaining sites, including the five largest sites, scheduled for completion in the post 2006 time frame.

Performance Indicators:

- Number of geographic sites completed;
- Number of release sites remediated;
- Number of nuclear facilities completed;
- Number of radioactive facilities completed;
- Number of industrial facility completed;
- Number of material access areas eliminated.

2. Safely and expeditiously dispose of waste generated during past and current DOE activities. Continue shipment of transuranic waste for disposal at the Waste Isolation Pilot Plant.

Performance Indicators:

- Liquid waste eliminated (millions of gallons);
- Number of liquid tanks closed;
- Canisters of high-level waste packaged for final disposition;
- Transuranic waste shipped for disposal at Waste Isolation Pilot Plant (m^3);
- Low-level waste/mixed low-level waste disposed (m^3).

3. Stabilize nuclear material and spent nuclear fuel by producing safer chemical and/or physical forms of the material, and reduce the level of potential risk to personnel from radiation exposure and to the environment from contamination.

Performance Indicators:

- Certified DOE storage/treatment/disposal 3013 containers (or equivalent) of plutonium metal or oxide packaged ready for long-term storage;
- Certified containers of enriched uranium packaged ready for long-term storage;
- Plutonium or uranium residues packaged for disposition (kg of bulk material);
- Spent Nuclear Fuel packaged for final disposition (metric tonnes of heavy metal);
- Depleted and other Uranium packaged for disposition (metric tonnes).

Annual Performance Results and Targets [a]

	FY 2002 Actuals	FY 2003 Estimate	FY 2004 Estimate
Non-Defense Site Acceleration Completion			
High-Level Waste Packaged for Final Disposition -Number of Containers	13	0	0
Transuranic Waste Shipped for Disposal at WIPP (m^3)	0	11	0
Low-Level and Mixed Low-Level Waste Disposed (m^3)	476	91	429
Radioactive Facility Completions - Number of Facilities	3	3	2
Industrial Facility Completions - Number of Facilities	1	0	0
Remediation Complete - Number of Release Sites	16	24	30

[a] This chart provides a consistent set of performance measures for the EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Funding Profile

(dollars in thousands)

	FY 2002 Comparable Appropriation	FY 2003 Request	FY 2004 Request	$ Change	% Change
Non-Defense Site Acceleration Completion					
2006 Accelerated Completions	110,430	53,979	48,677	-5,302	-9.8%
2012 Accelerated Completions	80,692	111,826	119,750	7,924	7.1%
2035 Accelerated Completions	3,400	1,776	2,448	672	37.8%
Total, Non-Defense Site Acceleration Completion	194,522	167,581	170,875	3,294	2.0%

Public Law Authorization:

Public Law 95-91, “Department of Energy Organization Act (1977)”

Public Law 103-62, “Government Performance and Results Act of 1993"

Public Law 106-377, “The Energy and Water Development Appropriations Act, 2001"

Public Law 106-398, “National Defense Authorization Act for Fiscal Year 2001"

Public Law 107-66, “The Energy and Water Development Appropriations Act, 2002"

Funding by Site

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
Chicago					
Argonne National Laboratory - East	4,083	3,239	1,890	-1,349	-41.6%
Argonne National Laboratory - West	538	410	0	-410	-100.0%
Brookhaven National Laboratory	28,194	35,650	38,840	3,190	8.9%
Chicago Operations Office	1,682	325	0	-325	-100.0%
Princeton Plasma Physics Laboratory	0	127	126	-1	-0.8%
Total, Chicago Operations Office	34,497	39,751	40,856	1,105	2.8%
Idaho					
Grand Junction	3,400	1,316	2,000	684	52.0%
Oak Ridge					
Oak Ridge Operations Office	34,900	0	0	0	0.0%
Ohio					
Ohio Field Office	22,457	0	0	0	0.0%
West Valley Demonstration Project	67,543	95,000	99,558	4,558	4.8%
Total, Ohio Field Office	90,000	95,000	99,558	4,558	4.8%

	(dollars in thousands)				
	FY 2002	FY 2003	FY 2004	$ Change	% Change
Various Locations					
Energy Technology Engineering Center . .	17,005	18,174	18,467	293	1.6%
General Atomics	298	200	0	-200	-100.0%
Inhalation Toxicology Laboratory	1,391	1,072	483	-589	-54.9%
Lawrence Berkeley National Laboratory . .	3,482	3,187	3,272	85	2.7%
Laboratory for Energy-Related Health Research	5,864	4,798	3,318	-1,480	-30.8%
Los Alamos National Laboratory	0	460	448	-12	-2.6%
Oakland Operations Office	1,081	589	57	-532	-90.3%
Stanford Linear Accelerator Center	2,604	3,034	2,416	-618	-20.4%
Total, Various Locations	31,725	31,514	28,461	-3,053	-9.7%
Total, Non-Defense Site Acceleration Completion	194,522	167,581	170,875	3,294	2.0%

2006 Accelerated Completions

Mission Supporting Goals and Measures

The Non-Defense Site Acceleration, 2006 Accelerated Completions account provides funding for completing cleanup and closing down facilities contaminated as a result of nuclear energy research and development. This account includes all geographic sites with an Accelerated Cleanup Plan closure date of 2006 or earlier (e.g., Stanford Linear Accelerator Center). In addition, this account provides funding for EM sites where overall site cleanup will not be completed by 2006 but non-defense cleanup projects within a site (e.g., soil contamination remediated, all waste shipped off-site) will be completed by 2006.

Subprogram Goals

Accelerating risk reduction and cleanup is the central focus of the EM program. Funding in this account is focused on completing non-defense risk reduction and cleanup activities at sites with a closure date of 2006 or earlier. Additionally, this account supports non-defense cleanup projects within sites where the overall cleanup will not be completed by 2006 but specific projects will be completed by 2006.

Since submittal of the FY 2003 Congressional Budget, EM has made substantial progress towards defining the accelerating risk reduction and cleanup strategies at each of its sites. Letters of Intent have been signed with many of our state and Environmental Protection Agency regulatory authorities. These Letters of Intent lay the foundation to move forward with the implementation of EM's accelerated risk reduction and cleanup strategies. Using the Letters of Intent as a basis, Performance Management Plans were then developed. These Performance Management Plans articulate the strategies, key milestones, and commitments that demonstrate sites are accelerating risk reduction and cleanup. From the Performance Management Plans, resource loaded project baselines will be developed that EM will use to manage and track risk reduction and real cleanup progress at its sites.

Performance Indicators

Performance measurement is integral to the success of the EM program in achieving its accelerated risk reduction and cleanup goals. Performance measurement of the EM program consists of "corporate" measures that provide a comprehensive programmatic perspective on progress as well as site and project-specific milestones which are used to demonstrate whether a project and site are on track to achieve its agreed to expectations and schedule. In October 2002, the Assistant Secretary for Environmental Management established a new set of corporate performance measures for the program. The corporate measures are quantitative and focus on the completion of sites, the interim steps necessary to complete sites, and the accomplishment of risk-reduction activities. These new measures, which are under strict EM Headquarters change control, will enable EM to comprehensively track progress against its accelerated risk reduction and closure objectives. In addition, these corporate measures are tracked in the context of the life-cycle total necessary to complete each site as well as the EM program as a whole.

Environmental Management is currently in the process of establishing site resource-loaded baselines which are expected to be completed during FY 2003. The establishment of these site baselines will enable the program to more meaningfully monitor and evaluate actual performance against the new accelerated baselines. Environmental Management believes significant strides have been made in its ability to monitor and demonstrate performance through the establishment of new corporate measures, implementation of a strict configuration management system, and the expected completion of new accelerated site baselines in FY 2003. Environmental Management acknowledges that the program needs to continue to improve upon the progress made to date to further develop project management techniques and associated cost and schedule performance measures. This will enable EM to demonstrate more clearly performance in meeting the program goals of accelerated risk reduction and site cleanup, thereby reducing life-cycle costs.

The EM corporate performance measures are:

- Number of Containers of Plutonium Metal/Oxide Stabilized and Packaged for Long-Term Storage;
- Kilograms of Enriched Uranium Stabilized and Packaged for Long-Term Storage;
- Number of Material Access Areas Eliminated;
- Kilograms Bulk of Plutonium Residues Stabilized, Packaged and Disposed;
- Cubic Meters of Transuranic Waste Stabilized, Packaged and Disposed;
- Kilograms of Depleted Uranium Packaged and Disposed;
- Metric Tonnes of Spent Nuclear Fuel Packaged for Disposal;
- Canisters of High-Level Waste Processed, Packaged, and Disposed;
- Gallons of Liquid Waste Stabilized and Disposed;
- Number of Liquid Waste Tanks Closed;
- Number of EM Geographic Sites Eliminated;
- Cubic Meters of Low-Level/Low-Level Mixed Waste Packaged and Disposed;
- Number of Nuclear Buildings/Facilities Deactivated, Decommissioned, Demolished, or Transferred;
- Number of Radioactive Buildings/Facilities Deactivated, Decommissioned, Dismantled, or Transferred;
- Number of Industrial Buildings/Facilities Deactivated, Decommissioned, Dismantled, or Transferred; and
- Number of Release Sites Evaluated, Remediated, and Closed Out.

The corporate measures will be complemented by project-specific measures consistent with the site Performance Management Plans and Letters of Intent. Those project-specific measures are typically milestones that signify that project and site progress is sufficient to meet established schedules. Detailed performance measure and milestone information can be found in the site details that follow this program overview.

