Uranium Facilities Maintenance and Remediation

Proposed Appropriation Language

For necessary expenses to maintain, decontaminate, decommission, and otherwise remediate uranium processing facilities, [$418,425,000] *$382,154,000,* of which [$299,641,000] *$235,523,000,* shall be derived from the Uranium Enrichment Decontamination and Decommissioning Fund, all of which shall remain available until expended. *(Energy and Water Development Appropriation Act, 2002.)*

Uranium Facilities Maintenance and Remediation

Program Mission

The Uranium Facilities Maintenance and Remediation appropriation includes two program accounts, the Uranium Enrichment Decontamination and Decommissioning Fund and Other Uranium Activities.

The Uranium Enrichment Decontamination and Decommissioning Fund is responsible for maintaining, decontaminating, decommissioning, and otherwise remediating uranium processing facilities. This includes the environmental management responsibilities at the nation's three gaseous diffusion plants at Paducah, Kentucky; Portsmouth, Ohio; and East Tennessee Technology Park in Oak Ridge, Tennessee.

The Other Uranium Activities program includes management of highly enriched uranium; management of the facilities at the Paducah and Portsmouth sites; pre-existing liabilities; management of the Department's inventory of depleted uranium hexafluoride and other surplus uranium inventories; management of the DOE Material Storage Areas at Paducah; the depleted uranium hexafluoride conversion project; and placement and maintenance of the Portsmouth Gaseous Diffusion Plant in cold-standby.

The FY 2003 request for the Uranium Facilities Maintenance and Remediation appropriation is $382,154,000. The Uranium Enrichment Decontamination and Decommissioning Fund portion is $235,523,000, of which $1,000,000 will be for the Uranium/Thorium Licensee Reimbursement program under title X, subtitle A, of the Energy Policy Act of 1992. The remaining $146,631,000, will be for Other Uranium Activities.

Program Strategic Performance Goals

The EM program has established a goal of cleaning up as many of its contaminated sites as possible by 2006 in a safe and cost-effective manner. By working toward this goal, EM can reduce the hazards presently facing its workforce and the public, and reduce the financial burden on the taxpayer. The EM program will:

- Work aggressively with stakeholders and regulators to address the compliance challenges faced by the EM program.
- Continue to address the most serious environmental risks across the DOE complex and ensure that facilities and activities pose no undue risks to the public and worker safety and health.
- Place and maintain Portsmouth Gaseous Diffusion Plant in cold-standby, including winterization of facilities, uranium deposit removal and associated activities.
- Manage the Department's inventory of depleted uranium hexafluoride in a safe manner.
- Continue surveillance and maintenance of facilities.

One way EM is ensuring success is to manage the program based on sound performance measures that define and quantify programmatic strategic performance goals from the Departmental level down to the contractors

performing the work. EM establishes specific performance measures and milestones on a project-by-project basis for the program within the context of the Environmental Quality Business Line and the Environmental Management Strategic Objectives. The EM program has been actively incorporating the requirements of the Government Performance and Results Act into its planning, budgeting, and management systems. At the programmatic level, these requirements are reflected in "corporate" performance measure and key milestone reporting and tracking. The EM management uses the corporate performance measures along with other site-specific and project-specific objectives on an annual basis to ensure that progress is being made toward the goal of site closure and project completion.

The chart below contains a summary of EM corporate performance measures for this program account. Detailed performance measure information can be found in the site details that follow this program overview.

Annual Performance Results and Targets [a]

	FY 2001 Actuals	FY 2002 Estimate	FY 2003 Estimate
Uranium Facilities Maintenance and Remediation			
Number of Release Site Completions	3	0	3
Number of Facilities Decommissioned	0	3	0
Volume of Mixed Low-Level Waste Treated (m^3)	0	71	16
Volume of Mixed Low-Level Waste Disposed (m^3)	3,081	1,769	2,047
Volume of Low-Level Waste Disposed (m^3)	2,723	3,339	7,750

Significant Accomplishments and Program Shifts

- *Portsmouth Cold Standby*: The United States Enrichment Corporation, under contract to DOE, started to place the Portsmouth Gaseous Diffusion Plant in cold standby in 2001. Aggressive contract management initiatives have been implemented to provide incentives for accelerating the program and to reduce cost. The Management and Integration contracting approach utilizes competitively bid fixed-price and fixed-unit cost contracts to reduce project costs. These actions focus on managing the contract for results and place emphasis on cost control, risk management, and measuring and analyzing earned value.
- *Comparabilities*. The FY 2003 request been prepared on a comparable basis. All activities and funds are displayed for FY 2001 and FY 2002 as if they were appropriated in the same appropriation and program account under which they are requested in FY 2003. The FY 2001 and FY 2002 Appropriations have

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

been adjusted to reflect the following comparabilities: movement of projects and/or activities between appropriations and/or program accounts; and shifts of projects and/or activities between sites.

Funding Profile

(dollars in thousands)

	FY 2001 Comparable Appropriation	FY 2002 Original Appropriation	FY 2002 Adjustments	FY 2002 Comparable Appropriation	FY 2003 Request
Uranium Facilities Maintenance and Remediation					
Uranium Enrichment Decontamination and Decommissioning Fund					
Decontamination and Decommissioning Activities	273,987	298,641	0	298,641	234,523
Uranium/Thorium Reimbursements	71,842	1,000	0	1,000	1,000
Subtotal, Uranium Enrichment Decontamination and Decommissioning Fund	345,829	299,641	0	299,641	235,523
Other Uranium Activities					
Pre-Existing Liabilities/ Maintenance of Facilities and Inventories	64,967	113,784	0	113,784	136,631
Depleted Uranium Hexafluoride Conversion Project	3,306	10,000	0	10,000	10,000
Subtotal, Other Uranium Activities	68,273	123,784	0	123,784	146,631
Subtotal, Uranium Facilities Maintenance and Remediation	414,102	423,425	0	423,425	382,154
Use of Prior Year Balances	0	-5,000	0	-5,000	0
Total, Uranium Facilities Maintenance and Remediation	414,102	418,425	0	418,425	382,154

Public Law Authorizations:

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

Public Law, 102-486, Title X, Subtitle A, “Energy Policy Act of 1992"

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

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

Funding by Site

(dollars in thousands)

	FY 2001	FY 2002	FY 2003	$ Change	% Change
Oak Ridge Operations Office					
East Tennessee Technology Park	106,170	115,352	98,555	-16,797	-14.6%
Oak Ridge Operations Office	7,907	13,675	11,567	-2,108	-15.4%
Oak Ridge Reservation	7,554	9,320	9,981	661	7.1%
Paducah	100,785	109,824	93,199	-16,625	-15.1%
Portsmouth	119,844	174,254	167,852	-6,402	-3.7%
Subtotal, Oak Ridge	342,260	422,425	381,154	-41,271	-9.8%
Multi-Site	71,842	1,000	1,000	0	0.0%
Total, Uranium Facilities Maintenance and Remediation	414,102	423,425	382,154	-41,271	-9.7%

Uranium Enrichment Decontamination and Decommissioning Fund

Program Mission

The Uranium Enrichment Decontamination and Decommissioning Fund was established by the Energy Policy Act of 1992 to carry out environmental management responsibilities at the nation's three gaseous diffusion plants. The plants are located in the East Tennessee Technology Park in Oak Ridge, Tennessee; at the Portsmouth site in Ohio; and at the Paducah site in Kentucky. The Energy Policy Act also directs that the Fund be used to reimburse licensees operating uranium or thorium processing sites for the costs of environmental cleanup at those sites, subject to a site specific reimbursement limit. Key to achieving this mission are the implementation of project management, contracting and technology strategies. Project management activities are focused on multi-year planning and maintaining project controls to meet the Office of Environmental Management's (EM) goals for safe, cost-effective and timely site closure. Project management cost savings result, in part, from integrating multiple projects through sequencing based on programmatic focus, critical path considerations, execution logic, mortgage reduction, resource leveling and subcontracting strategy. Emphasis is placed on subcontracting the largest portion of the work to best-in-class subcontractors through competitively bid fixed-price and fixed-unit price subcontractors with performance specifications.

The Uranium Enrichment Decontamination and Decommissioning Fund addresses the cleanup liabilities at the three gaseous diffusion plants that are attributable to historical Department of Energy (DOE) operations for weapons and commercial fuel. The ongoing operations of the enrichment facilities are managed by the privatized commercial United States Enrichment Corporation. Ultimate cleanup of the facilities that are leased from the Department by the United States Enrichment Corporation will commence when operations are completed and the leases are terminated. The Uranium Enrichment Decontamination and Decommissioning Fund includes contributions from annual appropriations as well as contributions from commercial utilities based upon historical purchases of enrichment services, measured in "separative work units." The United States Enrichment Corporation announced their intention to cease enrichment operations at the Portsmouth Gaseous Diffusion Plant in FY 2001. The United States Enrichment Corporation, under contract to DOE, placed the Portsmouth facility in cold standby in 2001.

Program Strategic Performance Goals

The goal is to clean up the surplus enrichment plants as soon as possible and reimburse licensees for their remediation activities at uranium and thorium sites. The enrichment plants include potentially valuable facilities and equipment, and the cleanup costs will be offset to the extent that the Department is able to recover the value from these surplus assets. Achieving the program goal requires aggressive contract management initiatives which have been implemented to provide incentives for accelerating the program and to reduce cost. The Management and Integration contracting approach utilizes competitively bid fixed-price and fixed-unit cost

contracts to reduce project costs. Additionally, resequencing the disposition of waste to avoid impact on critical path remediation has resulted in acceleration of the low-level waste program. These actions focus on managing the contract for results and placing emphasis on cost control, risk management, and measuring and analyzing earned value. These innovative approaches and "out of the box" thinking on this contract are the desired result of generating cost savings, cost avoidance, and accelerated clean up. The EM program will:

- Plan to "re-industrialize" the surplus sites and infrastructure which will reduce the Department's cleanup cost. Where appropriate, the surplus federal facilities will be transferred to private sector firms for productive re-use. In this way, the local socio-economic impacts of shutting down these facilities will be partially offset by increased commercial job creation.
- Remediate East Tennessee Technology Park, Paducah and Portsmouth, release sites in accordance with applicable regulations and dispose of legacy waste at Paducah and Portsmouth.
- Manage the characterization and cleanup of the DOE Material Storage Areas at Paducah.

One way EM is ensuring success is to manage the program based on sound performance measures that define and quantify programmatic strategic performance goals from the Departmental level down to the contractors performing the work. EM establishes specific performance measures and milestones on a project-by-project basis for the program within the context of the Environmental Quality Business Line and the Environmental Management Strategic Objectives. The EM program has been actively incorporating the requirements of the Government Performance and Results Act into its planning, budgeting, and management systems. At the programmatic level, these requirements are reflected in "corporate" performance measure and key milestone reporting and tracking. The EM management uses the corporate performance measures along with other site-specific and project-specific objectives on an annual basis to ensure that progress is being made toward the goal of site closure and project completion.

Annual Performance Results and Targets [a]

	FY 2001 Actuals	FY 2002 Estimate	FY 2003 Estimate
Uranium Enrichment Decontamination and Decommissioning Fund			
Number of Release Site Completions	3	0	3
Number of Facilities Decommissioned	0	3	0
Volume of Mixed Low-Level Waste Treated (m^3)	0	71	16
Volume of Mixed Low-Level Waste Disposed (m^3)	3,081	1,769	2,047
Volume of Low-Level Waste Disposed (m^3)	2,723	3,339	7,750

Significant Accomplishments and Program Shifts

In the course of developing and implementing corrective actions in response to the DOE independent investigation of environment, safety and health issues at the Paducah Gaseous Diffusion Plant, it became apparent that some of the DOE Material Storage Areas might contain Resource Conservation and Recovery Act material. In FY 2001, in response to a Notice of Violation, the Department initiated an extensive effort to characterize the 160 DOE Material Storage Areas to determine if Resource Conservation and Recovery Act waste was present and to develop a plan for safely dispositioning of any such material identified (i.e., hazardous waste). Preliminary estimates are that it will take five years and $82,000,000 to clean up the estimated 880,000 cubic feet of material in the 160 DOE Material Storage Areas. The Department is currently negotiating a schedule for cleanup with its regulators consistent with a 2010 completion date.

[a] This chart provides a consistent set of performance measures for the total 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 2001 Comparable Appropriation	FY 2002 Original Appropriation	FY 2002 Adjustments	FY 2002 Comparable Appropriation	FY 2003 Request
Uranium Enrichment Decontamination and Decommissioning Fund					
Decontamination and Decommissioning Activities	273,987	298,641	0	298,641	234,523
Uranium/Thorium Reimbursement	71,842	1,000	0	1,000	1,000
Total, Uranium Enrichment Decontamination and Decommissioning Fund	345,829	299,641	0	299,641	235,523

Public Law Authorizations:

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

Public Law 102-486, Title X, Subtitle A, “Energy Policy Act of 1992"

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

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

Funding by Site

(dollars in thousands)

	FY 2001	FY 2002	FY 2003	$ Change	% Change
Oak Ridge Operations Office	273,987	298,641	234,523	-64,118	-21.5%
Multi-Site	71,842	1,000	1,000	0	0.0%
Total, Uranium Enrichment Decontamination and Decommissioning Fund	345,829	299,641	235,523	-64,118	-21.4%

Oak Ridge

Mission Supporting Goals and Objectives

Program Mission

The Uranium Enrichment Decontamination and Decommissioning Fund was established by the Energy Policy Act of 1992 and is carried out by the Oak Ridge Operations Office to cleanup the nation's three gaseous diffusion plants. The three gaseous diffusion plants are located in Oak Ridge, Tennessee, Portsmouth, Ohio, and Paducah, Kentucky. The gaseous diffusion plant in Oak Ridge was shut down in 1985. The plants in Portsmouth and Paducah have been operated by the United States Enrichment Corporation since 1993. The United States Enrichment Corporation started shutdown of enrichment operations at the Portsmouth Gaseous Diffusion Plant in April 2001 and DOE decided to place the Plant in cold-standby. The Uranium Enrichment Decontamination and Decommissioning Fund supports decontamination and decommissioning, remedial actions, waste management, and surveillance and maintenance of the three gaseous diffusion plants. The fund is currently the sole funding source for cleanup at Portsmouth and Paducah, and is the dominant source of funds for the Oak Ridge Gaseous Diffusion Plant. The Uranium Enrichment Decontamination and Decommissioning Fund also reimburses licensees for cleanup of uranium and thorium processing sites that previously sold these materials to the Government.

Program Goal

The program goals are: the Office of Environmental Management will manage the ongoing remedial actions to prevent the spread of existing contamination, and continue waste management activities to address legacy waste at the sites; complete ongoing remedial actions including the DOE Materials Storage Area cleanup and waste management activities at Paducah; complete ongoing remedial action and waste management, and the DOE Materials Storage Area characterization/cleanup activities at Portsmouth; and transition the East Tennessee Technology Park site from a Federally-managed DOE installation to a privately-managed industrial park. The cleanup program is being carried out under the requirements of Federal and state compliance agreements that reflect community stakeholder involvement.

Program Objectives

The primary objectives at the Oak Ridge sites are to conduct remedial actions to limit the spread of contamination, waste management to remove legacy waste, and decommissioning to disposition the process and ancillary buildings at the Paducah and Portsmouth Gaseous Diffusion Plants. The East Tennessee Technology Park Gaseous Diffusion Plant is shutdown, and the focus is on cleanup followed by re-use of viable

facilities by private sector firms. Decommissioning of the three process buildings at the site will be completed to allow reuse.

Significant Accomplishments and Program Shifts

East Tennessee Technology Park

- Excavated 230 cubic yards of contaminated soil from a classified burial ground, treated on-site via low temperature thermal desorption (FY 2001).
- Completed Remedial Design Report and Remedial Action Work Plan for excavation of K-1070-A Burial Ground (FY 2001).
- Completed a time-critical removal action to remove drums and contaminated soil at the 1085 Old Firehouse Burn Area which was uncovered during road construction (FY 2001).
- Demolished six buildings as part of the Main Plant Buildings Decontamination and Decommissioning project and an old administrative building with a footprint of almost 50,000 square feet, as well as ten adjacent office and support facilities (FY 2001).
- Completed K-33 Cascade Unit 7 (FY 2001).
- Completed dismantlement and removal to disposal or recycle of four Cascade Units in K-33 Building.
- Started dismantlement operations in the K-31 Building and began shipments of low-level waste to the Nevada Test Site (FY 2001).
- Finished construction and began full-scale operation of the British Nuclear Fuel Ltd, Inc. K-33 supercompactor (FY 2001).
- Begin K-1070-A Burial Ground excavation (FY 2002).
- Disposal of treated material in Y-12 landfill or at the Environmental Management Waste Management Facility, the on-site disposal facility (FY 2002).
- Continuation of deactivation activities, including asbestos and other hazardous material abatement activities on the K-25 and K-27 buildings (FY 2002).
- Demolish Buildings K-1303, K-1413 and K-1302 as part of the Main Plant Building decontamination and decommissioning project (FY 2002).
- Disposition of the last 2 cascade units in Building K-33, disposition of 3 of 6 cascade units in Building K-31, and decontamination of the east half of Building K-33 (FY 2002).
- Begin disposal of low-level waste at the on-site disposal facility (FY 2002).

Paducah Gaseous Diffusion Plant

Completed shipment of remaining 500 tons of metal from the Drum Mountain project to Envirocare (FY 2001).

Characterized 9 high priority DOE Material Storage Areas (FY 2001).

Performed all waste storage, treatment, and disposal activities to meet DOE requirements, regulatory requirements, and facility-specific requirements (FY 2001).

Characterize 12 priority DOE Material Storage Areas (FY 2002).

Continue treatability studies to address trichloroethylene contaminated groundwater and subsurface soil (FY 2002).

Begin remediation of the North-South Diversion Ditch and approximately 54,000 tons of contaminated scrap metal over a ten acre area (FY 2002).

Continue to perform all waste storage, treatment, and disposal activities to meet DOE requirements, regulatory requirements, and facility-specific requirements (FY 2002).

Portsmouth Gaseous Diffusion Plant

Initiated construction of the Quadrant I X-749/120 barrier wall and the 5-Unit Area pipe installation to the pump and treat facility (FY 2001).

Demolished and disposed of the X-701C Neutralization Pit, the X-701A Lime House, and associated pipelines and utilities (FY 2001).

Completed construction of over three acres of equivalent Resource Conservation and Recovery Act Subtitle C cap on the X-231A and X-231B biodegradation plots (FY 2001).

Initiated upgrades to the X-622 pump and treat facility to accommodate future treatment of contaminated groundwater from the 5-Unit Area extraction system (FY 2001).

Stored, treated and disposed quantities of legacy hazardous, mixed low-level and low-level waste, and sanitary waste (FY 2001).

Begin construction on the Quadrant I X-749/120 Phytoremediation/bio remediation groundwater treatment system (FY 2002).

Continue work on size reducing and disposing of contaminated scrap metal stored at the X-747H scrap yard (FY 2002).

Complete design and begin construction on modifications to the X-622T and X-624 groundwater treatment facilities to allow them to operate more efficiently and cost effectively (FY 2002).

Continue to store, treat and dispose quantities of legacy hazardous, mixed low-level and low-level waste, and sanitary waste (FY 2002).

Funding Schedule

(dollars in thousands)

	FY2001	FY 2002	FY 2003
OR-193 / Long-Term Contractor Liabilities - Decontamination and Decommissioning Fund	6,879	8,511	9,182
OR-423 / East Tennessee Technology Park Remedial Action - Decontamination and Decommissioning Fund	22,987	2,108	4,089
OR-433 / East Tennessee Technology Park Decontamination and Decommissioning Fund	18,451	6,628	15,494
OR-443 / East Tennessee Technology Park Surveillance and Maintenance - Decontamination and Decommissioning Fund	20,176	19,887	21,071
OR-493 / East Tennessee Technology Park - Oak Ridge Operations Prime Contracts	39,101	74,729	41,520
OR-523 / Paducah Remedial Action	53,385	53,723	46,420
OR-543 / Paducah Surveillance and Maintenance	8,689	12,134	12,027
OR-553 / Paducah Waste Management	20,267	22,628	9,440
OR-593 / Paducah Long-Term Contractor Liabilities - Decontamination and Decommissioning Fund	4,940	4,913	5,575
OR-623 / Portsmouth Remedial Action	15,111	21,164	21,705
OR-643 / Portsmouth Surveillance and Maintenance	26,265	22,632	20,257
OR-653 / Portsmouth Waste Management	32,361	36,552	25,676
OR-693 / Portsmouth Long-Term Contractor Liabilities	774	9,357	500
OR-893 / Directed Support - Decontamination and Decommissioning Fund	4,601	3,675	1,567
Total, Oak Ridge	273,987	298,641	234,523

Funding By Site

(dollars in thousands)

	FY 2001	FY 2002	FY 2003	$ Change	% Change
East Tennessee Technology Park	100,715	103,352	82,174	-21,178	-20.5%
Oak Ridge Operations Office	4,601	3,675	1,567	-2,108	-57.4%
Oak Ridge Reservation	6,879	8,511	9,182	671	7.9%
Paducah	87,281	93,398	73,462	-19,936	-21.3%
Portsmouth	74,511	89,705	68,138	-21,567	-24.0%
Total, Oak Ridge	273,987	298,641	234,523	-64,118	-21.5%

Metrics Summary

	FY 2001	FY 2002	FY 2003
Release Site			
Cleanups	3	0	3
Mixed Low-Level Waste			
Treatment (m^3)	0	71	16
Disposal (m^3)	3,081	1,769	2,047
Low-Level Waste			
Disposal (m^3)	2,723	3,339	7,750

Site Description

Oak Ridge Reservation

The Oak Ridge Reservation encompasses about 37,000 acres and is comprised of three facilities: the Y-12 Plant; the East Tennessee Technology Park; and the Oak Ridge National Laboratory. The Uranium Enrichment Decontamination and Decommissioning Fund only supports the East Tennessee Technology Park, which is described in detail below. However, under this site designation, Long-Term Contractor Liabilities is covered.

Oak Ridge Operations Office

The Oak Ridge Operations Office manages, coordinates, tracks, and assists in the implementation of the Environmental Management program among the various sites. Oak Ridge provides crosscutting integration efforts related to the Oak Ridge sites. In addition, the Oak Ridge Operations Office manages oversight agreements with the States of Tennessee, Ohio, and Kentucky.

East Tennessee Technology Park

The East Tennessee Technology Park is located on a 1,500 acre tract of land adjacent to the Clinch River, approximately 10 miles west of Oak Ridge, Tennessee. It was built as part of the World War II Manhattan Project and used to enrich uranium for national defense purposes. By the mid-1950s, five large uranium enrichment buildings covering 114 acres were in operation: K-25, K-27, K-29, K-31, and K-33. Four electrical switch yards and eight cooling towers served these buildings. Machinery was fabricated, serviced, repaired, and cleaned at on-site facilities. Enrichment of weapons-grade uranium ceased in 1964. The plant continued to produce low enriched uranium for commercial nuclear power purposes until 1985, when the plant was shut down.

Paducah

The Paducah Gaseous Diffusion Plant is located approximately 15 miles west of Paducah, Kentucky, near the Ohio River. The Department of Energy reservation comprises of just over 3,500 acres; including 750 acres inside the site's security fence, 2,000 acres leased to the Kentucky Department of Fish and Wildlife; and plant process buildings covering 74 acres. Paducah began operations in 1952 to produce low-assay enriched uranium for use as commercial nuclear reactor fuel. In 1993, uranium enrichment operations were turned over to the United States Enrichment Corporation in accordance with the Energy Policy Act of 1992.