Annual Performance Results and Targets [a]

	FY 2002 Actuals	FY 2003 Estimate	FY 2004 Estimate
2006 Accelerated Completions			
High-Level Waste Packaged for Final Disposition - Number of Containers	13	0	0
Low-Level and Mixed Low-Level Waste Disposed (m^3)	1	35	39
Radioactive Facility Completions - Number of Facilities	1	0	1
Remediation Complete - Number of Release Sites	16	24	27

Funding by Site

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
Chicago					
Argonne National Laboratory - East	4,060	2,856	1,542	-1,314	-46.0%
Argonne National Laboratory - West	538	410	0	-410	-100.0%
Brookhaven National Laboratory	26,954	34,370	37,520	3,150	9.2%
Chicago Operations Office	1,682	325	0	-325	-100.0%
Princeton Plasma Physics Laboratory	0	127	126	-1	-0.8%
Total, Chicago Operations Office	33,234	38,088	39,188	1,100	2.9%
Oak Ridge					
Oak Ridge Operations Office	34,900	0	0	0	0.0%
Ohio					
Ohio Field Office	22,457	0	0	0	0.0%
West Valley Demonstration Project	6,200	3,600	0	-3,600	-100.0%
Total, Ohio Field Office	28,657	3,600	0	-3,600	-100.0%
Various Locations					
General Atomics	298	200	0	-200	-100.0%
Inhalation Toxicology Laboratory	1,391	1,072	483	-589	-54.9%
Lawrence Berkeley National Laboratory	3,482	3,187	3,272	85	2.7%
Laboratory for Energy-Related Health Research	5,864	4,798	3,318	-1,480	-30.8%
Stanford Linear Accelerator Center	2,604	3,034	2,416	-618	-20.4%
Total, Various Locations	13,639	12,291	9,489	-2,802	-22.8%
Total, Non-Defense Site Acceleration Completion, 2006 Accelerated Completions	110,430	53,979	48,677	-5,302	-9.8%

[a] This chart provides a consistent set of performance measures for the EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Funding Schedule

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
CH-ANLE-0030/Soil and Water Remediation-Argonne National Laboratory-East	4,060	2,856	1,542	-1,314	-46.0%
CH-ANLW-0030/Soil and Water Remediation-Argonne National Laboratory-West	538	410	0	-410	-100.0%
CH-BRNL-0030/Soil and Water Remediation-Brookhaven National Laboratory	18,060	25,429	30,241	4,812	18.9%
CH-BRNL-0040/Nuclear Facility Decontamination and Decommissioning-Brookhaven Graphite Research Reactor	8,894	8,941	7,279	-1,662	-18.6%
CH-OPS-0900/Pre-2004 Completions	1,682	325	0	-325	-100.0%
CH-PPPL-0030/Soil and Water Remediation-Princeton Site A/B	0	127	126	-1	-0.8%
OR-0900-N/Pre-2004 Completions (Non-Defense)	34,900	0	0	0	0.0%
OH-OPS-0900N / Pre-2004 Completions (Non-Defense)	22,457	0	0	0	0.0%
OH-WV-0012/Spent Nuclear Fuel Stabilization and Disposition-West Valley	6,200	3,600	0	-3,600	-100.0%
VL-GA-0012/Spent Nuclear Fuel Stabilization and Disposition-General Atomics	298	200	0	-200	-100.0%
VL-LBNL-0030/Soil and Water Remediation-Lawrence Berkeley National Laboratory	3,482	3,187	3,272	85	2.7%
VL-LEHR-0040/Nuclear Facility Decontamination and Decommissioning-Laboratory for Energy-Related Health Research	5,864	4,798	3,318	-1,480	-30.8%
VL-SLAC-0030/Soil and Water Remediation-Stanford Linear Accelerator Center	2,604	3,034	2,416	-618	-20.4%
VL-ITL-0030/Soil and Water Remediation-Inhalation Toxicology Laboratory	1,391	1,072	483	-589	-54.9%
Total, Non-Defense Site Acceleration Completion, 2006 Accelerated Completions	110,430	53,979	48,677	-5,302	-9.8%

Detailed Program Justification

(dollars in thousands)

FY 2002	FY 2003	FY 2004

CH-ANLE-0030 / Soil and Water Remediation-Argonne National Laboratory -East (life-cycle estimate $30,691K) **4,060** **2,856** **1,542**

Contamination of groundwater, sediment, and soils has occurred at Argonne National Laboratory-East as a result of past laboratory operations and spills. Contaminants of concern include volatile organic compounds, petroleum hydrocarbons, metals, polychlorinated biphenyl compounds, and a variety of radioisotopes. This PBS involves investigation and remedial activities at the Argonne National Laboratory-East to reduce risk to human health and the environment at the release sites and thus comply with corrective action requirements of the Resource Conservation and Recovery Act Part B permit issued by the Illinois Environmental Protection Agency. The remaining Resource Conservation Recovery Act solid waste management units/release sites are scheduled to be completed in FY 2004. However, residual contamination will remain at several areas of the Argonne National Laboratory-East site, which will require continued monitoring and/or remediation system operation.

The end-state of this project will be reached when the remaining Resource Conservation and Recovery Act solid waste management units/release sites are remediated, and the remediation system operation and maintenance activities have been integrated into the site monitoring and surveillance program conducted by the landlord (Office of Science) at Argonne National Laboratory-East. Continuing operation and maintenance activities for the remediation systems are expected to be transferred to the landlord after FY 2004. (Former PBS CH-ANLERA)

In FY 2004, the following activities are planned to support the accelerated cleanup of Argonne National Laboratory.

- Operation and maintenance of treatment and hydraulic control systems, will be conducted.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Remediation Complete (Number of Release Sites)	4	4	3	446	446	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Completed closure of the Resource Conservation and Recovery Act mixed-waste storage concrete pad (FY 2002).
- Completed remedial work at the Suspect Solid Waste Landfill and the 570 Area Unlined Holding Pond and requests for No Further Action submitted to the Illinois Environmental Protection Agency (FY 2002).
- Completed demolition of the 317 Area Deep Vault (September 2002).
- Completed remedial work for the 320 Area Shooting Range (FY 2002); and request for a No Further Action approval will be submitted to the Illinois Environmental Protection Agency (January 2003).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- Complete remediation at 330 yard and submit a No Further Action approval request to the Illinois Environmental Protection Agency (July 2003).
- Complete lime sludge recycling (September 2003).
- Complete all remedial activities at the Argonne National Laboratory-East (September 2004).

CH-ANLW-0030 / Soil and Water Remediation-Argonne National Laboratory-West (life-cycle estimate $7,939K) **538** **410** **0**

Past operations of the Experimental Breeder Reactor II and associated facilities at Argonne National Laboratory-West have resulted in contaminated surface soils and sediments. Primary contaminants of concern include cesium-137 and heavy metals. This PBS involves remediation activities at the Argonne National Laboratory-West Waste Area Group 9 to assess and reduce risk, as well as to comply with the Federal Facilities Agreement/Consent Order. All planned soil remediation activities have been completed (Geographic site completion was achieved in FY 2001) except for continuing operation and maintenance activities (related to the phytoremediation activities of vegetation planting and harvesting), monitoring, and verification sampling. These continuing operation and maintenance activities are expected to be completed in FY 2003.

The end-state of this project is completion of phytoremediation operation and maintenance activities (i.e., vegetation harvesting), and verification sampling in FY 2003. The tasks of monitoring and maintaining restricted areas, and enforcing institutional controls are expected to be transferred to the landlord (Office of Nuclear Energy) after FY 2004. (Former PBS CH-ANLWRA)

- No planned activities and no funds are requested for FY 2004, because the operation and maintenance activities for soil remediation (phytoremediation) will be completed in FY 2003.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Remediation Complete (Number of Release Sites)	0	0	0	37	37	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Continued phytoremediation activities of planting and harvesting (FY 2002).
- Conduct verification sampling of soil at release sites where phytoremediation has been implemented to ensure all remediation goals regarding removal of contaminants form the soil have been met, and prepare verification sampling report and submit to regulatory agencies (September 2003).
- Dispose of all harvested plant matter from phytoremediation harvesting activities (September 2003).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

CH-BRNL-0030 / Soil and Water Remediation-Brookhaven National Laboratory (life-cycle estimate $227,144K) **18,060** **25,429** **30,241**

Historical practices and discharges, as well as past spills, have resulted in the contamination of groundwater, sediments, and soils at Brookhaven National Laboratory. Off-site groundwater is contaminated with volatile organic compounds and onsite groundwater is contaminated with volatile organic compounds and the radionuclides tritium and strontium-90. Historical discharges from Brookhaven National Laboratory's Sewage Treatment Plant have resulted in elevated levels of metals, primarily mercury, and radionuclides (e.g. cesium-137), in the Peconic River sediments both on and off-site. Some soils at Brookhaven National Laboratory are contaminated with radionuclides (primarily cesium-137 and stronium-90) and chemicals (primarily mercury) due to historical practices and spills. This PBS addresses the accelerated cleanup of these contaminated areas based on known or potential risks to human health and the environment at the Brookhaven National Laboratory. These areas are being remediated under a Comprehensive Environmental Response, Compensation, and Liability Act Interagency Agreement between DOE, the United States Environmental Protection Agency, and the New York State Department of Environmental Conservation. Strategic Initiative 1 in the Brookhaven National Laboratory Performance Management Plan (August 2002) accelerates the completion of the groundwater and soils cleanup projects by one year from FY 2006 to FY 2005. Strategic Initiative 2 accelerates Peconic River Remedy Selection and Cleanup with completion in FY 2005. Strategic Initiative 5 is DOE's commitment to plan and implement an effective monitoring and remediation system operation program at Brookhaven National Laboratory. These initiatives accelerate Brookhaven National Laboratory soil and groundwater projects and also provide for a risk-based remedy selection process for the Peconic River cleanup. In combination, these initiatives will accelerate the completion of the Brookhaven National Laboratory environmental cleanup program by over one year (from FY 2006 to FY 2005) and will support completion of all EM cleanup at Brookhaven (including the Brookhaven Graphite Research Reactor and High Flux Beam Reactor) by 2008.

The projected end-state of this project is that 17 groundwater treatment systems will be built and operating and that all required non-reactor facility decontamination and decommissioning soil cleanup and Peconic River remediation will be complete by the end of FY 2005. Continuing activities such as groundwater monitoring and groundwater treatment system operations and maintenance would be underway and expected to transfer to the landlord (Office of Science) in FY 2006. FY 2004 activities, including the construction of several off-site groundwater treatment systems, the initiation of soil cleanup at the old Hazardous Waste Management Facility, and the disposition of remaining Chemical Holes soils and legacy wastes, support Strategic Initiative 1, the acceleration of groundwater and soil cleanup at Brookhaven National Laboratory. The initiation of Peconic River Cleanup in FY 2004 supports Strategic Initiative 2 to complete cleanup by FY 2005. Continuing site wide monitoring and reporting activities in FY 2004 support Strategic Initiative 5, DOE's commitment to plan and implement an effective monitoring and remediation system operation program at Brookhaven National Laboratory. (Former PBS CH-BRNLRA)

In FY 2004, the following activities are planned to support the accelerated cleanup of Brookhaven National Laboratory.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- In support of Strategic Initiative 1, Accelerate Groundwater and Soils Cleanup: Complete construction of North Street/North Street East, Industrial Park East, Airport/Long Island Power Authority, and the Operable Unit VI ethylene dibromide off-site groundwater treatment systems. Two additional groundwater treatment systems remain to be constructed.
- Also in support of Strategic Initiative 1, complete decontamination and decommissioning of the buildings and initiate significant soil cleanup at the old Hazardous Waste Management Facility, and complete Meadow Marsh and Ash Pit remediation and dispose of remaining Chemical Holes soils and wastes and EM Liability Wastes.
- In support of Strategic Initiative 2, Accelerate Peconic River Remedy Selection and Cleanup: Initiate Peconic River cleanup, in accordance with the signed Record of Decision.
- In support of Strategic Initiative 5: Continue site wide monitoring, data management and reporting activities.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Remediation Complete (Number of Release Sites)	1	0	0	67	75	89%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- For Strategic Initiative 1, completed the design and construction of the Western South Boundary (FY 2002).
- Completed cleanup of contaminated soil and piping from the Building 650 Sump and Outfall and disposed of all wastes off-site (FY 2002).
- Also in support of Strategic Initiative 1, completed characterization of the Hazardous Waste Management Facility buildings (FY 2002), and submit Hazardous Waste Management Facility decontamination and decommissioning close out report to Environmental Protection Agency/Department of Environmental Conservation (December 2003).
- For Strategic Initiative 2, complete cleanup of the Sewage Treatment Plant (February 2003).
- Submit Draft Peconic River Record of Decision to regulators in support of Strategic Initiative 2 (March 2003).
- Complete strontium-90 Groundwater Treatment System Pilot Study (September 2003).
- Complete disposition of radioactive sources from the former Hazardous Waste Management Facility (September 2003).
- Complete construction of the Airport/Long Island Power Authority Groundwater Treatment System (March 2004).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

CH-BRNL-0040 / Nuclear Facility Decontamination and Decommissioning-Brookhaven Graphite Research Reactor (life-cycle estimate $49,144K) **8,894** **8,941** **7,279**

The Brookhaven Graphite Research Reactor was the world's first research reactor constructed solely for the peaceful use of atomic energy. The Brookhaven Graphite Research Reactor operated from 1950 to 1969. During the initial deactivation of the Brookhaven Graphite Research Reactor in 1969-1972, the spent reactor fuel was removed from the reactor and shipped to DOE's Savannah River Site. Also, the water within the spent fuel canal was pumped to Brookhaven National Laboratory's Waste Concentration Facility for storage and processing. These actions removed the majority (more than 95%) of the radioactive material from the facility. However, the reactor core contains residual contamination and the spent fuel canal and cooing air ducts are contaminated with fusion products, such as strontium-90 and cesium-137. This PBS scope characterizes, stabilizes, decontaminates and decommissions the Brookhaven Graphite Research Reactor to remove or isolate sources of contamination and reduce any potential risk to human health and the environment. The Brookhaven Graphite Research Reactor is an Area of Concern under the Brookhaven National Laboratory Comprehensive Environmental Response, Compensation, and Liability Act Interagency Agreement. The acceleration of the end-state decision and decontamination and decommissioning of the Brookhaven Graphite Research Reactor is identified as Strategic Initiative 3 in the Brookhaven National Laboratory Performance Management Plan (August 2002). This initiative accelerates the end-state determination and Record of Decision for the Brookhaven Graphite Research Reactor by up to one year (from FY 2005 to FY 2004), allowing completion of decontamination and decommissioning by the end of FY 2005, and contributing to completion of all EM scope at Brookhaven (including the High Flux Beam Reactor) by FY 2008.

The end-state of this project will be decided with the approval of the Record of Decision for the Brookhaven Graphite Research Reactor. The acceleration of the end-state decision and decontamination and decommissioning of the Brookhaven Graphite Research Reactor with completion in FY 2005. Continuing activities, such as access controls and surveillance and maintenance for the Brookhaven Graphite Research Reactor are expected to begin and be transferred to the landlord (Office of Science) in FY 2006. This project was recently reassessed and work tasks resequenced to reduce technical, programmatic, and environmental risks, thereby increasing confidence that the project will be completed in a safe, cost-effective, and timely manner. Prior Brookhaven National Laboratory baselines (March 2000 and August 2001) described the Brookhaven Graphite Research Reactor cleanup work as a series of independent studies (i.e. Engineering Evaluation/Cost Analyses) and removal actions with no end-state goal identified. Corrective actions resulting from the assessment have integrated parts of the project scope to ensure a comprehensive and efficient regulatory strategy; accelerated the end-state decision and Record of Decision by nearly one year; and corrected scope omissions, including lack of a comprehensive risk assessment and supporting engineering information for end-state discussions. (Former PBS CH-BRNLDD)

In FY 2004, the following activities are planned to support the accelerated cleanup of Brookhaven National Laboratory.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- In support of Strategic Initiative 3, Accelerate End-State Decision and Decontamination and Decommissioning of the Brookhaven Graphite Research Reactor, Filter and Liner removal from the Below Ground Ducts will continue.
- The Canal and Water Treatment House removal will be started (if required based on Brookhaven Graphite Research Reactor end-state decision).
- A Record of Decision will be prepared and submitted for regulatory review.
- Removal of Building 701 equipment and systems will continue.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Radioactive Facility Completions (Number of Facilities)	1	0	1	4	10	40%
Remediation Complete (Number of Release Sites)	0	0	0	1	1	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- In support of Strategic Initiative 3, shipped Above Ground Ducts for disposal (FY 2002).
- Removed and shipped Below Ground Duct Coolers (FY 2002).
- Complete Building-701/702 soils characterization (March 2003).
- Begin removal of Below Ground Duct Filters and Liners (April 2003).
- Submit Brookhaven Graphite Research Reactor Draft Record of Decision to the regulators to determine final end-state for Brookhaven Graphite Research Reactor (January 2004).
- Complete removal of Below Ground Piping (April 2004).

CH-OPS-0900 / Pre-2004 Completions (life-cycle estimate $175,192K) **1,682 325 0**

This program activity supported the cleanup program at all Chicago site pre-2004 project completions (Ames Laboratory, and Princeton Plasma Physics Laboratory Site C/D, as well as the FY 2001 transfer of waste management activities to the landlord at Argonne National Laboratory-East, Princeton, and Brookhaven National Laboratory and previously for Argonne National Laboratory-West). Also completed an evaluation for Argonne National Laboratory-West Remote Treatment Facility in FY 2002. It has also provided support to the Congressional/Departmental Priorities such as United Negro College Fund Second Nature/Environmental Stewardship. No new budget authority for FY 2004 and beyond is required. (Former PBSs CH-AMESWO, CH-PPPLRA, CH-ANLEWO, CH-ANLWWO, CH-BRNLBYW, CHANLWRA, CH-BRNLWO, CH-ANLWRTF, CH-COPS)

- No planned activities and no funds are requested in FY 2004.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
LLW/MLLW Disposed (m^3)	0	0	0	537	537	100%
Remediation Complete (Number of Release Sites)	0	0	0	30	30	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- There are no milestones associated with this PBS.

CH-PPPL-0030 / Soil and Water Remediation-Princeton Site A/B (life-cycle estimate $936K) **0** **127** **126**

Potentially Responsible Party payments are required to cover DOE's responsibility, as a previous lessee, for a portion of the characterization/remediation costs for cleanup of soil and groundwater volatile organic compounds contamination at Princeton University's Site A/B, in accordance with the New Jersey Department of Environmental Protection/Princeton University Memorandum of Understanding and DOE/Princeton University Memorandum of Agreement. Potentially Responsible Party payments began in 1995, and are expected to continue through FY 2004 and are expected to be transferred to the landlord (Office of Science) after FY 2004. (Former PBS CH-CH00PUAB)

In FY 2004, the following activities are planned to support the Princeton Site A/B.

- Payment of DOE's annual portion, as a Potentially Responsible Party, for characterization and remediation costs.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
No metrics associated with this PBS						

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Payment of DOE's annual portion, as a Potentially Responsible Party, for characterization and remediation costs (FY 2002/2003/2004).

OR-0900-N / Pre-2004 Completions (Non-Defense) (life-cycle estimate $610,052K) **34,900** **0** **0**

This activity includes the completion of remedial actions and waste disposal in FY 2002 at the Weldon Spring Site in Weldon Spring, Missouri. The work addresses the completion of all physical work for remedial actions, demolitions of all remaining buildings, treatment of all surface and groundwater, placement of all waste in the onsite disposal facility and capping of the cell, and final restoration of the site. The only remaining work in FY 2003 and FY 2004 is the completion of regulatory and contractual closeout documentation using carryover funds. Post-closeout activities will be conducted by the Office of Legacy Management (Grand Junction Office). (Former PBSs OR-715 and OR-775)

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- There are no activities or funding requested for FY 2004.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Industrial Facility Completions (Number of Facilities)	0	0	0	3	3	100%
Remediation Complete (Number of Release Sites)	2	0	0	23	25	92%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Completed Remedial Action Program (FY 2002).
- Completed pilot testing of the groundwater interceptor trench (FY 2002).
- Completed dismantling and disposition of the Quarry Water Treatment Plant (FY 2002).
- Completed final site restoration, grading, and seeding (FY 2002).
- Completed construction of the disposal facility and final cell cap and completed trichloroethylene treatment of groundwater (FY 2002).

OH-OPS-0900-N / Pre-2004 Completions (Non-Defense)
(life-cycle estimate $396,094K) **22,457** **0** **0**

This project contains scope for one Ohio project which was completed prior to FY 2004, at West Valley. The West Valley Demonstration Project High-Level Waste vitrification and high activity waste processing project involved the design, construction, and processing operations associated with solidifying approximately 2,200 m^3 of liquid high-level waste and sludge into a solid, glass form. A total of 275 disposal ready high-level waste canisters were produced as a result of vitrification operations. The end-state for this project, including vitrification processing operations, flushing and final shutdown of the systems, vessels and equipment was accomplished in September 2002. (Former PBSs OH-WV-01)

- There are no planned activities or funding requested for FY 2004.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
HLW Packaged for Final Disposition (Number of Containers)	13	0	0	275	275	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Completed vitrification processing operations and melter shutdown at West Valley (FY 2002).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

OH-WV-0012 / Spent Nuclear Fuel Stabilization and Disposition-West Valley (life-cycle estimate $29,425K) **6,200** **3,600** **0**

The West Valley Demonstration Project Spent Nuclear Fuel project encompasses activities required to safely manage and store 125 Spent Nuclear Fuel assemblies, prepare them for shipment to the Idaho National Engineering and Environmental Laboratory per a joint agreement between the states of New York and Idaho, and deactivate/decontaminate the Fuel Receiving and Storage facility where the assemblies have been stored since the 1960's. Completing these efforts will reduce environmental and worker risk at the site and help position the Project to support initiation of a closure contract for Project decommissioning planned to begin in 2005, consistent with the West Valley Demonstration Project accelerated plan for completion.