Portsmouth

The Portsmouth Gaseous Diffusion Plant is located approximately 22 miles north of Portsmouth, Ohio. Construction of the 3,714 acre site began in 1952. Plant process buildings cover 93 acres. In 1993, uranium enrichment operations were turned over to the United States Enrichment Corporation in accordance with the Energy Policy Act of 1992. In 2001, the United States Enrichment Corporation under contract to DOE placed the Portsmouth Gaseous Diffusion Plant in cold standby.

Detailed Program Justification

(dollars in thousands)

FY 2001	FY 2002	FY 2003

The Oak Ridge Operations Office of Environmental Management projects under the Uranium Enrichment Decontamination and Decommissioning Fund are managed by a Management and Integration contractor through incentivized contracts, with fixed-price subcontracts, to assure the most cost efficient service to the Government.

The scope planned for FY 2003 has been reviewed and is appropriate to meet the goals of the site as outlined in the EM sites' baseline planning data. Project Baselines for activities have had, or are planned to have, an independent cost review of the scope, and the funds requested for FY 2003 are appropriate to perform the activities based on a historical level of effort and fixed-price contracts. Regulatory drivers for cleanup are Federal Facility Agreements which integrate Comprehensive Environmental Response Compensation and Liability Act and Resource Conservation and Recovery Act requirements; Consent Orders issued by the State regulators for permitted hazardous waste units; Resource Conservation and Recovery Act Part B hazardous waste management permits; Toxic Substances Control Act regulations for management of polychlorinated biphenyls; and Federal Facility Compliance Agreements for management of legacy mixed waste. The agreements establish enforceable milestones for completing major activities at the sites consistent with site baselines.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

OR-193 / Long-Term Contractor Liabilities - Decontamination and Decommissioning Fund **6,879** **8,511** **9,182**

This PBS includes work activities associated with on-going, long-term obligations and central programs necessary to support the contractor activities. Activities include Post Retirement Medical Benefits for grandfathered employees, severance/Reduction in Force costs from workforce transition subcontractors, Information Technology, and the Sample Management Office.

- Activities that are associated with on-going, long-term obligations and central programs necessary to support the contractor activities will continue to be funded in this PBS and the Defense PBS OR-191.
- The Sample Management Office will maintain subcontracts with support laboratories, operate and maintain the Performance Evaluation laboratory; and provide support to the DOE National Analytical Management Program laboratory-auditing program.

OR-423 / East Tennessee Technology Park Remedial Action - Decontamination and Decommissioning Fund **22,987** **2,108** **4,089**

The purpose of the East Tennessee Technology Park Remedial Action Project PBS is to address environmental hazards that have been identified within the East Tennessee Technology Park watershed and the waste sites associated with it, and to complete the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 activities required for all of these sites. The East Tennessee Technology Park is organized into seven functional or geographical areas involving the evaluation or actions for soils that collectively address all release sites currently known to exist at East Tennessee Technology Park. All actions will be addressed under Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Records of Decision for the site. In addition several early actions are included to eliminate areas of greatest concern.

For the K-1070-A Burial Ground Project:

- Complete excavation and disposal of waste at K-1070-A Burial Ground Project from 62 pits and 26 trenches in which unclassified chemical, radiological, and construction-type wastes are buried.
- Complete characterization of residual soils; complete site restoration and demobilization.
- Prepare the Remedial Action Report and submit the D1 version to the Environmental Protection Agency and the Tennessee Department of Environment and Conservation.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Metrics			
Release Site			
Cleanups	2	0	0
Mixed Low-Level Waste			
Disposal (m^3)	1,699	0	0
Key Milestones			
# Submit the D1 of the Remedial Action Report for the K-1070 C/D G Pit and contaminated pad (July 2001).			
# Submittal to regulators of K-1070A remedial action report (August 2003).			

OR-433 / East Tennessee Technology Park-Decontamination and Decommissioning Fund **18,451 6,628 15,494**

The purpose of the East Tennessee Technology Park Decontamination and Decommissioning - Decontamination and Decommissioning Fund PBS is to address environmental hazards that have been identified at facilities within the East Tennessee Technology Park watershed and to complete Comprehensive Environmental Response, Compensation, and Liability Act of 1980 activities required for all of these facilities. All of the scope included in this PBS is necessary to accomplish the land use of East Tennessee Technology Park, which is that of an industrial park occupied by private-sector businesses and industries. The East Tennessee Technology Park is organized into seven functional or geographical areas involving the evaluation or actions for facilities that collectively address all facilities to be decontaminated and decommissioned at the East Tennessee Technology Park.

Complete the Main Plant Buildings Decontamination and Decommissioning project.

Demolish Building 1300 and overhead fluorine lines associated with the fluorine production and support facilities.

Continue K-25/K-27 asbestos and other hazardous material abatement activities.

Begin utility reconfiguration engineering and construction work; issue equipment removal request for proposal.

Metrics			
Facility Decommissioning			
Cleanups	0	3	0
Key Milestones			
# K-25/K-27 Buildings Decontamination and Decommissioning - Submit the D1 of the engineering evaluation/cost analysis (January 2001).			

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Demolish five Main Plant Buildings at East Tennessee Technology Park (September 2001).

OR-443 / East Tennessee Technology Park Surveillance and Maintenance - Decontamination and Decommissioning Fund . . **20,176** **19,887** **21,071**

This project ensures adequate containment and site control at shutdown facilities awaiting decommissioning or re-use and pre- and post remedial actions. The facilities (~6.2 million square feet) include major gaseous diffusion process buildings and support structures. This is accomplished through a systematic program of inspections, surveillances, maintenance, and environmental monitoring. These activities are designed to cost effectively manage the legacy materials remaining in the facilities; ensure sufficient containment is in place by process equipment and building structures. The Water Quality Program provides site-wide monitoring, sampling and analysis and well maintenance activities support is also provides to reindustrialization.

Complete annual decontamination and decommissioning surveillance and maintenance report.

Provide optimum annual level of services to maintain infrastructure facilities for reuse and decontamination and decommissioning.

Turnover K-25 and K-27 Process Buildings and Poplar Creek to decontamination and decommissioning program.

Effectively support - East Tennessee Reindustrialization Program efforts as they are used to perform decontamination and decommissioning efforts at the site

Perform annual inspection and routine maintenance of approximately 260 monitoring wells.

OR-493 / East Tennessee Technology Park - Oak Ridge Operations Prime Contracts **39,101** **74,729** **41,520**

This project decontaminates and decommissions three (K-29, K-31, and K-33) gaseous diffusion process buildings at the East Tennessee Technology Park so that the buildings are available for reuse without radiological and nonradiological concerns. A fixed-price prime contract removes and disposes of equipment and decontaminates the interior of the building to a contractually specified end point (for more details see datasheet at the end of section).

Continue to work on last three cascade units in Building K-31.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Key Milestones

- # K-33 Cascade Unit 7 complete (January 2001).
- # British Nuclear Fuels Limited Supercompactor Facility Operational at K-33 (March 2001).
- # Complete dismantlement and removal to disposal, as either Low-Level Waste or Recycle, of four Cascade Units K-33 (May 2001).
- # Start Gaseous Diffusion Plant Cascade Unit Converter removal, disassembly, and disposal from Building K-29 (January 2002).
- # Complete dismantlement removal, and disposal of last two of the eight Gaseous Diffusion Plant Cascade Units in Building K-33 (February 2002).
- # Begin disposal of low-level waste from the East Tennessee Technology Park Three Building decontamination and decommissioning and Recycle Project in the Oak Ridge Operations Office, the Environmental Management Waste Management Facility Project (April 2002).
- # Complete decontamination of the east half of the interior cell and operating floors of Building K-33 for release (August 2002).
- # Complete dismantlement, removal, and disposal of three of the six Gaseous Diffusion Plant Cascade Units in Building K-31 (August 2002).

OR-523 / Paducah Remedial Action **53,385 53,723 46,420**

This project remediates contaminated sites and DOE Material Storage Areas at the Paducah Gaseous Diffusion Plant and surrounding environments. To accomplish this objective, a phased remediation approach has been developed for groundwater, surface water, surface soils, and burial grounds with an emphasis on addressing imminent threats and off-site releases as the top priority.

- # Complete the Remedial Design Work Plan Record of Decision 1, Remedial Design Report Record of Decision, and the Remedial Action Work Plan for C-270 Source Reduction Remedial Action Project.
- # Complete site-wide sediment control removal action.
- # Complete North/South Ditch remedial action.
- # Complete characterization of Priority B DOE Material Storage Areas, and areas C-409-01/02.
- # Continue characterization of Priority A DOE Material Storage Areas.
- # Continue scrap metal removal action.
- # Continue field mobilization and removal of concrete foundation and contaminated soil at the former Kellogg Building in Solid Waste Management Unit 99.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

- # Continue permeable treatment zone treatability study and quarterly reports developed.
- # Continue C-sparge treatability study completion report.

Metrics			
Release Sites			
Cleanups	0	0	3
Key Milestones			
# Groundwater Operable Unit - Issue D1 proposed plan (May 2001).			
# Scrap metal - complete disposal of Drum mountain (June 2001).			
# Scrap Metal - Issue D1 Removal Action Workplan for Balance of Scrap (May 2001).			
# PA-6 - Equipment Relocation/Removal of Accessible Contamination in Building C-410 - Complete PBI milestones (September 2001).			
# Approve performance based incentive completion for the hard flow piping diversion for the North/South Diversion Ditch (May 2002).			
# Approve performance based incentive completion form for characterization of 12 Paducah DOE Material Storage Areas (September 2002).			

OR-543 / Paducah Surveillance and Maintenance 8,689 12,134 12,027

This project implements routine actions to ensure contaminated sites and facilities at the Paducah Gaseous Plant remain in a safe and protective state both before and after cleanup. This is accomplished through a systematic program to inspect and safely maintain facilities and release sites, conduct routine environmental monitoring and groundwater sampling, operate the groundwater pump and treat systems and provide drinking water to affected residents. As remedial actions are completed that result in residual contamination remaining in place, long-term stewardship surveillance and maintenance scope will progressively increase.

- # Provide water to residents north of the Plant affected by off-site contamination.
- # Continue groundwater pump and treat from northeast and northwest plumes.
- # Sample 161 residential and monitor wells.
- # Inspect C-340 and C-410 facilities and take necessary corrective actions for 212 release sites, pre- and post-remedial action areas.
- # Conduct Kentucky Pollutant Discharge Elimination System environmental monitoring and reporting.
- # Monitor, inspect, and maintain operating and closed landfills.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Meet regulatory reporting required by compliance agreements.

OR-553 / Paducah Waste Management **20,267 22,628 9,440**

This project safely stores, treats, and disposes of legacy waste in accordance with applicable laws and regulations. Waste steams include low-level, mixed low-level, hazardous, transuranic, Toxic Substances Control Act, and sanitary wastes. The waste streams have been ranked for treatment and disposal using a risk-based prioritized system.

Perform all waste storage activities to meet DOE requirements.

Continue operations of C-746-U landfill.

Characterize and disposal of 15,000 gallons of waste water.

Continue treatment of Site Treatment Plan mixed low-level waste and issue Site Treatment Plan quarterly and annual reports.

Dispose of Resource Conservation and Recovery Act/polychlorinated biphenyl/radioactive soft solids and liquids at Toxic Substances Control Act Incinerator.

Treat and discharge newly-generated organic waste waters.

Complete shipment of 70 cm^3 of treated waste to Envirocare.

Characterize, package, treat and dispose of newly generated mixed low-level waste and low-level waste.