This project will be considered complete once the Spent Nuclear Fuel has been shipped to Idaho National Engineering and Environmental Laboratory and the Fuel Receiving and Storage facility has been deactivated/decontaminated. The Spent Nuclear Fuel has been consolidated and prepared for shipment by being placed into two Nuclear Regulatory Commission certified casks which in turn were loaded on rail cars that are awaiting shipment to Idaho National Engineering and Environmental Laboratory. The original shipment planned for the early part of FY 2002 was postponed and the West Valley Demonstration Project is currently preparing for shipment to Idaho National Engineering and Environmental Laboratory by the end of FY 2004. After the Spent Nuclear Fuel was loaded into the casks, deactivation and decontamination efforts began in the Fuel Receiving and Storage facility. Decontamination efforts have mostly focused on removing debris and equipment from the storage pool. Initial draining and treatment of the pool water has begun. Final draining of the pool and decontamination of the facility will be complete in FY 2003, consistent with the site's overall accelerated risk reduction and clean-up goals. No new budget authority is requested in FY 2004 for this PBS. (Former PBS OH-WV-03).

In FY 2004, the following activities are planned to support the accelerated cleanup of West Valley.

- Prior year funds will remain uncosted, but committed, to supporting the shipment of West Valley Demonstration Project Spent Nuclear Fuel to the Idaho National Engineering and Environmental Laboratory by the end of FY 2004 consistent with the West Valley Demonstration Project accelerated plan for completion. With the planned completion of the Spent Nuclear Fuel shipment by the end of FY 2004, this PBS will be completed.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
No metrics associated with this PBS						

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Spent Nuclear Fuel was prepared for shipment to the Idaho National Engineering and Environmental Laboratory (FY 2002).
- Decontamination and deactivation operations of the Fuel Receiving and Storage facility were initiated (FY 2002).
- Complete deactivation and decontamination of the Fuel Receiving and Storage facility (June 2003).
- Complete shipment of Spent Nuclear Fuel to the Idaho National Engineering and Environmental Laboratory (September 2004).

VL-GA-0012 / Spent Nuclear Fuel Stabilization and Disposition-General Atomics (life-cycle estimate $14,941K) . . **298** **200** **0**

The General Atomic Hot Cell Facility is a privately-owned, Nuclear Regulatory Commission-licensed nuclear facility in LaJolla, California. In the 1950's, DOE contracted with General Atomics for various research programs. In the early 1990's, the DOE work was completed leaving the contaminated Hot Cell Facility to be decontaminated and decommissioned. This project consisted of the decontamination and decommissioning of the General Atomics Hot Cell Facility and cleanup of the associated yard area and disposition of stored DOE owned irradiated fuel materials. Hot Cell Facility decommissioning activities were completed in 2001. Remaining scope consists of shipment of the irradiated fuel materials to the Idaho National Environmental and Engineering Laboratory for interim storage in FY 2003. Shipment of the irradiated fuel materials will complete all EM project scope at the site. Project end-state is regulatory release to unrestricted use for the Hot Cell Facility yard area and the irradiated fuel materials storage area. (Former PBS OK-012)

- Project closure is scheduled for FY 2003 with no planned activities in FY 2004.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
SNF Packaged for Final Disposition (MTHM)	0	0	0	1	1	100%
LLW/MLLW Disposed (m^3)	0	0	0	1,716	1,716	100%
Remediation Complete (Number of Release Sites)	0	0	0	2	2	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Continued surveillance and maintenance of the irradiated fuel materials (FY 2002).
- Ship Irradiated Fuel Materials (September 2003).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

VL-LBNL-0030 / Soil and Water Remediation-Lawrence Berkeley National Laboratory (life-cycle estimate $34,366K) . **3,482** **3,187** **3,272**

The mission of this PBS is to investigate and clean up past releases of hazardous and radioactive waste in soil and groundwater that may have occurred at Lawrence Berkeley National Laboratory and are under the purview of the Resource Conservation and Recovery Act. Lawrence Berkeley National Laboratory has completed its Resource Conservation and Recovery Act Facility Investigation for 185 release sites to determine the amount and extent of contamination. Pilot testing will be completed in FY 2004 to evaluate different remedial systems for use at Lawrence Berkeley National Laboratory. If successful, the results will be utilized to recommend full-scale remediation systems that will be constructed in FY 2005 and FY 2006. The end-state of this project will be the completion of the final remediation systems in FY 2006 and the transfer of long term surveillance and maintenance responsibilities to the site landlord, the Office of Science.

Lawrence Berkeley will meet the Environmental Management site end-state by reducing contaminants to acceptable levels or eliminating contamination in soil and completing construction to meet remediation objectives in groundwater. Operation of treatment systems will be transferred to the site landlord, the Office of Science, after completion of construction in FY 2006. The site landlord will continue surveillance and monitoring of the site. (Former PBS OK-003)

In FY 2004, the following activities are planned to support the accelerated cleanup of Lawrence Berkeley National Laboratory.

- Pilot scale testing of remedial systems will be concluded.
- The Corrective Measures Study will be completed and submitted for modification into the Resource Conservation and Recovery Act permit.
- The Corrective Measures Study will recommend clean up remedies for the remaining contaminated areas at Lawrence Berkeley National Laboratory.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Remediation Complete (Number of Release Sites)	0	17	21	174	185	94%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- The Ecological and Human Health Risk Assessments were submitted for regulatory review (FY 2002).
- Pilot tests were initiated, which included operation of the thermally enhanced Volatile Organic Compound removal project in the Old Town Area and construction of a soil flushing pilot test (FY 2002).
- A Comprehensive Environmental Response, Compensation, and Liability Act evaluation was concluded and Environmental Protection Agency determined Superfund listing was not warranted which results in less reporting requirements for this cleanup work (FY 2002).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- Interim Corrective Measure operations continued to prevent off-site migration and removal of source areas at Building-75 area (FY 2002).
- Groundwater collection trenches were constructed at Building-25 and Building-58 (FY 2002).
- Complete interim corrective measure at Building-75 to remove and dispose of polychlorinated biphenyl contaminated soil (May 2003).
- Complete corrective measures: In-situ chemical oxidation pilot test at Building 5IL, Electro-Osmosis pilot test at Building-64, Monitored Natural Attenuation pilot test at Building-51B, Hydrogen/Oxygen releasing compounds pilot test at Building-69, and In-situ soil flushing pilot test at Building-7(September 2003).
- Complete Pilot Test Construction (March 2004).
- Complete Corrective Measures Studies (May 2004).

VL-LEHR-0040 / Nuclear Facility Decontamination and Decommissioning-Laboratory for Energy-Related Health Research (life-cycle estimate $40,979K) **5,864 4,798 3,318**

The Laboratory for Energy-Related Health Research conducted research from the 1950's through 1970's on the effects of radiation on humans by exposing dogs to various radionuclides. These research activities resulted in the chemical and radioactive contamination of the site and various facilities. This PBS involves the cleanup of the contamination and includes: 1) decontamination and decommissioning of radioactive contaminated facilities; 2) removal of on-site radioactive sources and wastes; 3) remediation and/or removal of soil contamination (radiological and/or hazardous) at Southwest Trenches, Radium and Strontium Treatment Systems, Domestic Septic Tanks, outdoor dog pens (Western and Eastern Dog Pens)and DOE Disposal Box; 4) closure or removal of underground tanks; 5) verification of cleanup completion; and 6) post closure monitoring as required by the Comprehensive Environmental Response, Compensation and Liability Act for National Priority List sites.

The cleaned facilities and land will be returned to the University of California, Davis for continued use as an educational/research facility. To date, five Removal Actions have been completed: a time-critical removal action in the DOE Disposal Box area, and non-time-critical removal actions in the South West Trenches, the Radium and Strontium Treatment Systems, the Western Dog Pens areas, and the Domestic Septic Systems. These removal actions have eliminated the major risks at the site. Most of the legacy waste, including sources, and waste generated from the Southwest Trenches, DOE Box Area, and the Radium and Strontium Treatment Systems has been disposed off-site. Since 1998, 5050 yd^3 of low-level waste, 250 yd^3 of hazardous waste and 1 yd^3 of mixed waste have been disposed off-site.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

The acceleration plan for cleanup of the site will result in completion by the end of FY 2005. The remaining cleanup work includes: disposal of all remaining waste generated from the Western Dog Pens and Domestic Septic Systems (about 3000 yd^3); disposal or reusing South West Trench overburden soil (about 400 yd^3); disposal of remaining sanitary waste (about 50 yd^3); disposal of contaminated equipments and miscellaneous waste (about 50 yd^3); disposal of thorium source; remediating the Eastern Dog Pens (i.e., excavate the contaminated media or consumate an agreement for University of California, Davis to incorporate the Eastern Dog Pen area into its landfill cap), transferring title of DOE-owned buildings to the University of California, Davis; and delisting DOE areas from the National Priority List. (Former PBS OK-010)

In FY 2004, the following activities are planned to support the accelerated cleanup of Laboratory for Energy-Related Health Research.

- Complete surveys for the Geriatrics Building and Cobalt-60 Field Waste area confirming that no further remediation is necessary, resulting in the transfer title of all buildings at the site under DOE ownership to the University of California-Davis.
- Complete the transfer of the remaining physical property to the other DOE sites.
- Complete the cleanup of the Eastern Dog Pen Area and disposition the remaining hazardous and radioactive waste off-site.
- Complete Comprehensive Environmental Response, Compensation, and Liability Act documentation, e.g., the Feasibility Study and the Record of Decision.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
LLW/MLLW Disposed (m^3)	1	0	4	948	948	100%
Industrial Facility Completions (Number of Facilities)	0	0	0	1	1	100%
Remediation Complete (Number of Release Sites)	6	3	1	17	17	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Low-level waste from remediation of the Western Dog Pens was shipped and disposed off-site (1500 yd^3) (FY 2002).
- Removal actions were completed for the Domestic Septic Systems and Western Dog Pens area (FY 2002).
- A 500 Ci Cobalt source was removed from the irradiator and disposed off-site (FY 2002).
- Complete disposal of mixed waste (June 2004).
- Complete removal action of the Eastern Dog Pen Area (September 2004).
- Complete verification surveys of Geriatrics Building, Animal Hospital, and Cobalt-60 Waste Field (September 2004).
- Complete disposal of low-level waste and equipment (September 2004).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

VL-SLAC-0030 / Soil and Water Remediation-Stanford Linear Accelerator Center (life-cycle estimate $20,934K) **2,604** **3,034** **2,416**

This PBS involves the cleanup of legacy contamination resulting from physics research mission operations over the past several decades at the Stanford Linear Accelerator Center. The EM mission includes the identification of chemical contaminants in soil and groundwater, and developing and implementing remedies to address these environmental concerns using Comprehensive Environmental Response, Compensation, and Liability Act technical guidance. The principle contaminants of concern include polychlorinated biphenyls, lead, and volatile organic compounds in soils and groundwater. There are no radiologically contaminated areas or contaminated buildings that require remediation at Stanford Linear Accelerator Center. Preliminary Site Assessments have identified 18 release sites to date requiring remediation. There are four areas remaining to be evaluated to determine if contaminants are present and remedial actions are necessary.

The strategy to accelerate the completion of the project includes tasks which are being worked in parallel rather than in series, whenever possible. Installing and testing treatment systems initially, as presumptive remedies, are occurring at the same time as the remedial investigation/feasibility study reports are processed through the approval cycle. Soils contaminated with polychlorinated biphenyls are characterized to determine the extent of the contamination and the work is carried out through an interim removal action, before reports are submitted for approval to regulators. This will lower the overall risk at the site, and thus, reduce the number of potential issues with the proposed remedial solution. The EM end-state is to return long term surveillance and maintenance activities for remediated site area to the Office of Science by the end of FY 2006. (Former PBS OK-005)

In FY 2004, the following activities are planned to support the accelerated cleanup of Stanford Linear Accelerator Center.

- Complete removal actions at the Former Hazardous Waste Storage Area and the Plating Shop Area.
- Construct engineering measures to control contaminated runoff at the IR-6 Drainage Channel.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Remediation Complete (Number of Release Sites)	3	0	2	18	18	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Installation of the hydraulic containment system at the Former Solvent Underground Storage Tank as an interim removal action (FY 2002).
- Beneficial Use of Groundwater Study has been developed and submitted to the Regional Water Quality Control Board as evidence that the groundwater does not meet the physical characteristics as a drinking water source (FY 2002).
- Completed Removal Action of Substation 505 (FY 2002).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- Completed Removal Action of Substation 512 (FY 2002).
- Construct engineering controls at the IR6 Drainage Channel (September 2004).
- Complete removal action at the Former Hazardous Waste Storage Area (September 2004).
- Complete removal action at the Plating Shop (September 2004).

VL-ITL-0030 / Soil and Water Remediation-Inhalation Toxicology Laboratory (life-cycle estimate $9,159K) **1,391** **1,072** **483**

Remedial activities for contaminated soil and groundwater at the site were completed in 1997. Currently, Environmental Management at the Inhalation Toxicology Laboratory is comprised of two projects: (a) groundwater monitoring and reporting and (b) legacy waste disposal. The groundwater monitoring is at two sites, the Sewage Lagoon Site and the Diesel Spill Site, pursuant to conditions imposed by the State. Monitoring is to continue until no contamination is observed above regulatory standards for four consecutive semiannual sampling events for the Lagoon Site and eight consecutive quarterly sampling events for the Diesel Site. Legacy low-level radioactive waste and hazardous waste, is being identified and disposed of as funding permits. Labs and facilities that are contaminated from DOE projects have been vacated and are in the process of being surveyed, decontaminated, and released for other research purposes. All legacy waste is expected to be disposed of by the end of FY 2005. Once legacy waste is disposed, remaining monitoring activities if any, may be turned over to the site landlord at the end of FY 2006. (Former PBS AL-005)

In FY 2004, the following activities are planned to support the cleanup of the Inhalation Toxicology Laboratory.

- Continue to monitor groundwater at the Diesel and Lagoon sites and submit required reports to the State. Inhalation Toxicology Laboratory will cleanup four of the 30 remaining laboratories and dispose of 33m^3 of low-level waste and one metric ton of hazardous waste.
- Cleanup of eight rooms and three analytical chemistry labs will be completed.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
LLW/MLLW Disposed (m^3)	0	35	35	70	105	67%
Remediation Complete (Number of Release Sites)	0	0	0	9	9	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Continued groundwater monitoring and reporting at the Diesel and Sewage Lagoon sites pursuant to regulatory requirements, successfully negotiated a renewed Lagoon Site discharge permit for five years that reduces the required chemical analyses from 17 to only four chemicals, performed all sampling, monitoring, and report writing, cleared 70 labs and storage rooms of legacy low-level radioactive and hazardous waste and surveyed, decontaminated and released then for general use (FY 2002).
- Inhalation Toxicology Laboratory will continue groundwater monitoring and reporting at the Diesel and Sewage Lagoon Sites, dispose of 231m^3 of low-level waste at the Nevada Test Site and three metric tonnes of hazardous waste through a commercial licensed chemical disposal company, and clear eight more laboratories of legacy low-level radioactive and hazardous waste (September 2003).
- Conduct groundwater monitoring and reporting (September 2003/September 2004).
- Dispose of legacy low-level waste (September 2003/September 2004).
- Conduct groundwater monitoring and reporting (September 2004).
- Dispose of low-level waste (September 2004).

Total, Non-Defense Site Acceleration Completion, 2006 Accelerated Completions	**110,430**	**53,979**	**48,677**

Explanation of Funding Changes

FY 2004 vs. FY 2003 ($000)

CH-ANLE-0030 / Soil and Water Remediation-Argonne National Laboratory -East

- Decrease in funding reflects the completion of remedial activities in FY 2003. Only continuing operation and maintenance activities will be conducted in FY 2004 . . . . . -1,314

	FY 2004 vs. FY 2003 ($000)
CH-ANLW-0030 / Soil and Water Remediation-Argonne National Laboratory-West	
■ Decrease in funding reflects the completion of phytoremediation, and associated operation and maintenance activities in FY 2003	-410
CH-BRNL-0030 / Soil and Water Remediation-Brookhaven National Laboratory	
■ Increase in funding reflects acceleration of groundwater, sediment, and soil remediation in support of Strategic Initiatives 1, 2 and 5 in the Brookhaven National Laboratory Performance Management Plan.	4,812
CH-BRNL-0040 / Nuclear Facility Decontamination and Decommissioning-Brookhaven Graphite Research Reactor	
■ Decrease in funding reflects the completion of several tasks in FY 2003 including the Building-701/702 soils characterization work	-1,662
CH-OPS-0900 / Pre-2004 Completions	
■ Decrease in funding reflects the completion of various Chicago project activities in FY 2003.	-325
CH-PPPL-0030 / Soil and Water Remediation-Princeton Site A/B	
■ No significant change.	-1
OH-WV-0012 / Spent Nuclear Fuel Stabilization and Disposition-West Valley	
■ The West Valley Demonstration Project Spent Nuclear Fuel is expected to be shipped to Idaho National Engineering and Environmental Laboratory in FY 2004 using prior year funds	-3,600
VL-GA-0012 / Spent Nuclear Fuel Stabilization and Disposition-General Atomics	
■ EM mission completed in FY 2003	-200
VL-LBNL-0030 / Soil and Water Remediation-Lawrence Berkeley National Laboratory	
■ Increase provides for implementation of pilot scale testing in FY 2004 of remedial action systems identified in the Resource Conservation and Recovery Act Corrective Measures Study	85
VL-LEHR-0040 / Nuclear Facility Decontamination and Decommissioning-Laboratory for Energy-Related Health Research	
■ Decrease due to the majority of on-the-ground cleanup and waste management activities being completed	-1,480
VL-SLAC-0030 / Soil and Water Remediation-Stanford Linear Accelerator Center	
■ Decrease is a result of fewer remedial actions planned as work nears completion	-618

	FY 2004 vs. FY 2003 ($000)
VL-ITL-0030 / Soil and Water Remediation-Inhalation Toxicology Laboratory	
■ The reduction in funding results from redirecting EM funds to support schedules at major sites having accelerated cleanup agreements	-589
Total Funding Change, Non-Defense Site Acceleration Completion, 2006 Accelerated Completions	-5,302

2012 Accelerated Completions

Mission Supporting Goals and Measures

The Non-Defense Site Acceleration, 2012 Accelerated Completions account provides funding for completing cleanup and closing down facilities contaminated as a result of nuclear energy research and development. This account includes all geographic sites with an Accelerated Cleanup Plan closure date of 2007 through 2012 (e.g., Brookhaven National Laboratory, West Valley Demonstration Project). In addition, this account provides funding for EM sites where overall site cleanup will not be completed by 2012 but cleanup projects within a site (e.g., soil contamination remediated, all waste shipped off-site) will be completed by 2012.

Subprogram Goals

Accelerating risk reduction and cleanup is the central focus of the EM program. Funding in this account is focused on completing non-defense risk reduction and cleanup activities at sites with a closure date of 2012 or earlier. Additionally, this account supports cleanup projects at other sites where overall cleanup will not be completed by 2012 but specific projects will be completed by 2012.

Since submittal of the FY 2003 Congressional Budget, EM has made substantial progress towards defining the accelerating risk reduction and cleanup strategies at each of its sites. Letters of Intent have been signed with many of our state and Environmental Protection Agency regulatory authorities. These Letters of Intent lay the foundation to move forward with the implementation of EM's accelerated risk reduction and cleanup strategies. Using the Letters of Intent as a basis, Performance Management Plans were then developed. These Performance Management Plans articulate the strategies, key milestones, and commitments that demonstrate sites are accelerating risk reduction and cleanup. From the Performance Management Plans, resource loaded project baselines will be developed that EM will use to manage and track risk reduction and real cleanup progress at its sites.

Performance Indicators

Performance measurement is integral to the success of the EM program in achieving its accelerated risk reduction and cleanup goals. Performance measurement of the EM program consists of "corporate" measures that provide a comprehensive programmatic perspective on progress as well as site and project-specific milestones which are used to demonstrate whether a project and site are on track to achieve its agreed to expectations and schedule. In October 2002, the Assistant Secretary for Environmental Management established a new set of corporate performance measures for the program. The corporate measures are quantitative and focus on the completion of sites, the interim steps necessary to complete sites, and the accomplishment of risk-reduction activities. These new measures, which are under strict EM Headquarters change control, will enable EM to comprehensively track progress against its accelerated risk reduction and closure objectives. In addition, these corporate measures are tracked in the context of the life-cycle total necessary to complete each site as well as the EM program as a whole.

Environmental Management is currently in the process of establishing site resource-loaded baselines which are expected to be completed during FY 2003. The establishment of these site baselines will enable the program to more meaningfully monitor and evaluate actual performance against the new accelerated baselines. Environmental Management believes significant strides have been made in its ability to monitor and demonstrate performance through the establishment of new corporate measures, implementation of a strict configuration management system, and the expected completion of new accelerated site baselines in FY 2003. Environmental Management acknowledges that the program needs to continue to improve upon the progress made to date to further develop project management techniques and associated cost and schedule performance measures. This will enable EM to demonstrate more clearly performance in meeting the program goals of accelerated risk reduction and site cleanup, thereby reducing life-cycle costs.