Metrics			
Mixed Low-Level Waste			
Treatment (m^3)	0	71	16
Disposal (m^3)	3	474	35
Low-Level Waste			
Disposal (m^3)	4	0	0

OR-593 / Paducah Long-Term Contractor Liabilities - Decontamination and Decommissioning Fund **4,940 4,913 5,575**

This project provides Bechtel Jacobs Company, LLC support to DOE in the litigation activities and support of the Kentucky Agreement In Principle.

Support ongoing DOE litigation activities and Kentucky Agreement In Principle

(dollars in thousands)

FY 2001	FY 2002	FY 2003

OR-623 / Portsmouth Remedial Action **15,111 21,164 21,705**

During the cold war, the Portsmouth Gaseous Diffusion Plant was constructed to enrich uranium in support of both government and private programs. The Diffusion Plant recently operated (until plant was placed in cold standby status in FY 2001) under a lease agreement with the United States Enrichment Corporation, to produce enriched uranium for commercial applications. During DOE's operation of the plant, radiological and hazardous constituents were released from the process into the environment. This project, along with OR-643 will complete the DOE portion of the Environmental Restoration Program for the site. Additional Environmental Restoration will be required in support of decontamination and decommissioning of the plant: however, this is outside the scope of the current Life Cycle Baseline.

- # Initiate a human health and risk assessment study.
- # Construction of the X-749 Peter Kiewit Landfill five year corrective measures will be completed and construction of a barrier wall will be initiated.
- # The X-747H scrap yard project will package and dispose of approximately 3,800 tons of low-level contaminated scrap metal.

Metrics			
Release Site			
Cleanups	1	0	0

Key Milestones
Portsmouth Quadrant II Corrective Actions - QII X-701C Design/Build Complete (July 2001).
Approve performance based incentive completion form for completion of Portsmouth Quadrant I Corrective Actions (October 2002).

OR-643 / Portsmouth Surveillance and Maintenance **26,265 22,632 20,257**

This project implements routine actions to ensure contaminated sites and facilities at the Portsmouth Gaseous Diffusion Plant remain in a safe and protective state both before and after cleanup. This is accomplished through a systematic program to inspect and maintain facilities and release site conduct routine environmental monitoring, and operate groundwater treatment systems. As remedial actions are completed that result in residual contamination remaining in place, long-term stewardship scope will progressively increase.

- # Operate and maintain the ongoing groundwater program at the site in accordance with regulatory requirements.
- # Conduct long-term surveillance and maintenance of the remedial action units and decommissioning and decontamination facilities.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Complete the X-624 and X-523 facilities and process modification to increase the capacity of the facilities.

OR-653 / Portsmouth Waste Management **32,361** **36,552** **25,676**

This project safely stores, treats, and disposes of legacy waste in accordance with applicable laws and regulations. Waste streams include low-level, mixed low-level, hazardous, Toxic Substances Control Act, and sanitary.

Continue the safe storage of legacy mixed low-level waste and low-level waste, and dispose of sanitary and hazardous waste in accordance with regulations and permits.

Characterize, treat, and dispose of various low-level streams.

Metrics			
Mixed Low-Level Waste			
Disposal (m^3)	1,379	1,295	2,012
Low-Level Waste			
Disposal (m^3)	2,719	3,339	7,750
Key Milestones			
# Complete cutting and packaging for disposal of 2600 tons of contaminated scrap metal (August 2001).			

OR-693 / Portsmouth Long-Term Contractor Liabilities **774** **9,357** **500**

This project provides Bechtel Jacobs Company, LLC support of ongoing DOE litigation activities.

Support ongoing DOE litigation.

Severance costs occurring in FY 2002 will no longer be required in FY 2003.

OR-893 / Directed Support - Decontamination and Decommissioning Fund **4,601** **3,675** **1,567**

This project provides support to DOE/Oak Ridge Operations Office in closing out previous obligations incurred by the former management and operations contractor and provides for the annual financial audit of Uranium Enrichment Decontamination and Decommissioning Fund.

The National Center of Excellence for Metal Recycle will continue to facilitate the recycle of metal throughout the DOE complex.

The audit of the Uranium Enrichment Decontamination and Decommissioning Fund will continue to be supported.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

The Lockheed Martin Energy Systems contract closeout will continue closing subcontracts, supporting litigation activities etc.

Funding is provided for the Agreements in Principle with the State of Tennessee and the Commonwealth of Kentucky.

Total, Oak Ridge	273,987	298,641	234,523

Explanation of Funding Changes

	FY 2003 vs. FY 2002 ($000)
OR-193 / Long-Term Contractor Liabilities - Decontamination and Decommissioning Fund	
# Additional funding for legacy documents and litigation.	671
OR-423 / East Tennessee Technology Park Remedial Action - Decontamination and Decommissioning Fund	
# Increase for the removal of K-1070A contaminated burial ground excavation	1,981
OR-433 / East Tennessee Technology Park Decontamination and Decommissioning Fund	
# Increased work on the K-25/K27 Building hazardous material abatement and equipment removal	8,866
OR-443 / East Tennessee Technology Park Surveillance and Maintenance - Decontamination and Decommissioning Fund	
# Level of effort funding.	1,184
OR-493 / East Tennessee Technology Park - Oak Ridge Operations Prime Contracts	
# In FY 2003, the Administration proposes to reduce this project to permit EM to accelerate risk reduction elsewhere	-33,209
OR-523 / Paducah Remedial Action	
# Continuation of activities at a reduced level of effort	-7,303
OR-543 / Paducah Surveillance and Maintenance	
# No significant change	-107

	FY 2003 vs. FY 2002 ($000)
OR-553 / Paducah Waste Management	
# Decrease due to less mixed low-level waste and low-level waste disposal	-13,188
OR-593 / Paducah Long-Term Contractor Liabilities	
# Increase in litigation activities	662
OR-623 / Portsmouth Remedial Action	
# Increased work on scrap metal disposal; corrective actions; and construction of barrier wall..	541
OR-643 / Portsmouth Surveillance and Maintenance	
# Decrease due to completion of winterization activities in FY 2002.	-2,375
OR-653 / Portsmouth Waste Management	
# Decrease due to less characterization of low-level waste streams and on-site treatment of waste water streams only.	-10,876
OR-693 / Portsmouth Long Term Contractor Liabilities	
# Severance costs occurring in FY 2002 will not be required in FY 2003.	-8,857
OR-893 / Directed Support - Decontamination and Decommissioning Fund	
# Reduction in support subcontracts because of fewer special projects planned.	-2,108
Total Funding Change, Oak Ridge	-64,118

Uranium/Thorium Reimbursement Program

Mission Supporting Goals and Objectives

Program Mission

The Uranium Enrichment Decontamination and Decommissioning Fund supports partial payment of Uranium/Thorium licensee claims, as required under Title X, Subtitle A of the Energy Policy Act of 1992. The Act directs that the Fund be used to reimburse operating uranium and thorium processing site licensees for the costs of their environmental cleanup at those sites, subject to a specific reimbursement limit. This payment is to cover the Federal Government's share of cleanup being carried out at specific active uranium and thorium processing sites. The Department compensates uranium site owners on a per-ton basis for the restoration costs for those tailings attributable to the Federal Government.

Program Goal

To ensure the Federal Government compensates the Uranium/Thorium licensees for the Federal Government's portion of cleanup costs at their sites.

Program Objective

The Uranium and Thorium Reimbursements will be distributed in the Spring of 2003 based on approved unpaid claims submitted through FY 2002. Reimbursements will be based on the review and audits of claims submitted by 13 uranium licensees and one thorium licensee.

Significant Accomplishments and Program Shifts

- Public Laws 104-259 and 105-388 increased the authorized reimbursement amount for uranium and thorium licensees from $270,000,000 and $40,000,000 to $350,000,000 and $140,000,000, respectively, for an aggregate amount of $490,000,000, uninflated.
- A total of $351,268,092 has been paid to licensees through FY 2001: ($205,154,575 to the 13 uranium licensees and $146,113,517 to the thorium licensee).
- Under existing Title X authority, requested funding along with prior year carryover will be sufficient to make planned reimbursements in FY 2003.
- The total reimbursement amount authorized under Title X to the thorium licensee ($146,000,000, includes

inflation adjustments) has been fulfilled. However, proposed legislation (H.R. 3343) which has been passed by the House, would increase thorium reimbursements an additional $225,000,000.

Funding Schedule

(dollars in thousands)

	FY 2001	FY 2002	FY 2003
HQ-4000 / Reimbursements to Uranium and Thorium Licensees under Title X of the Energy Policy Act of 1992	71,842	1,000	1,000
Total, Uranium Enrichment Decontamination and Decommissioning	71,842	1,000	1,000

Title X of the Energy Policy Act of 1992: Uranium/Thorium Reimbursement Program

Status of Payments through Fiscal Year 2001 and Estimated Future Payments

(dollars in thousands)

Licensees	Total Payments FY 1994-FY 2001	Approved but Unpaid Claim Balances After FY 2001 Payment [a]	Estimated Payments: FY 2001 through End of Program [b]	Estimated Unpaid Uranium Claim Balances in Excess of Dry Short Ton Ceilings at End of Program [c]
Uranium				
American Nuclear Corp. Site				
American Nuclear Corporation	807	0	20	0
State of Wyoming	1,218	0	626	0
Atlantic Richfield Company	32,306	0	0	0
Atlas Corporation/Moab Mill Reclamation Trust [d]	8,903	0	789	0
Cotter Corporation	2,391	854	736	927
Dawn Mining Company	3,124	0	4,740	0
Homestake Mining Company	35,540	0	17,410	0
Pathfinder Mines Corporation	7,532	0	1,167	0
Petromics Company	2,392	0	516	0
Quivira Mining Company	14,249	0	6,844	0
Tennessee Valley Authority	12,334	12,796	3,795	9,407

[a] All outstanding approved claims have been paid through FY 2001. These amounts are prior year approved claims for uranium licensees that exceed the mandated ceiling for reimbursable costs per dry short ton.

[b] These amounts are estimates of future claims provided by the licensees in early 2001.

[c] These amounts are estimates of approved claims that would be in excess of the uranium dry short ton ceiling at the end of the program. Under Sec. 1001.(b)(2)(E) of the Energy Policy Act of 1992, the Secretary may allow reimbursement of these claims if there is an excess of uranium reimbursement authority.

[d] Effective December 30, 1999, the Nuclear Regulatory Commission transferred the license from the Atlas Corporation to a newly created trust approved by a bankruptcy court. In FY 2000 and FY 2001, Title X payments were made to the trust. The license was terminated and DOE assumed title to the site in October 2001. The current trust is expected to be dissolved in early CY 2002, and a new trust will be formed and will be eligible for reimbursement of the remaining claim amount that is scheduled for approval in April 2002. That will be the final Title X liability for the Moab site.

		(dollars in thousands)		
Umetco Minerals Corporation-CO	43,270	6,280	13,313	10,132
Umetco Minerals Corporation-WY	13,568	0	7,305	1,617
Western Nuclear, Incorporated	27,521	631	4,177	0
Sub-total, Uranium	205,155	20,561	61,438	22,083
Thorium				
Kerr-McGee Chemical Corp	146,114	0	0	0
Sub-total, Thorium	146,114	0	0	0
Total, Uranium and Thorium	351,269	20,561	61,438	22,083

Detailed Program Justification

	(dollars in thousands)		
	FY 2001	FY 2002	FY 2003
HQ-4000 / Reimbursements to Uranium and Thorium Licensees under Title X of the Energy Policy Act of 1992	**71,842**	**1,000**	**1,000**

The project reimburses the 14 inactive uranium and thorium processing site licensees for a portion (the Federal related material determined to be at each site) of their costs of cleanup.

Provide for payment of approved Uranium/Thorium licensee claims for cleanup completed.