The EM corporate performance measures are:

- Number of Containers of Plutonium Metal/Oxide Stabilized and Packaged for Long-Term Storage;
- Kilograms of Enriched Uranium Stabilized and Packaged for Long-Term Storage;
- Number of Material Access Areas Eliminated;
- Kilograms Bulk of Plutonium Residues Stabilized, Packaged and Disposed;
- Cubic Meters of Transuranic Waste Stabilized, Packaged and Disposed;
- Kilograms of Depleted Uranium Packaged and Disposed;
- Metric Tonnes of Spent Nuclear Fuel Packaged for Disposal;
- Canisters of High-Level Waste Processed, Packaged, and Disposed;
- Gallons of Liquid Waste Stabilized and Disposed;
- Number of Liquid Waste Tanks Closed;
- Number of EM Geographic Sites Eliminated;
- Cubic Meters of Low-Level/Low-Level Mixed Waste Packaged and Disposed;
- Number of Nuclear Buildings/Facilities Deactivated, Decommissioned, Demolished, or Transferred;
- Number of Radioactive Buildings/Facilities Deactivated, Decommissioned, Dismantled, or Transferred;
- Number of Industrial Buildings/Facilities Deactivated, Decommissioned, Dismantled, or Transferred; and
- Number of Release Sites Evaluated, Remediated, and Closed Out.

The corporate measures will be complemented by project-specific measures consistent with the site Performance Management Plans and Letters of Intent. Those project-specific measures are typically milestones that signify that project and site progress is sufficient to meet established schedules. Detailed performance measure and milestone information can be found in the site details that follow this program overview.

Annual Performance Results and Targets [a]

	FY 2002 Actuals	FY 2003 Estimate	FY 2004 Estimate
2012 Accelerated Completions			
Transuranic Waste Shipped for Disposal at WIPP (m^3)	0	11	0
Low-Level and Mixed Low-Level Waste Disposed (m^3)	475	56	390
Radioactive Facility Completions - Number of Facilities	2	3	1
Industrial Facility Completions - Number of Facilities	1	0	0
Remediation Complete - Number of Release Sites	0	0	3

Funding by Site

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
Chicago					
Argonne National Laboratory - East	23	383	348	-35	-9.1%
Brookhaven National Laboratory	1,240	1,280	1,320	40	3.1%
Total, Chicago Operations Office	1,263	1,663	1,668	5	0.3%
Ohio					
West Valley Demonstration Project	61,343	91,400	99,558	8,158	8.9%
Various Locations					
Energy Technology Engineering Center	17,005	18,174	18,467	293	1.6%
Oakland Operations Office	1,081	589	57	-532	-90.3%
Total, Various Locations	18,086	18,763	18,524	-239	-1.3%
Total, Non-Defense Site Acceleration Completion, 2012 Accelerated Completions	80,692	111,826	119,750	7,924	7.1%

[a] This chart provides a consistent set of performance measures for the EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Funding Schedule

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
CH-ANLE-0040/Nuclear Facility Decontamination and Decommissioning-Argonne National Laboratory-East	23	383	348	-35	-9.1%
CH-BRNL-0041/Nuclear Facility Decontamination and Decommissioning- High Flux Beam Reactor	1,240	1,280	1,320	40	3.1%
OH-WV-0013/Solid Waste Stabilization and Disposition-West Valley	25,550	32,585	39,800	7,215	22.1%
OH-WV-0040/Nuclear Facility Decontamination and Decommissioning- West Valley	35,793	58,815	59,758	943	1.6%
VL-ETEC-0040/Nuclear Facility Decontamination and Decommissioning-Energy Technology Engineering Center	17,005	18,174	18,467	293	1.6%
VL-FOO-0013B-N/Solid Waste Stabilization and Disposition-Oakland Sites-2012 (Non-Defense)	1,081	589	57	-532	-90.3%
Total, Non-Defense Site Acceleration Completion, 2012 Accelerated Completions	80,692	111,826	119,750	7,924	7.1%

Detailed Program Justification

(dollars in thousands)

FY 2002	FY 2003	FY 2004

CH-ANLE-0040 / Nuclear Facility Decontamination and Decommissioning - Argonne National Laboratory-East (life-cycle estimate $28,066K) **23** **383** **348**

Historic operations at Argonne National Laboratory-East have focused on reactor research, and led to the construction of several reactors. Many of these facilities are no longer in service, are surplus, and are contaminated. These facilities are being decontaminated and decommissioned to remove accessible radioactive contamination for unrestricted facility/area release or, if not feasible, for demolition. This PBS scope supports decontamination and decommissioning activities at the Argonne National Laboratory-East facilities to comply with requirements of the applicable DOE Orders. Three facilities (Building 301 Hot Cells, Juggernaut Reactor, and the Zero Power Reactor), remain to be decontaminated and decommissioned at Argonne National Laboratory-East. In FY 2003, three units within Building 301 Hot Cells (Cave 1, Cave 2, and miscellaneous areas) are expected to be completed. These facilities are currently in a safe shutdown condition, are under continuing surveillance and monitoring, and do not currently pose an unmanaged risk to the environment, workers, or the public.

The end-state of this project is the decontamination and decommissioning of the remaining facilities. Any continuing activities, such as soil water monitoring of tritium at the CP-5 Reactor Facility, will be transferred to the landlord (Office of Science) at Argonne National Laboratory-East. With the completion of the decontamination and decommissioning scope as described, the EM Program at Argonne National Laboratory-East will be completed. (Former PBS CH-ANLEDD)

In FY 2004, the following activities are planned to support the accelerated cleanup of the Argonne National Laboratory-East.

- Surveillance and monitoring of the surplus and radiologically contaminated facilities and grounds will continue in FY 2004.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Radioactive Facility Completions (Number of Facilities)	2	3	0	66	78	85%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Completed Phase 1 (including the cave 5, and rooms 101 and 109) of the Building-301Hot Cells Decontamination and Decommissioning project (FY 2002).
- Completed Decontamination and Decommissioning of the Building-310 Retention Tanks (10 tanks), and completed final survey (FY 2002).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- Three units within Building 301 Hot Cells (Cave 1, Cave 2, and miscellaneous areas) are expected to be completed (September 2003).
- Continued surveillance and monitoring of the facilities and grounds, will be performed to ensure protection of site workers and the environment (FY 2002/2003/2004).

CH-BRNL-0041 / Nuclear Facility Decontamination and Decommission High Flux Beam Reactor (life-cycle estimate $98,768K) **1,240 1,280 1,320**

The High Flux Beam Reactor served as a significant cornerstone of research in physics, materials technology, and biomedical sciences at Brookhaven National Laboratory for over three decades, beginning in 1965. The High Flux Beam Reactor was a heavy water moderated and cooled reactor, which used highly enriched uranium to produce an operating power level of 30-60 mega watts thermal. In 1997, a tritium plume stemming from a leak in the reactor's spent fuel storage pool was identified and reactor operations were halted. In 1999, the High Flux Beam Reactor was permanently shut down. In 1991-2001, DOE stabilized the facility for long-term safe shut down. This PBS scope stabilizes, characterizes, deactivates and decommissions the High Flux Beam Reactor, and associated buildings at Brookhaven National Laboratory. The High Flux Beam Reactor Decontamination and Decommission Project mission is to develop end-state alternatives for the disposition of the High Flux Beam Reactor facility, select the final end-state in the evaluation process, and then conduct the planning, engineering, and implementation of the activities necessary to achieve the selected end-state. Also, this scope is to perform routine facility maintenance and remove certain equipment for reactor maintenance at Brookhaven National Laboratory, and facilitate the implementation of a long term minimal surveillance and maintenance program that will be required while the facility awaits full decommissioning.

The acceleration of decontamination and decommissioning of the High Flux Beam Reactor is identified as Strategic Initiative 4 in the Brookhaven National Laboratory Performance Management Plan (August 2002). This includes advancing the end-state determination for the High Flux Beam Reactor to accelerate completion of the resulting decontamination and decommissioning by one year from FY 2009 to FY 2008. With the completion of the High Flux Beam Reactor Decontamination and Decommissioning, the EM Program at Brookhaven National Laboratory will be completed. FY 2004 activities include planning and initial engineering for facility decommissioning, as well as continuing surveillance and maintenance activities, in support of a FY 2008 completion. (Former PBS CH-EF-01)

In FY 2004, the following activities are planned to support the accelerated cleanup of the Brookhaven National Laboratory.

- In support of Strategic Initiative 4, Accelerate Decontamination and Decommissioning of the High Flux Beam Reactor: planning and initial engineering for facility decommissioning will be performed.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- Continue to perform routine facility maintenance, remove certain equipment as part of the decontamination and decommissioning process and facilitate the implementation of a long-term, minimal surveillance and maintenance program that will be required while the facility awaits full decommissioning.
- Continue the evaluation of reducing surveillance and maintenance costs over the life-cycle of the project.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
No metrics are associated with this PBS						

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Surveillance and maintenance activities performed (FY 2002/2003/2004).

OH-WV-0013 / Solid Waste Stabilization and Disposition-West Valley (life-cycle estimate $438,995K) **25,550 32,585 39,800**

The solid waste stabilization and disposition project at the West Valley Demonstration Project involves the waste management activities required per the West Valley Demonstration Project Act of 1980 associated with identifying disposition pathways and dispositioning low- level and transuranic waste produced as a result of Project activities, including the legacy low-level waste and transuranic generated as a result of high-level waste vitrification readiness and execution. When this project is complete in FY 2012, all generated low-level waste (including Class B and Class C low-level waste) and transuranic waste will have been shipped off-site for disposal, reducing worker and environmental risk at the site. In order to prepare for legacy waste disposition efforts associated with transuranic and other high activity waste, a Remote Handled Waste Facility is under construction which will provide the capability to safely characterize, size reduce, package and prepare waste for off-site shipment and disposal. The facility is scheduled to be operational by the beginning of 2005, consistent with West Valley Demonstration Project accelerated plan for completion. (Former PBSs OH-WV-02 and OH-WV-06)

In FY 2004, the following activities are planned to support the accelerated cleanup of the West Valley Demonstration Project.