Total Uranium/Thorium Reimbursement	71,842	1,000	1,000

East Tennessee Technology Park Three-Building Decontamination and Decommissioning and Recycle Project Oak Ridge, Tennessee (OR-493)

Significant Changes

- The bulk of the project contingency will be utilized to cover the cost of the three following issues. (1) The Departmental decision to pay BNFL for contractually decontaminated nickel, carbon steel, copper, and aluminum returned to the Department of Energy (DOE). This was necessary to carry out the Departmental decision to prohibit the free release into commerce of volumetrically contaminated nickel and suspension of the release of surface contaminated metals. This has transferred the cost that was anticipated being recovered by BNFL from commercial markets to DOE. This also increases the cost of independent verification and other project support cost. The cost is reflected as contingency because DOE has not finalized contract modifications on this issue and does not know the duration of the suspension and/or moratorium. In addition, the exact quantity of nickel and other metals to be returned to DOE is only an estimate at this time. (2) Additional process and support material quantities of approximately 12 percent within building K-33 and K-31 above the contract base estimate have been verified. (3) Additional security requirements resulting from September 11, 2001, and processing material that had been previously stored in K-31 and K-33 buildings prior to contract award above the estimated 190 tons. The processing and the costs for the Department to purchase contractually decontaminated metals have limited the impact of these changes on the Department's fixed price contract with BNFL. They have resulted in increases to the technical support cost, but should stay within the existing contingency and the Department's Total Project Cost (TPC).
- Technical and contractual evaluations and subsequent renegotiation of the contract to incorporate a Departmental decision to prohibit free release of volumetrically-contaminated nickel, material quantity overrun, and miscellaneous other contract items are underway and should be completed by the end of FY 2002.

1. Construction Schedule History

	Fiscal Quarter				Total Estimated Cost ($000)	Total Project Cost ($000)
	A-E Work Initiated	A-E Work Completed	Mobilization Start	Physical Construction Complete		
FY 1999 Budget Request	N/A	N/A	4Q 1997	1Q 2004	272,126	283,866
FY 2000 Budget Request *(Current Baseline Estimate)*	N/A	N/A	4Q 1997	1Q 2004	284,298	284,298
FY 2001 Budget Request	N/A	N/A	4Q 1997	4Q 2004	295,198	295,198
FY 2002 Budget Request	N/A	N/A	4Q 1997	1Q 2005	348,085	348,085 [a]
FY 2003 Budget Request	N/A	N/A	4Q 1997	2Q 2004	348,085	348,085[a]

[a] Represents the original base amount of the BNFL contract of $263,351,887, plus approved baseline changes of $7,143,898 for a revised contract total of $270,495,785. To this amount a 23.1 percent contingency for potential fluctuations in the metals market, additional metal quantities, Departmental decisions on recycling, and other associated cost for a total BNFL contract and support cost of $348,085,000. This amount is net of the value of salvage material recovered by BNFL during decontamination and decommissioning activities, estimated at $16,920,415. In addition, this estimate includes project support costs of $24,486,618 for fencing, office moves and set up, contractor interface, independent verification team support, technical support, and miscellaneous documents.

2. Financial Schedule (Operating Expense Funded)

(dollars in thousands)

Fiscal Year	Appropriations	Obligations	Cost
1997	8,399	8,399	6,937
1998	19,599 [a]	19,599	16,789 [b]
1999	44,000 [c]	44,000	46,457
2000	62,500	62,500	25,105
2001	38,101 [d]	38,101	60,819
2002	73,000 [e]	73,000	84,972
2003	41,520	41,520	46,040
2004	60,966	60,966	60,966

3. Project Description, Justification and Scope

The East Tennessee Technology Park gaseous diffusion process buildings were permanently closed in 1987, and the uranium enrichment mission transferred to the United States Enrichment Corporation at Portsmouth, Ohio, and Paducah, Kentucky. The three buildings of the project are filled with diffusion equipment which is contaminated with uranium and contains barrier material representing a classified technology requiring provisions for security and protection. The three buildings are currently unusable and require continuous surveillance and maintenance activities estimated to cost approximately $80,700,000 for the 10-year period FY 1997 through FY 2006 (estimate taken from *Engineering Evaluation/Cost Analysis*, DOE/OR/02-1579&D1, April 1997).

The challenge for this project is to link the ability to remove equipment/material and to clean up the buildings with some economically viable salvage/recycle of the equipment/material in an effort to lower the overall cost to

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[a] The FY 1998 Congressional Budget Request, Volume 5, dated February 1997, pg. 880, cited the subject project, beginning in FY 1997, and was included in the $54,189,000 for the East Tennessee Technology Park (K-25) Decommissioning in FY 1998; includes $1,125,000 of program management support and all funding associated with PBS OR-493 (UE D&D Fund).

[b] Includes approved Baseline Change Proposals and Option-I, Switchyard Demolition.

[c] Termination liability of $3,500,000 was transferred to more critical environmental management compliance projects for FY 1999. Funding will be restored within FY 2003 appropriations.

[d] FY 2001 funding request was reduced from $60,200,000 to $26,101,000 due to BNFL not making enough progress to require the higher level of funding. $12,000,000 supplemental funding was added to the FY 2001 total to equal $38,101,000.

[e] FY 2002 funding is $53,000,000, plus the $20,000,000 payback from the FY 2001 reprogramming.

the Government. The cost recovery portion of the project (the equipment and material) requires unique contractor capabilities due to the contamination present, the classified nature of much of the recyclable material, and the limited market for previously-contaminated material.

The East Tennessee Technology Park Three Building Decontamination and Decommissioning and Recycling Project encompasses Buildings K-29, K-31, and K-33. The three buildings contain approximately 45 percent of the five East Tennessee Technology Park Gaseous Diffusion Plant building materials.

The following table summarizes the quantity of contaminated or potentially contaminated metal planned to be removed from the facilities, decontaminated and processed as appropriate, and economically recycled.

East Tennessee Technology Park Three Building Decontamination and Decommissioning and Recycling Initiative Quantity Data

	(building)		
	K-29	K-31	K-33
Building Size (Gross Sq. Ft.) . . .	451,000	1,660,000	2,780,000
Metal Quantities for Processing [a]			
Fe Metals (Tons)	10,624	31,678	62,489
Nickel (Tons)	692	1,563	3,752
Copper (Tons)	1,165	2,810	7,036
Aluminum (Tons)	899	2,301	4,140

The scope of the East Tennessee Technology Park Three-Building Decontamination and Decommissioning and Recycle Project includes the following:

- perform decontamination and decommissioning and recycle under fixed-price contract;
- perform surveillance and maintenance services;
- remove all process equipment and materials from the three buildings;
- decontaminate vacant areas within the buildings to industrial reuse standards;
- decontaminate and recycle the majority of materials and equipment;
- disposal of all waste; and
- provide the buildings ready for industrial occupancy as they are completed.

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[a] 10,557 tons of additional aluminum, carbon steel, and copper above the listed quantities in the three buildings. The schedule and cost impact has not been negotiated.

The three building concept is the beginning of full decontamination and decommissioning of the five East Tennessee Technology Park gaseous diffusion plant buildings. The concept directly supports reindustrialization of the East Tennessee Technology Park, which is targeted as an essential mission by DOE resulting in accelerated cleanup, cost savings, and indirect benefits to the Oak Ridge work force and community. The Department has signed an agreement with the Community Reuse Organization of East Tennessee to encourage utilization of the East Tennessee Technology Park site. This agreement allows the Community Reuse Organization of East Tennessee to lease the East Tennessee Technology Park facilities from DOE and in turn sublease them to outside companies to use them for a variety of activities. The three buildings of the proposed concept will be leased to the Community Reuse Organization of East Tennessee, one by one, as soon as building decontamination is completed.

The intent of this project is to find the best economical match between the Government's desire to have the three buildings cleaned up and available for alternative use, and to minimize the overall cost of accomplishing the task. BNFL in fulfilling this charge, brings their expertise in cleaning up similar diffusion facilities at Capenhurst, Great Britain. The decontamination and recycle enterprises will be negotiated and established by BNFL. Recyclable materials will be recovered and delivered to these enterprises in forms that meet the acceptance and fulfill the specialized and focused needs of BNFL's business associates.

In this concept, BNFL and its subcontractors have expertise in each of the decontamination and decommissioning, recycle, and waste disposal areas needed to perform the scope of work described above. BNFL was selected through a competitive process, whereby, an announcement was published in the Commerce Business Daily requesting expressions of interest from all parties desiring to perform the decontamination and decommissioning of the three process buildings. Several responses were received, but only BNFL met all the terms set forth in the published announcement. Therefore, BNFL was awarded a fixed-price contract for delivering vacant and decontaminated buildings to DOE/Oak Ridge Operations Office. The work will be performed utilizing external licensing by the Tennessee Department of Environment and Conservation (which has Nuclear Regulatory Commission oversight responsibilities in Tennessee) and under the Office of Safety and Health Administration rules (off-site) and DOE oversight (on-site) utilizing Work Smart Standards.

In this approach, savings occur (estimated at approximately $450,000,000 over the traditional management and operating approach) due to a combination of efforts including: 1) reduced engineering and management overhead and fees; 2) reduced surveillance and maintenance cost; 3) efficiencies in the approach to recycle and building decontamination based on BNFL's successful experiences at Capenhurst; 4) reduced contingency due also to BNFL's experience and confidence based on Capenhurst decontamination and decommissioning; and 5) DOE's assignment of all materials in the three buildings to BNFL. In return for these benefits, BNFL takes responsibility for recycle/salvage activities through whatever means BNFL selects, including waste containers or other products fabricated from recycled metal. BNFL is following an approach that disposes of more low-valued metal than in the previous approach; and BNFL is using the least-net-cost method for decontamination and recycle of other assets.

Additional benefits to the Department from the East Tennessee Technology Park Three Building Decontamination and Decommissioning and Recycle Project includes:

- Reduced risk to the public, workers, and the environment by accomplishing decontamination and decommissioning of the buildings sooner than planned. Risk is related to the deposited uranium products left in the gaseous diffusion plant systems at shutdown, coupled with the fact that neither the systems nor buildings are designed for long-term storage of nuclear materials.
- Risk is assumed by the contractor during cleanup, including risks of waste handling and disposal.
- Removal of process systems eliminates fissile material hold-ups as well as risk of potential criticality accidents. This is consistent with requirements within the Defense Nuclear Facilities Safety Board 94-1 Implementation Plan.
- The approach leaves buildings standing that will be used by DOE and the Community Reuse Organization of East Tennessee in efforts to reindustrialize the East Tennessee Technology Park.
- The approach results in the further establishment and verification of efficient decontamination and decommissioning methods that will be made available to DOE for use at other facilities.

4. Details of Cost Estimate

(dollars in thousands)

	Current Estimate	Previous Estimate
Design Phase		
None	0	0
Total, Engineering, Design, Inspection, and Administration of Construction Costs	0	0
Construction Phase		
Removal cost less salvage (BNFL contract)	270,496	270,496
Project Support Costs (9.1% of the contract)	24,486 [a]	15,172
Total, Construction Costs	294,982	285,668
Contingencies		
Construction Phase (19.6% of the contract)	53,103	62,417
Total, Costs (TEC & TPC)	348,085 [b]	348,085

The National Academy of Sciences recommendation (*Affordable Cleanup?*, February 1996) included a least cost scenario to accomplish the East Tennessee Technology Park gaseous diffusion plant decontamination and

[a] $9,314,000 increase in project support costs are due to crane repairs in K-31 and K-29 being shifted to BJC from BNFL and material processing cost to store metal. This was shifted from contingency. The $9,314,000 decrease was transferred to project support costs.

[b] This estimate for the contracting approach is expected to provide a cost savings/avoidance of approximately $450,000,000 compared to the traditional management and operating approach.

decommissioning program. While the National Academy of Sciences did not intend for the *Affordable Cleanup?* document to represent a detailed cost estimate, a scaling exercise is included that bounds the 5-building cleanup in the range from $510,770,000 to $935,960,000. This bound can be pro-rated to a 3-building bound with the range from $204,308,000 to $374,484,000 with a mid-point of $289,396,000. These estimates are unescalated dollars, the mid-point amount escalated is $321,438,000.

5. Method of Performance

BNFL will finance the project, design the decontamination facilities, apply for and receive required permits and licenses, construct necessary facilities and bring them on-line, operate the facilities to decontaminate metals and equipment, salvage metal and equipment, and deactivate the decontamination facilities. BNFL will recover the resources it has invested both through recycle activities and through the delivery of vacated and decontaminated building space paid for by DOE on a fixed-unit-price basis. The underlying intent is to transfer the primary share of the financial, performance, and operational responsibility from the government to BNFL.

6. Schedule of Project Funding

(dollars in thousands)

	Prior Years	FY 2001	FY 2002	FY 2003	Outyears	Total
Project Cost						
Facility Cost						
Design	0	0	0	0	0	0
Construction	95,288	60,819	84,972	46,040	60,966	348,085
Total Facility Cost	95,288	60,819	84,972	46,040	60,966	348,085
Other Project Cost						
Conceptual design costs	0	0	0	0	0	0
NEPA documentation costs	0	0	0	0	0	0
Other project-related costs	0	0	0	0	0	0
Total other project costs	0	0	0	0	0	0
Total, Project Costs	95,288	60,819	84,972	46,040	60,966	348,085
LESS: Non-Federal contribution	0	0	0	0	0	0
Total Project Cost (TPC)	95,288	60,819	84,972	46,040	60,966	348,085

7. Related Annual Funding Requirements

(dollars in thousands)

	Current Estimate	Previous Estimate
Annual Facility operating costs	N/A	N/A
Annual Facility maintenance and repair costs	N/A	N/A
Total related annual funding [a]	N/A	N/A

8. Background Issue

This contract is a negotiated fixed-price contract with BNFL to cleanup three of the five gaseous diffusion buildings at the East Tennessee Technology Park. BNFL will provide sufficient financing until elements of performance are completed, i.e., portions of the buildings are cleaned up. Payments will be made to BNFL upon completion of equipment removal from individual portions of the buildings and other payments after each building is decontaminated. The offset from the recycling initiative, based on fair market value, is adjustable if prices as indexed on the American Metals Market fluctuate more than five percent from the prices negotiated

[a] Because this is not a construction project, there are no related annual maintenance and repair costs.

as part of the contract. Changes above or below five percent shall be split between DOE and the contractor. This will occur 17 times in the course of the contract.

9. Contracting Authority

The authority for DOE to enter into this contract is found at 42 U.S.C. § 7256(c). Authority for DOE to offset against the contract price paid to BNFL the cost of proceeds that BNFL receives from the sale of property it acquires as partial consideration for the contract work is found in Subpart 37.3, "Dismantling, Demolition, or Removal of Improvements" of the Federal Acquisition Regulation and in 40 U.S.C. § 485(e) of the Federal Property and Administrative Services Act of 1949, as amended.

Authority for the Federal Acquisition Regulation Subpart 37.3 is found in 40 U.S.C. § 486(c). See 48 Federal Register 42365 (Sept. 19, 1983). The Federal Acquisition Regulation Subpart 37.3 provides that when the Government pays a contractor to dismantle or demolish structures, in further consideration of contract performance, title to property to be dismantled or demolished maybe transferred to the contractor, and the value of this property will be considered when determining payment to the contractor. See Federal Acquisition Regulation 37.303; Federal Acquisition Regulation 37.304(a); Federal Acquisition Regulation 52.237-4. Federal Acquisition Regulation Subpart 37.3 is applicable to this contract because the contract requires BNFL to dismantle, demolish and remove the interiors of the three process buildings at the East Tennessee Technology Park. In consideration for this work, BNFL will receive a fixed price and title to the property in the three process buildings. BNFL intends to recycle and sell a certain amount of this property. The fixed price paid by DOE will reflect credit of a dollar amount that the parties agree reflects the expected value of the recycled property; i.e., the proceeds received by BNFL from the sale of the property it has received as partial consideration for its work under the contract.

40 U.S.C. § 485(a) provides that proceeds from any "disposition of surplus property" shall be sent to the Treasury as miscellaneous receipts unless one of the exceptions set forth in 40 U.S.C.§ § 485(b), (c), (d) or (e) is applicable. Section 485(e) is applicable to the use of proceeds from the disposition of property by BNFL under the contract. This section provides that "any contract" entered into by an executive agency such as DOE may authorize that "any sale of property in the custody of the contractor be credited to the cost or price of the work covered by such contract . . ." DOE therefore may credit the proceeds from the sale of property provided to BNFL under this decontamination and decommissioning contract as partial consideration for the contract work against the total fixed price paid by DOE to BNFL.

The Department of Energy and BNFL anticipate that the property to be provided to BNFL as partial consideration for BNFL's work will contain metals that can be recycled and subsequently sold. However, since DOE and BNFL expect that most of these metals are contaminated with radionuclides and other substances (e.g., PCB’s) and many are in a classified configuration, the metals must be decontaminated and declassified before they can be recycled. Most of the fixed contract price will reflect the considerable decontamination and associated work that must be performed by BNFL. This work therefore is deemed to be outside the intent of the language under the section entitled "Use of Receipts From Leasing or Selling Government Property or Assets" in Title III of both the Energy and Water Development Appropriations Bill, 1997 (H. R. Rep.

104-679) and the Conference Report entitled "Making Appropriations for Energy and Water Development for The Fiscal Year Ending September 30, 1997, And for Other Purposes" (H. R. Rep.104-782).

The DOE/Oak Ridge Operations Office Contracting Officer for the East Tennessee Technology Park Three-Building Decontamination and Decommissioning and Recycling Project has evaluated and deemed it to be in the "Best Interest" of the Government to utilize the property generated by the dismantling and demolition activities as part of the compensation to be provided the contractor for decontamination and decommissioning services. The reasons for utilizing this concept and subsequent determination are as follows:

- DOE has legal authority to enter into this contract.
- The intent of this project is to find the best economical match between the Government's desire to clean the three buildings up and to minimize the overall cost of the task.
- The cost recovery aspects of the equipment and material in the project are not readily available due to the contamination present, the classified nature of much of the material, and the limited market for previously contaminated material.
- The material has no value in the current state of contamination and the Government has no use for the material.
- The expertise of BNFL in cleaning up similar diffusion facilities in Great Britain, their financial backing, and their industrial contacts.
- BNFL will negotiate and establish decontamination and recycle enterprises. Recyclable materials will be recovered and delivered to these enterprises in forms that meet the acceptance and fulfill the specialized and focused needs of BNFL's business associates.
- The DOE/Oak Ridge Operations Office does not have the expertise in house to recycle and market this material at a comparable cost. Substantial investment would be required, either in-house or through a separate contract to accomplish the same task.

10. Project Status (as of December 15, 2001)

- BNFL assumed responsibility for Buildings K-31 and K-33 on January 5, 1998, and Building K-29 on July 1, 1998.
- BNFL started process equipment dismantlement and removal on July 1, 1998.
- BNFL awarded Option-I, Dismantlement and Removal of K-31 and K-33 Switchyards, for net DOE cost of $196,432, and completed September 28, 2000.
- Overall cleanup of K-33 is in excess of 90 percent complete versus 100 percent scheduled.
- Overall project is 54 percent complete versus 72 percent scheduled.

- Dismantled and dispositioned 68,775 tons of metal, either as low-level waste or recycled metal, from K-33 and K-31.
- Dismantled 12,250 tons of additional metals that are waiting disposition through compactor, classified and/or UCNI disposal, or recycle in K-33.
- DOE has purchased and stored 2,934 tons of metal that meets contract release limits.
- Dismantled and dispositioned 4,615 tons of metal from two switchyards.
- BNFL awarded Option II to package and transport 20,000 drums (13,210 tons) of stabilized pond and Portsmouth soils waste out of K-31 and K-33 to Envirocare. Completed on April 13, 2000, at negotiated fixed-price cost with no changes.
- The Oak Ridge Operations Office has negotiated and approved fifteen baseline change proposals totaling $7,143,898.
- Line Item 1 completed on schedule, September 25, 1997.
- Line Item 2 completed November 13, 1998, four months behind schedule.
- Line Item 3 completed September 27, 1999, six months behind schedule.
- Line Item 4 completed on schedule, June 2, 1999.
- Line Item 5, completed 2nd cascade unit in K-33 on February 15, 2001, 14 months behind schedule.
- Line Item 6, completed 3rd cascade unit in K-33 on March 15, 2001, 14 months behind schedule.
- Line Item 7, completed 4th cascade unit in K-33 on February 20, 2001, 10 months behind schedule.
- BNFL started K-31 operating floor dismantlement on March 3, 2001, and cell floor converter disassembly on April 16, 2001.
- BNFL made first classified LLW shipment to NTS on April 12, 2001.
- Line Item 8, completed 5th cascade unit in K-33 on May 25, 2001, 10 months behind schedule.
- Line Item 9, completed 6th unit in K-33 on July 27, 2001, 10 months behind schedule.
- The BNFL supercompactor received full notice to proceed on March 2, 2001.

Other Uranium Activities

Program Mission

Other Uranium Activities support activities which include Maintenance of Facilities and Inventories, Pre-Existing Liabilities, the Depleted Uranium Hexafluoride Conversion Project, and placing the Portsmouth Gaseous Diffusion Plant in cold-standby.

Program Strategic Performance Goals

The goals of Other Uranium Activities are to: 1) manage the Office of Environmental Management's Uranium Program activities at Portsmouth, Ohio; Paducah, Kentucky; and Oak Ridge, Tennessee in a safe, economical, and environmentally sound manner; 2) complete the necessary activities to dispose of the current inventory of depleted uranium hexafluoride; and 3) continue research and development of beneficial uses for depleted uranium hexafluoride conversion products and other materials which is required by the State of Ohio's Environmental Protection Agency's Director's Findings of Facts and Orders. The EM program will:

- Manage enriched uranium inventories removed from the Portsmouth gaseous diffusion plant to an offsite facility, manage the collection and disposal of polychlorinated biphenyl spills, and maintain facilities in a safe and environmentally-sound condition.
- Fund all financial liabilities associated with the operations of the Portsmouth and Paducah gaseous diffusion plants prior to the establishment and after the privatization of United States Enrichment Corporation.
- Manage the depleted uranium hexafluoride storage cylinders and other surplus uranium inventories in an environmentally responsible manner.
- Complete the design, National Environmental Policy Act and site preparation activities for the disposition of depleted uranium hexafluoride.
- Conduct research and development to find beneficial uses for depleted uranium forms and other materials to reduce future program costs.
- Place and maintain Portsmouth Gaseous Diffusion Plant in cold-standby.

Significant Accomplishments and Program Shifts

In 2001, the United States Enrichment Corporation placed the facilities at Portsmouth in cold-standby.

As background, in FY 1998, the Office of Nuclear Energy, Science and Technology received a total of $66,000,000 from United States Enrichment Corporation under two Memoranda of Agreement for the management and disposition of 11,212 depleted uranium hexafluoride storage cylinders transferred from United

States Enrichment Corporation to DOE. Between FY 2000 - FY 2001, $14,600,000 has been used to build new concrete depleted uranium hexafluoride cylinder storage yards at Paducah, Kentucky, and Portsmouth, Ohio, to accommodate these cylinders. The Department plans to use these Memoranda of Agreement funds combined with appropriations to fund this project.

Public Law 105-204 required the Secretary of Energy to prepare a plan to ensure that all amounts accrued on the books of the United States Enrichment Corporation for the disposition of depleted uranium hexafluoride will be used to treat and recycle this material consistent with the National Environmental Policy Act. The Department responded to this requirement by issuing the "Final Programmatic Environmental Impact Statement for Alternative Strategies for Long-Term Management and Use of Depleted Hexafluoride" in July 1999. The preferred alternative for managing depleted uranium hexafluoride is to begin conversion of the depleted uranium hexafluoride inventory for use or long-term storage. The Record of Decision concerning the Department's long-term management of the use of depleted uranium hexafluoride was issued in August 1999. The Department will initiate project-specific environmental impact statements and activities to convert the depleted uranium hexafluoride inventory to a more stable form. The Department intends to complete National Environmental Policy Act review prior to initiating depleted uranium hexafluoride disposition activities.