- Complete construction of the Remote Handled Waste Facility and initiate readiness operations consistent with the West Valley Demonstration Project accelerated plan for completion.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
TRU Waste Shipped for Disposal at WIPP (m^3)	0	0	0	0	692	0%
LLW/MLLW Disposed (m^3)	467	0	0	4,022	23,844	17%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Completed final design, stainless steel liner installation along process cell walls, and initiated mechanical / electrical installation associated with construction of the Remote Handled Waste Facility (FY 2002).
- Achieve 80% construction of the Remote Handled Waste Facility (September 2003).
- Dispose of remediation waste as generated approximately 425 m^3 (September 2003).
- Complete construction for Remote Handled Waste Facility to handle transuranic waste and other high activity waste (July 2004).
- Open a disposition pathway for Class B and C low level waste, as well as West Valley Demonstration Project transuranic waste (September 2004).
- Complete performance testing for Remote Handled Waste Facility (September 2004).

OH-WV-0040 / Nuclear Facility Decontamination and Decommissioning - West Valley (life-cycle estimate $1,029,542K) **35,793 58,815 59,758**

The decontamination and decommissioning program at the West Valley Demonstration Project involves those activities required per the West Valley Demonstration Project Act of 1980 to decontaminate and decommission the facilities, tanks and hardware used in connection with the Project. Decommissioning criteria for the West Valley Demonstration Project was established by the Nuclear Regulatory Commission in January 2002. Decontamination and decommissioning operations will be performed to most effectively reduce worker, public and environmental risk at the Project. To support decontamination and decommissioning efforts, this program also involves those activities required to safely manage and maintain the site in compliance with federal and state statutes, as well as DOE orders and mandates. The end-state of this scope will be determined by the finalization of an Environmental Impact Statement and subsequent Record of Decision for Decommissioning and/or Long-Term Stewardship of the West Valley Demonstration Project (scheduled for 2005). The Environmental Impact Statement will evaluate the full range of alternatives, from "do nothing" to "unrestricted release".

(dollars in thousands)

FY 2002	FY 2003	FY 2004

To prepare for implementation of the Record of Decision once published, as well as reduce worker and environmental risk, decontamination operations are being performed in the most highly contaminated portions of Project facilities including the General Purpose Cell, the Process Mechanical Cell, and Extraction Cell 2. Concurrently, radiological characterization efforts are underway to update and/or confirm the inventory of radionuclides present in Project facilities. Together, these efforts will demonstrate that DOE is able to meet Nuclear Regulatory Commission decommissioning dose criteria and the Project will be ready to begin planning and implementation for decommissioning in 2005 consistent with the Record of Decision and the West Valley Demonstration Project accelerated plan for completion. (Former PBSs OH-WV-02, OH-WV-05, OH-WV-07)

In FY 2004, the following activities are planned to support the accelerated cleanup of the West Valley Demonstration Project.

- Complete decontamination of all West Valley Demonstration Project facilities required to meet Nuclear Regulatory Commission decommissioning dose criteria, including the General Purpose Cell, Process Mechanical Cell, and Extraction Cell 2. Complete facility characterization efforts and begin final report of radiological inventory to demonstrate that the Project can satisfy Nuclear Regulatory Commission West Valley Demonstration Project decommissioning dose criteria.
- Begin preparations for decommissioning consistent with the West Valley Demonstration Project accelerated plan for completion.
- Maintain safe interim storage of 275 high-level waste canisters, legacy transuranic (approximately 692 cubic meters) and low-level waste (approximately 19,822 cubic meters).
- Ensure safe management of the migrating groundwater plume.
- Continue development of the Decommissioning and/or Long-Term Stewardship Environmental Impact Statement in support of the West Valley Demonstration Project accelerated plan for completion.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Liquid Waste Tanks Closed (Number of Tanks)	0	0	0	0	2	0%
Remediation Complete (Number of Release Sites)	0	0	0	0	1	0%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Continued decontamination operations in the General Purpose Cell and initiated decontamination operations in the Process Mechanical Cell to reduce the worker and environmental risk and accelerate preparations for decommissioning (FY 2002).
- Initiated facility characterization efforts to update the inventory of radionuclides present in Project facilities (FY 2002).
- Maintain safe interim storage of high-level waste canisters, legacy transuranic and low-level waste (September 2003).
- Continue management of the groundwater plume (September 2003).

(dollars in thousands)

FY 2002	FY 2003	FY 2004

- Complete development of the Waste Management Environmental Impact Statement, as well as continued development for the Decommissioning and/or Long-Term Stewardship Environmental Impact Statement (September 2003).
- Complete decontamination operations in the General Purpose Cell and Process Mechanical Cell (June 2004), and the Extraction Cell 2 (September 2004).

VL-ETEC-0040 / Nuclear Facility Decontamination and Decommissioning-Energy Technology Engineering Center (life-cycle estimate $206,869K) **17,005 18,174 18,467**

The Energy Technology Engineering Center historically was involved in testing reactor components and development of emerging energy technologies. During this testing and development mission, the site and facilities became contaminated. The purpose of this PBS scope is to: 1) clean up contaminated release sites; 2) decontaminate and decommission radioactive, and chemically contaminated facilities for eventual release to Boeing; 3) perform Resource Conservation and Recovery Act cleanup involving the remediation of both contaminated groundwater and soil; and 4) remove from the site radioactive and hazardous waste from the site applying (when possible) waste minimization principle (e.g., recycling).

Over the past ten years, significant progress has been made in the cleanup of the site including the decontamination and decommissioning of several radiologically and chemically contaminated buildings; removal of transuranic waste from the site, and the remediation of contaminated soil areas. The cleanup work remaining to be performed involves principally the demolition of Building 4059 including the below grade portions of the building; the decontamination and decommissioning of the Radioactive Materials Handling Facility consisting of Buildings 021, 022 and 075; decontamination and decommissioning of Building 4024; the remediation of six solid waste management units; and the installation of a groundwater treatment system.

The Energy Technology Engineering Center Performance Management Plan (August 2002) describes the strategic initiatives and milestones that will be taken to accelerate the completion of the cleanup by 2007. The end-state is that once cleanup is complete, the site will be returned to Boeing North American, Incorporated. The FY 2004 scope of work has been designed in accordance with DOE's revised cleanup strategy. (Former PBSs OK-007 and OK-009)

In FY 2004, the following activities are planned to support the accelerated cleanup of the Energy Technology Engineering Center-Oakland.

- Complete decontamination and decommissioning of one surplus facility.
- Recycle surplus materials removed during decontamination and decommissioning activities.
- Continue decontamination and decommissioning of surplus facilities.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
TRU Waste Shipped for Disposal at WIPP (m^3)	0	11	0	11	11	100%
LLW/MLLW Disposed (m^3)	7	56	390	583	1,335	44%
Radioactive Facility Completions (Number of Facilities)	0	0	1	4	6	67%
Industrial Facility Completions (Number of Facilities)	1	0	0	12	13	92%
Remediation Complete (Number of Release Sites)	0	0	3	7	10	70%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Completed demolition of the Sodium Component Test Installation (FY 2002).
- Release of Draft Environmental Assessment which is critical to continuing cleanup of the site and starting new cleanup activities (FY 2002).
- Start decontamination and decommissioning of Radioactive Materials Handling Facility (October 2003).
- Shipped transuranic waste to Richland for interim storage (December 2003).
- Complete Decontamination and Decommissioning of the subsurface of Space Nuclear Auxiliary Reactor Prototype Facility (B4059) (August 2004).

VL-FOO-0013B-N / Solid Waste Stabilization and Disposition - Oakland Sites - 2012 (Non-Defense) (life-cycle estimate $6,575K) **1,081 589 57**

This PBS scope achieves efficiencies through managing support activities for waste management and environmental restoration at multi-project/site activities for the Non-Defense sites (Laboratory for Energy-Related Health Research, Stanford Linear Accelerator Center, Lawrence Berkeley National Laboratory, and Energy Technology Engineering Center) environmental restoration, environmental restoration generated waste, and legacy waste. Rather than each project awarding its own separate contract, economies of scale are achieved by managing waste consolidation, characterization, aggregation, packaging, and transport-especially to commercial facilities. Services for site investigations, hydrogeologic studies, regulatory review, and stakeholder liaisons are also included within this project through wide applicability of these restoration activities to multiple projects/sites.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

This project will end when the underlying projects/sites supported by the waste management and environmental restoration activities achieve their end-state, and there is no longer a need for a separate project to achieve multi-project/site savings and efficiencies. End-states will coincide with the site closure of Laboratory for Energy-Related Health Research, Stanford Linear Accelerator Center, Lawrence Berkeley National Laboratory, and Energy Technology Engineering Center. (Former PBS OK-041N)

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
LLW/MLLW Disposed (m^3)	1	0	0	83	83	100%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- There are no milestones associated with this PBS.

Total, Non-Defense Site Acceleration Completion, 2012 Accelerated Completions	**80,692**	**111,826**	**119,750**

Explanation of Funding Changes

	FY 2004 vs. FY 2003 ($000)
CH-ANLE-0040 / Nuclear Facility Decontamination and Decommissioning - Argonne National Laboratory - East	
■ Decrease in funding supports reduced magnitude of surveillance and monitoring activities required for surplus facilities.	-35
CH-BRNL-0041 / Nuclear Facility Decontamination and Decommissioning - High Flux Beam Reactor	
■ Increase in funding supports planning, and initial engineering for decommissioning activities.	40
OH-WV-0013 / Solid Waste Stabilization and Disposition - West Valley	
■ The difference in funding requested between FY 2003 and FY 2004 represents the increased activities associated with acceleration of waste management efforts needed to support preparations for decommissioning planned to begin in 2005	7,215

	FY 2004 vs. FY 2003 ($000)
OH-WV-0040 / Nuclear Facility Decontamination and Decommissioning - West Valley	
■ The increase reflects resources needed to support high-level waste facilities management	943
VL-ETEC-0040 / Nuclear Facility Decontamination and Decommissioning - Energy Technology Engineering Center	
■ Reprioritization of activities based on risk have resulted in a focus on the decontamination and decommissioning of radiological facilities	293
VL-FOO-0013B-N / Solid Waste Stabilization and Disposition - Oakland Sites - 2012 (Non-Defense)	
■ Decrease due to reduction in support activities	-532
Total Funding Change, Non-Defense Site Acceleration Completion, 2012 Accelerated Completions	7,924

2035 Accelerated Completions

Mission Supporting Goals and Measures

The Non-Defense Site Acceleration, 2035 Accelerated Completions account provides funding for completing cleanup and closing down facilities contaminated as a result of nuclear energy research and development. This account provides funding for site closures and site specific cleanup and closure projects that are expected to be completed after 2012. EM has established a goal of completing cleanup at all its sites by 2035.

Subprogram Goals

Accelerating risk reduction and cleanup is the central focus of the EM program. Funding in this account is focused on completing non-defense risk reduction and cleanup activities expected to be completed after 2012. EM's goal is to complete cleanup activities at all its sites by 2035.