Additionally, in response to DOE independent investigations of environment, safety and health issues, EM developed and implemented corrective action plans to resolve criticality safety concerns, improve DOE management and oversight and other health and safety issues at Paducah, Portsmouth and East Tennessee Technology Park.

Funding Profile

(dollars in thousands)

	FY 2001 Comparable Appropriation	FY 2002 Original Appropriation	FY 2002 Adjustments	FY 2002 Comparable Appropriation	FY 2003 Request
Other Uranium Activities					
Depleted Uranium Hexafluoride Conversion Project	3,306	10,000	0	10,000	10,000
Maintenance of Facilities and Inventories/Pre-Existing Liabilities	64,967	113,784	0	113,784	136,631
Total, Other Uranium Activities	68,273	123,784	0	123,784	146,631

Funding by Site

(dollars in thousands)

	FY 2001	FY 2002	FY 2003	$ Change	% Change
Oak Ridge Operations Office	68,273	123,784	146,631	22,847	18.5%
Total, Other Uranium Activities	68,273	123,784	146,631	22,847	18.5%

Oak Ridge

Mission Supporting Goals and Objectives

Program Mission

The Oak Ridge Operations Office manages the Other Uranium Activities. These activities include the Maintenance of Facilities and Inventories, Pre-Existing Liabilities, the Depleted Uranium Hexafluoride Conversion Project and related research and development and placing the Portsmouth Gaseous Diffusion Plant in cold standby.

The Maintenance of Facilities and Inventories activities for East Tennessee Technology Park, Paducah and Portsmouth Gaseous Diffusion Plants, includes the uranium hexafluoride cylinder inspection program; maintaining the uranium hexafluoride cylinder yard environmental and radiological monitoring programs; routine re-stacking and relocation of cylinders to place the cylinders in improved storage conditions; required preventive corrective maintenance associated with the cylinders, cylinder storage yards, and cylinder holding equipment; and disposition of legacy cylinder debris/waste and the disposal of empty cylinders. This program also provides for the surveillance and maintenance of DOE leased and non-leased facilities, cleaning legacy polychlorinated biphenyls spills in the leased areas of the diffusion sites consistent with the Federal Facilities Compliance Act, maintaining nuclear safety authorization basis documents, and managing the highly enriched uranium program at Portsmouth. Activities at Portsmouth include placing and maintaining the facilities in cold-standby.

The Pre-Existing Liabilities includes activities and expenses associated with Post Retirement Life and Medical Benefits and Long Term Disability Benefits to transitioned Bechtel Jacobs Company employees supporting enrichment facilities programs while working as first or second tier subcontractors. It also covers pre-April 1, 1998, retirees associated with enrichment facilities and employees on long term disability prior to April 1, 1998. These benefits are applicable to Paducah Gaseous Diffusion Plant employees prior to the lease agreement with the United States Enrichment Corporation and the DOE in July 1993. These benefits are also applicable to retirees of the Ohio Valley Electric Company and contractor employees with service at the Portsmouth Gaseous Diffusion Plant prior to the lease agreement with United States Enrichment Corporation and the DOE in July 1993. This scope has been expanded to include retired employees working at both Paducah and Portsmouth Gaseous Diffusion Plants prior to the date of United States Enrichment Corporation privatization.

The depleted uranium hexafluoride conversion project will convert the depleted uranium hexafluoride to a less hazardous form for reuse or disposal. DOE currently stores 680,000 metric tons of depleted uranium as solid depleted uranium hexafluoride. This inventory is maintained at the Paducah, Kentucky and Portsmouth, Ohio gaseous diffusion plants and the East Tennessee Technology Park in Oak Ridge, Tennessee. Included in this project is sale or disposal of lessor natural and low enriched inventories of depleted uranium hexafluoride at these sites. This project includes activities necessary to convert depleted uranium hexafluoride to another form;

the shipment of depleted uranium hexafluoride inventories; the disposition of conversion products, and decontamination and decommissioning activities within a 30-year period.

Program Goals

- Manage Office of Environmental Management's Uranium Program activities at Portsmouth, Ohio; Paducah, Kentucky; and Oak Ridge, Tennessee in a safe, economical, and environmentally-sound manner.
- Place and maintain the Portsmouth Plant in cold-standby including winterization of facilities, uranium deposit removal and associated activities.

Program Objectives

- Manage the highly enriched uranium oxides inventory removed from the gaseous diffusion plants to an offsite facility, manage the collection and disposal of polychlorinated biphenyls spills at the leased gaseous diffusion plants, and maintain the non-leased facilities in a safe and environmentally-sound condition.
- Manage the pre-existing liabilities incurred before the privatization of United States Enrichment Corporation in 1993 and as further defined by the memorandum of agreement between Office of Management and Budget and United States Enrichment Corporation, dated April 6, 1998.
- Manage the depleted uranium hexafluoride storage cylinders and other surplus uranium inventories in an environmentally responsible manner by conducting cylinder inspections, moving cylinders to properly spaced storage locations on upgraded, concrete storage yards, coating cylinders to inhibit corrosion, and developing and implementing options to repair cylinders exhibiting accelerated corrosion.
- Conduct site preparation activities to dispose of depleted uranium hexafluoride.
- Maintain the Portsmouth Plant in cold-standby safely and efficiently.

Significant Accomplishments and Program Shifts

Depleted Uranium Hexafluoride Conversion Project and Research and Development

- The National Environmental Policy Act documentation for project specific determinations at Paducah and Portsmouth will continue (FY 2001).
- DOE is to award a new prime contract for activities to dispose of depleted uranium hexafluoride (FY 2002).
- The design and construction will be executed according to the prime contractors agreed upon schedule (FY 2002).
- Completion of the National Environmental Policy Act process, and obtaining Acquisition Executive (S-2) approval to proceed with detailed design (FY 2002).

Continue research and development efforts on beneficial uses of depleted uranium conversion products (FY 2002).

Maintenance of Facilities and Inventories

East Tennessee Technology Park

Continue management of polychlorinated biphenyl activities to maintain compliance with the Toxic Substances Control Act, the Uranium Enrichment Toxic Substance Control Act Federal Facilities Compliance Agreement, DOE orders and other requirements (FY 2001/FY 2002).

Support for annual Reports to Congress on status of environmental, safety, and health conditions at the Gaseous Diffusion Plants, and Safety Analysis Report update for non-leased facilities (FY 2001/FY 2002).

Continue to relocate cylinders from substandard storage conditions; recoat worst case depleted uranium hexafluoride cylinders to provide a barrier between the cylinder wall and the moist environment (FY 2001/FY 2002).

Conduct annual inspections, quadrennial inspections, and wall thickness inspections at East Tennessee Technology Park (FY 2001/FY 2002).

Management and general maintenance and repair of an estimated 7,200 cylinders which includes 4,700 of depleted uranium hexafluoride cylinders and other uranium cylinders located on three yards at East Tennessee Technology Park (FY 2001/FY 2002).

Paducah Gaseous Diffusion Plant

Continue management of polychlorinated biphenyl activities to maintain compliance with the Toxic Substances Control Act, the Uranium Enrichment Toxic Substance Control Act Federal Facilities Compliance Agreement, DOE orders and other requirements (FY 2001/FY 2002).

Support for annual Reports to Congress on status of environmental, safety, and health conditions at the Gaseous Diffusion Plants, and Safety Analysis Report update for non-leased facilities (FY 2001/FY 2002).

Continue correct maintenance and inspection of 15 inactive facilities at the Paducah Site (FY 2001/FY 2002).

Continue to relocate cylinders to improve storage conditions (FY 2001/FY 2002).

Conduct annual inspections, quadrennial inspections, and wall thickness inspections at Paducah (FY 2001/FY 2002).

Management and general maintenance and repair of an estimated 40,200 cylinders which includes 36,910 of depleted uranium hexafluoride cylinders and other uranium cylinders located on 12 yards at Paducah (FY 2001/FY 2002).

Portsmouth Gaseous Diffusion Plant

- Place and maintain facility in cold-standby (FY 2001/FY 2002).
- Offsite storage and processing of highly enriched uranium (FY 2001/FY 2002).
- Oversight and management of the highly enriched uranium deposit removal program (FY 2001/FY 2002).
- Corrective maintenance and inspection of six active and fourteen inactive facilities at the Portsmouth site (FY 2001/FY 2002).
- Continue management of polychlorinated biphenyl activities to maintain compliance with the Toxic Substances Control Act, the Uranium Enrichment Toxic Substance Control Act Federal Facilities Compliance Agreement, DOE orders and other requirements (FY 2001/FY 2002).
- Support for annual Reports to Congress on status of environmental, safety, and health conditions at the Gaseous Diffusion Plants, and Safety Analysis Report update for non-leased facilities (FY 2001/FY 2002).
- Continue to relocate cylinders to improve storage conditions; recoat worst case depleted uranium hexafluoride cylinders to provide a barrier between the cylinder wall and the moist environment (FY 2001/FY 2002).
- Conduct annual inspections, quadrennial inspections, and wall thickness inspections at Portsmouth (FY 2001/FY 2002).
- Management and general maintenance and repair of an estimated 18,000 cylinders (FY 2001/FY 2002).
- Characterization, shipping and disposal activities for depleted hexafluoride cylinders (FY 2001/FY 2002).

Pre-Existing Liabilities

- At the Oak Ridge Reservation, funding for the contractual liability for Lockheed Martin Energy Systems and Bechtel Jacobs, LLC, post-retirement life and medical expenses for employees with service prior to the privatization of the United States Enrichment Corporation in 1993, as further defined by the Memorandum of Agreement between the Office of Management and Budget and the United States Enrichment Corporation, dated April 6, 1998, was provided in FY 2001 and will be provided in FY 2002.
- At the Paducah Gaseous Diffusion Plant, contractual liability for Lockheed Martin Energy Systems post-retirement life and medical expenses for employees with service prior to the privatization of the United States Enrichment Corporation in 1993, as further defined by the Memorandum of Agreement between the Office of Management and Budget and the United States Enrichment Corporation, dated April 6, 1998, was provided in FY 2001 and will be provided in FY 2002.
- At the Portsmouth Gaseous Diffusion Plant, contractual liability for Lockheed Martin Energy Systems and the Ohio Valley Electric Corporation post-retirement life and medical expenses for employees with service prior to the privatization of the United States Enrichment Corporation in 1993, as further defined by the Memorandum of Agreement between the Office of Management and Budget and the United States Enrichment Corporation, dated April 6, 1998. Support the United States Enrichment Corporation

severance costs related to the shutdown of the Plant was provided in FY 2001 and will be provided in FY 2002.

Funding Schedule

(dollars in thousands)

	FY 2001	FY 2002	FY 2003
Depleted Uranium Hexafluoride Conversion Project			
OR-9C3 / Uranium Hexafluoride Conversion Facility	3,306	10,000	10,000
Maintenance of Facilities & Inventories			
OR-4M3 / East Tennessee Technology Park Uranium Facilities Maintenance	5,455	12,000	16,381
OR-5M3 / Paducah Uranium Facilities Maintenance	10,508	12,642	15,853
OR-6M3 / Portsmouth Uranium Facilities Maintenance	35,699	77,358	92,323
Pre-Existing Liabilities			
OR-1P3 / Oak Ridge Reservation Pre-Existing Liabilities	675	809	799
OR-5P3 / Paducah Pre-Existing Liabilities	2,996	3,784	3,884
OR-6P3 / Portsmouth Pre-Existing Liabilities	9,634	7,191	7,391
Total, Oak Ridge	68,273	123,784	146,631

Funding by Site

(dollars in thousands)

	FY 2001	FY 2002	FY 2003	$ Change	% Change
East Tennessee Technology Park	5,455	12,000	16,381	4,381	36.5%
Depleted Uranium Hexafluoride	3,306	10,000	10,000	0	0.0%
Oak Ridge Reservation	675	809	799	-10	-1.2%
Paducah Gaseous Diffusion Plant	13,504	16,426	19,737	3,311	20.2%
Portsmouth Gaseous Diffusion Plant	45,333	84,549	99,714	15,165	17.9%
Total, Oak Ridge	68,273	123,784	146,631	22,847	18.5%
Total, Uranium Programs	68,273	123,784	146,631	22,847	18.5%

Site Description

East Tennessee Technology Park

The activities at the East Tennessee Technology Park, located on approximately 1,500 acres in Oak Ridge, Tennessee, include nuclear safety activities required to meet Departmental obligations under the Energy Policy Act of 1992 by assisting the Nuclear Regulatory Commission in the preparation of an annual report to Congress on the status of health, safety, and environmental conditions at the gaseous diffusion plants; and depleted uranium hexafluoride cylinder maintenance activities including storage of the existing inventory of approximately 4,700 depleted uranium hexafluoride cylinders and 2,500 other surplus uranium cylinders in a safe manner.

Oak Ridge Reservation

The Oak Ridge Reservation encompasses about 37,000 acres and is comprised of three facilities: the Y-12 Plant; the East Tennessee Technology Park; and the Oak Ridge National Laboratory. The only activity in this budget is to administer the Pre-Existing Liabilities for employees who transitioned to Bechtel Jacobs, LLC.

Paducah Gaseous Diffusion Plant

The activities at the Paducah Gaseous Diffusion Plant, located on just over 3,500 acres near Paducah, Kentucky, include: (1) oversight activities associated with the execution of the depleted uranium hexafluoride cylinder maintenance operations; (2) review and update of Safety Analysis Reports as necessary, and assistance with the preparation of Nuclear Regulatory Commission's annual report to Congress; (3) the maintenance of non-leased facilities which includes efforts at both active and inactive facilities to protect the environment, protect the safety and health of workers and the public and to perform biological monitoring activities; and (4) the polychlorinated biphenyls program which includes activities related to achieving and maintaining compliance with the Toxic Substance Control Act of 1976, the Uranium Enrichment Toxic Substances Control Act of 1976, Federal Facilities Compliance Agreement, and DOE Orders and other applicable requirements. Specific polychlorinated biphenyls activities which include oversight of the collection and containment system, management of Toxic Substance Control Act of 1976 regulated polychlorinated biphenyls spill sites, and management of waste generated from these activities.

Portsmouth Gaseous Diffusion Plant

The activities at the Portsmouth Gaseous Diffusion Plant, located on 3,714 acres near Portsmouth, Ohio, include: (1) oversight activities associated with the execution of the depleted uranium hexafluoride cylinder maintenance operations; (2) the highly enriched uranium equipment shutdown and inventory disposition program which removes all highly enriched uranium materials (materials with assays greater than 20 percent) from the Portsmouth site, as well as buffering shut down production equipment for nuclear criticality safety purposes, program and business management, safety authorization basis management, and other technical support associated with highly enriched uranium material; (3) review and update Safety Analysis Reports as necessary, and assistance with the preparation of Nuclear Regulatory Commission's annual report to Congress; (4) the maintenance of non-leased facilities which includes effort in both active and inactive facilities to protect the environment and the safety and health of personnel; and (5) the polychlorinated biphenyls program which includes activities related to achieving and maintaining compliance with Toxic Substances Control Act of 1976, the Uranium Enrichment Toxic Substance Control Act of 1976, Federal Facilities Compliance Agreement, and DOE Orders and other applicable requirements; and (6) placing and maintaining facilities in cold-standby. Specific polychlorinated biphenyls activities include oversight of the collection and containment system, management of Toxic Substance Control Act of 1976 regulated polychlorinated biphenyls spill sites, and management of waste generated from these activities.

Detailed Program Justification

(dollars in thousands)

FY 2001	FY 2002	FY 2003
OR-9C3 / Depleted Uranium Hexafluoride Conversion Project	**3,306**	**10,000**	**10,000**

This project converts the depleted uranium hexafluoride to a less hazardous form for reuse or disposal. DOE is responsible for 700,000 metric tons of depleted uranium as solid depleted uranium hexafluoride. This inventory is maintained at the Paducah, Kentucky and Portsmouth, Ohio gaseous diffusion plants and the East Tennessee Technology Park in Oak Ridge, Tennessee. Included in this project is sale or disposal of lessor natural and low enriched inventories of depleted uranium hexafluoride at these sites. This project includes activities necessary to dispose of depleted uranium hexafluoride; the shipment of depleted uranium hexafluoride inventories; the disposition of conversion products; and decontamination and decommissioning of equipment used for the disposition, within a 30 year period.

- Complete site specific National Environmental Policy Act analyses.
- Complete project design
- Continue research and development into beneficial uses of depleted uranium conversion products.

Key Milestones

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Depleted Uranium Hexafluoride Conversion Activities - Complete project design (September 2003).

OR-4M3 / East Tennessee Technology Park Uranium Facilities Maintenance 5,455 12,000 16,381

This project at the East Tennessee Technology Park includes the uranium hexafluoride cylinder inspection program, the uranium hexafluoride cylinder yard environmental and radiological monitoring programs, routine re-stacking and relocation of cylinders to place them in improved storage condition required preventive and corrective maintenance associated with the cylinders, cylinder storage yards, and cylinder handling equipment, the disposition legacy cylinder debris/waste, and the disposal of empty cylinders. The project maintains an estimated 7,200 uranium hexafluoride cylinders which includes about 4,700 depleted uranium hexafluoride and other uranium hexafluoride cylinders.

- # Continue activities involved with the uranium hexafluoride cylinder storage and maintenance at East Tennessee Technology Park.
- # Continue the support to the three site annual reports on Environment, Safety, and Health, Gaseous Diffusion Plant Regulator Oversight/Nuclear Regulatory Oversight, Gaseous Diffusion Plant Lease Administration, etc.

OR-5M3 / Paducah Uranium Facilities Maintenance 10,508 12,642 15,853

This project at the Paducah Gaseous Diffusion Plant maintains safe storage of the existing 40,200 uranium hexafluoride cylinders, provides surveillance and maintenance of DOE non-leased inactive facilities and land areas not addressed in PBS OR-523, manages the polychlorinated biphenyl project to maintain compliance with the Toxic Substances Control Act and Uranium Enrichment Toxic Substances Control Act, Federal Facility Compliance Agreement, and reviews and updates, as necessary, the authorization-basis documents for the DOE facilities to ensure they are current and remain applicable. There are a total of 15 inactive facilities and approximately 200 acres of land returned to DOE by the United States Enrichment Corporation.

- # Continue management of polychlorinated biphenyls activities.
- # Continue corrective maintenance and inspection of 15 inactive facilities.
- # Relocation DOE cylinders to improve storage conditions.
- # Personnel and materials necessary to monitor cylinder and storage yards.
- # Conduct annual inspections, quadrennial inspections, and wall thickness inspection.
- # Characterization, shipping and disposal activities for depleted uranium hexafluoride cylinders.
- # Management and general maintenance and repair of an estimated 40,200 cylinders.
- # Materials and personnel performing engineering development work necessary to sustain, optimize and enhance the cylinder storage and maintenance.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

Continue upgrading of safety analysis reports.

OR-6M3 / Portsmouth Uranium Facilities Maintenance 35,699 77,358 92,323

This project at the Portsmouth Gaseous Diffusion Plant maintains safe storage of the existing uranium hexafluoride cylinders, manages the polychlorinated biphenyls project, and reviews and updates, as necessary, the authorization basis documents for the DOE facilities to ensure they are current and remain applicable.

Continue operations to maintain the facility in cold-standby, including uranium deposit removal, maintain infrastructure and perform surveillance and maintenance.

Offsite storage and initiate processing of highly enriched uranium oxides.

Surveillance and maintenance activities plus power and utilities costs associated with the 158 permanently shut down cells building X-326.

Corrective maintenance and inspection of six active and 14 inactive facilities.

Management of polychlorinated biphenyl activities to comply with regulatory requirements.

Personnel and materials necessary to monitor cylinder and storage yards.

Recoat DOE cylinders to provide a barrier between the cylinder wall and the moist environment that contributes to the deterioration of the cylinder.

General maintenance and repair of an estimated 18,000 cylinders.

Initiate National Environmental Policy Act activities for shipping cylinders from East Tennessee Technology Park.

Continue upgrading of safety analysis.

Key Milestones
Definitize “cold-standby” contract with the United States Enrichment Corporation (December 2001).

OR-1P3 / Oak Ridge Reservation Pre-Existing Liabilities 675 809 799

This project includes activities and expenses associated with post retirement life and medical benefits and long-term disability benefits to transitioned Bechtel Jacobs Company employees who supported enrichment facilities programs while working as first or second tier subcontractors. It also covers pre- April 1, 1998, retiree costs associated with enrichment facilities programs and employees on long-term disabilities prior to April 1, 1998, associated with enrichment facilities programs.

Continue funding for the contractual liabilities.

(dollars in thousands)

FY 2001	FY 2002	FY 2003

OR-5P3 / Paducah Pre-Existing Liabilities 2,996 3,784 3,884

This project includes activities and expenses associated with post retirement life and medical benefits applicable to retirees and contractor employee with service at the Paducah Gaseous Diffusion Plant prior to the lease agreement between the United States Enrichment Corporation and DOE in July 1993. This scope has been expanded to include retired employees working at the Gaseous Diffusion Plant prior to the date of the United States Enrichment Corporation privatization and as further defined by the Memorandum of Agreement between the Office of Management and Budget and United States Enrichment Corporation, dated April 6, 1998.

Continue funding for the contractual liabilities.

OR-6P3 / Portsmouth Pre-Existing Liabilities 9,634 7,191 7,391

This project includes activities and expenses associated with post retirement life and medical benefits applicable to retirees of the Lockheed Martin Energy Systems and the Ohio Valley Electric Company and contractor employees with service at the Portsmouth Gaseous Diffusion Plant prior to the lease agreement between United States Enrichment Corporation and DOE in July 1993. This scope has been expanded to include retired employees working at the Gaseous Diffusion Plant to the date of the United States Enrichment Corporation privatization as further defined by the memorandum of agreement between the Office of Management and Budget and United States Enrichment Corporation, dated April 6, 1998.

Continue funding for the contractual liabilities.

Support United States Enrichment Corporation severance costs related to the shutdown of Portsmouth Gaseous Diffusion Plant.

Total, Other Uranium Activities 68,273 123,784 146,631

Explanation of Funding Changes

FY 2003 vs. FY 2002 ($000)

OR-9C3 / Depleted Uranium Hexafluoride Conversion Facility

No change 0

OR-4M3 / East Tennessee Technology Park Uranium Facilities Maintenance

	FY 2003 vs. FY 2002 ($000)
# Increased number of cylinders that will be relocated to a better location; additional cylinders will be coated	4,381
OR-5M3 / Paducah Uranium Facilities Maintenance	
# Increased number of cylinders that will be relocated to a better location; additional cylinders will be coated.	3,211
OR-6M3 / Portsmouth Uranium Facilities Maintenance	
# Increased number of cylinder that will be relocated to a better storage location; additional cylinders will be coated; and initiate National Environmental Policy Act activities for shipping cylinders from East Tennessee Technology Park	14,965
OR-1P3 / Oak Ridge Reservation Pre-Existing Liabilities	
# No significant change.	-10
OR-5P3 / Paducah Pre-Existing Liabilities	
# Increased contractual liability estimates.	100
OR-6P3 / Portsmouth Pre-Existing Liabilities	
# Increase for additional long-term disabilities payments.	200
Total Funding Change, Other Uranium Activities	22,847