Since submittal of the FY 2003 Congressional Budget, EM has made substantial progress towards defining the accelerating risk reduction and cleanup strategies at each of its sites. Letters of Intent have been signed with many of our state and Environmental Protection Agency regulatory authorities. These Letters of Intent lay the foundation to move forward with the implementation of EM's accelerated risk reduction and cleanup strategies. Using the Letters of Intent as a basis, Performance Management Plans were then developed. These Performance Management Plans articulate the strategies, key milestones, and commitments that demonstrate sites are accelerating risk reduction and cleanup. From the Performance Management Plans, resource loaded project baselines will be developed that EM will use to manage and track risk reduction and real cleanup progress at its sites.

Performance Indicators

Performance measurement is integral to the success of the EM program in achieving its accelerated risk reduction and cleanup goals. Performance measurement of the EM program consists of "corporate" measures that provide a comprehensive programmatic perspective on progress as well as site and project-specific milestones which are used to demonstrate whether a project and site are on track to achieve its agreed to expectations and schedule. In October 2002, the Assistant Secretary for Environmental Management established a new set of corporate performance measures for the program. The corporate measures are quantitative and focus on the completion of sites, the interim steps necessary to complete sites, and the accomplishment of risk-reduction activities. These new measures, which are under strict EM Headquarters change control, will enable EM to comprehensively track progress against its accelerated risk reduction and closure objectives. In addition, these corporate measures are tracked in the context of the life-cycle total necessary to complete each site as well as the EM program as a whole.

Environmental Management is currently in the process of establishing site resource-loaded baselines which are expected to be completed during FY 2003. The establishment of these site baselines will enable the program to more meaningfully monitor and evaluate actual performance against the new accelerated baselines. Environmental Management believes significant strides have been made in its ability to monitor and demonstrate performance through the establishment of new corporate measures, implementation of a strict configuration management system, and the expected completion of new accelerated site baselines in FY 2003. Environmental Management acknowledges that the program needs to continue to improve upon the progress made to date to further develop project management techniques and associated cost and schedule performance measures. This will enable EM to demonstrate more clearly performance in meeting the program goals of accelerated risk reduction and site cleanup, thereby reducing life-cycle costs.

The EM corporate performance measures are:

- Number of Containers of Plutonium Metal/Oxide Stabilized and Packaged for Long-Term Storage;
- Kilograms of Enriched Uranium Stabilized and Packaged for Long-Term Storage;
- Number of Material Access Areas Eliminated;
- Kilograms Bulk of Plutonium Residues Stabilized, Packaged and Disposed;
- Cubic Meters of Transuranic Waste Stabilized, Packaged and Disposed;
- Kilograms of Depleted Uranium Packaged and Disposed;
- Metric Tonnes of Spent Nuclear Fuel Packaged for Disposal;
- Canisters of High-Level Waste Processed, Packaged, and Disposed;
- Gallons of Liquid Waste Stabilized and Disposed;
- Number of Liquid Waste Tanks Closed;
- Number of EM Geographic Sites Eliminated;
- Cubic Meters of Low-Level/Low-Level Mixed Waste Packaged and Disposed;
- Number of Nuclear Buildings/Facilities Deactivated, Decommissioned, Demolished, or Transferred;
- Number of Radioactive Buildings/Facilities Deactivated, Decommissioned, Dismantled, or Transferred;
- Number of Industrial Buildings/Facilities Deactivated, Decommissioned, Dismantled, or Transferred; and
- Number of Release Sites Evaluated, Remediated, and Closed Out.

The corporate measures will be complemented by project-specific measures consistent with the site Performance Management Plans and Letters of Intent. Those project-specific measures are typically milestones that signify that project and site progress is sufficient to meet established schedules. Detailed performance measure and milestone information can be found in the site details that follow this program overview.

Annual Performance Results and Targets [a]

	FY 2002 Actuals	FY 2003 Estimate	FY 2004 Estimate
There are no quantifiable corporate performance measures associated with this account.			

Funding by Site

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
Idaho					
Grand Junction	3,400	1,316	2,000	684	52.0%
Various Locations					
Los Alamos National Laboratory	0	460	448	-12	-2.6%
Total, Non-Defense Site Acceleration Completion, 2035 Accelerated Completions	3,400	1,776	2,448	672	37.8%

Funding Schedule

(dollars in thousands)

	FY 2002	FY 2003	FY 2004	$ Change	% Change
ID-GJ-0031/Soil and Water Remediation-Moab	3,400	1,316	2,000	684	52.0%
VL-LANL-0040-N/Nuclear Facility Decontamination and Decommissioning-Los Alamos National Laboratory	0	460	448	-12	-2.6%
Total, Non-Defense Site Acceleration Completion, 2035 Accelerated Completions	3,400	1,776	2,448	672	37.8%

[a] This chart provides a consistent set of performance measures for the EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Detailed Program Justification

(dollars in thousands)

FY 2002	FY 2003	FY 2004

ID-GJ-0031 / Soil and Water Remediation - Moab (life-cycle estimate $325,581K) **3,400** **1,316** **2,000**

This PBS covers remediation of the former Atlas Mill Site, with 13 million metric tonnes of contaminated mill tailings, mill debris, contaminated ground water, and vicinity properties in Moab, Utah, under authority of the Uranium Mill Tailings Radiation Control Act. An Environmental Impact Statement will evaluate alternatives for remediation, with a focus on capping the tailings in place or relocation to a commercial facility or DOE-constructed repository. Vicinity properties contaminated with mill tailings as a result of past construction practices will be remediated and contaminated materials disposed of in conjunction with the mill site cleanup.

When remediation is complete, disturbed areas around the former mill site will be restored to pre-mill conditions, and institutional controls on land and surface and groundwater use may be necessary to protect human health and the environment. The site is of particular public interest due to its unique setting on the banks of the Colorado River. The tailings pile is leaching contaminants to the river through the ground water, potentially impacting critical habitat for endangered native fish species. Local citizens are concerned about the environmental effects posed by the pile, and downstream water users in Southern California are concerned about contaminants entering the river. Public interest is also heightened by the site's proximity to a Nature Conservancy wetlands preserve directly across the river and its shared boundary with Arches National Park, one of the nation's most popular parks.

The end-state will be achieved after contaminated soil, tailings, vicinity properties, and surface and groundwater are remediated. Specific actions to be taken will be determined by the results of the Environmental Impact Statement. The site will then be transferred to the Office of Legacy Management for monitoring and required stewardship. (Former PBS ID-GJ-107)

In FY 2004, the following activities are planned to support the accelerated cleanup of the Moab Site.

- Continued stabilization and characterization of the mill site.
- Complete the Environmental Impact Statement to support selection of the final mill tailings repository and vicinity property and surface and ground water remedy.
- Operate Interim groundwater action to reduce ammonia concentrations reaching the river, protecting federally listed endangered fish species.
- Monitor surface and ground water in accordance with Environmental Impact Statement compliance strategy.
- Dewater tailings pile, which is necessary under any remediation scenario, and provide site maintenance, radiological access controls, and air monitoring.

(dollars in thousands)

FY 2002	FY 2003	FY 2004

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
No metrics associated with this PBS						

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Transferred property to DOE (FY 2002).
- Prepared Draft Plan for Remediation (FY 2002)
- Received National Academy of Sciences comments on Draft Plan for Remediation and incorporated them into project plans as appropriate (FY 2002).
- Prepared public involvement and vicinity property strategy plans (FY 2002).
- Initiation of an Environmental Impact Statement to support selection of final reclamation alternative (December 2002).
- Complete installation of Groundwater Interim Remedial Action (September 2003).
- Issue Record of Decision for the Environmental Impact Statement which will set forth the remedy (September 2004).

VL-LANL-0040-N / Nuclear Facility Decontamination and Decommissioning - Los Alamos National Laboratory (Non-Defense) (life-cycle estimate $16,356K) **0 460 448**

The Tritium System Test Assembly Facility will be transferred into the EM Program in FY 2003 for demolition. This transfer is documented in a memorandum of agreement that was signed by EM, Defense Programs, and the Office of Science and Fusion. Prior to transfer of the facility, the facility will be placed in a safe shutdown mode. The shutdown mode is documented in an end point transition report. Several gloveboxes, which contain small amounts of radioactive tritium residue, will be left in place as approved and documented in the Safety Authorization Basis. As a result, the facility emissions stack system will continue to be operational. Until the ultimate disposition of the facility is achieved, which is demolition and disposal of resulting waste, the facility will remain in a shutdown mode, and surveillance and maintenance activities will be performed. Surveillance and maintenance activities include facility walk-throughs, maintaining the safety basis authorization, stack monitoring, and security. At Los Alamos, there are several other process contaminated facilities that have been declared excess by the landlord program and are awaiting transfer to the EM program for deactivation and decommissioning.

The end-state of this activity, to occur in FY 2020 is completion of decontamination and decommissioning of all transferred contaminated facilities such that specific facilities or portions thereof, as appropriate are made available for reuse by the site landlord, with appropriate restrictions. In the case of any facilities demolished as part of the decontamination and decommissioning process, the remediated facility sites may be transferred to the site landlord along with responsibility for any long term monitoring. (Former PBS AL-EF-02)

(dollars in thousands)

FY 2002	FY 2003	FY 2004

In FY 2004, the following activities are planned to support the accelerated cleanup of the Los Alamos National Laboratory.

- Continue surveillance and maintenance which include maintaining air emissions permit, facility walk-throughs, maintaining the safety basis authorization, stack monitoring, and security.

Metrics	FY 2002	FY 2003	FY 2004	Cumulative Complete FY 2004	Life-cycle Quantity	FY 2004 % Complete
Radioactive Facility Completions (Number of Facilities)	0	0	0	0	1	0%

Key Accomplishments (FY 2002) / Planned Milestones (FY 2003/FY 2004)

- Initiate surveillance and maintenance at Tritium System Test Assembly facility (April 2003).
- Continue surveillance and maintenance activities at Tritium Systems Test Assembly (September 2004).

Total, Non-Defense Site Acceleration Completion, 2035 Accelerated Completions	**3,400**	**1,776**	**2,448**

Explanation of Funding Changes

	FY 2004 vs. FY 2003 ($000)
ID-GJ-0031 / Soil and Water Remediation - Moab	
■ Increase due to a change in Plan for Remediation using an Environmental Impact Statement as the basis for remedy selection	684
VL-LANL-0040-N / Nuclear Facility Decontamination and Decommissioning - Los Alamos National Laboratory (Non-Defense)	
■ No significant change	-12
Total Funding Change, Non-Defense Site Acceleration Completion, 2035 Accelerated Completions	672