

Office of Environmental Management

PSRP Name: The Office of Environmental Management Uranium Enrichment D&D		
PSRP Lead Program Office and/or Laboratory/Site Office: The Office of Environmental Management		
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1. Objectives:

Program Purpose

The Uranium Enrichment Decontamination and Decommissioning (UED&D) Fund, established by the Energy Policy Act of 1992, supports decontamination and decommissioning (D&D), remedial actions, waste management, surveillance, and maintenance of preexisting environmental conditions on sites leased and operated by the United States Enrichment Corporation (USEC), as well as Department of Energy (DOE) facilities at these and other uranium enrichment sites. The sites covered by the Fund include operational uranium enrichment facilities at Portsmouth, Ohio, and Paducah, Kentucky, and the inactive K-25 site in Tennessee, formerly called the Oak Ridge Gaseous Diffusion Plant. Environmental restoration efforts at these three sites are supported from the UED&D Fund with monies secured from tax on domestic utilities and annual DOE appropriations.

EM UED&D Recovery Act work will accelerate completion of existing environmental protection and site cleanup goals. Funds will be used for the removal and disposal of large process equipment and demolition of surplus chemical processing facilities from EM sites much earlier than originally planned, thus reducing environmental threat to the areas surrounding the sites. UED&D Recovery Act funds also allow DOE to comply with Title X of the Energy Policy Act of 1992 to reimburse cleanup costs to companies that formerly processed uranium and thorium for sale to the Federal Government.

Public Benefits

Public benefits resulting from Recovery Act funding range from job creation, to cost savings over the lifecycle of the EM program, to enhanced environmental protection resulting from the cleanup and closure of the EM sites on the former nuclear weapons complex. Excess facilities and other structures will be deactivated and demolished to reduce any potential safety and health risks that may emerge.

Recovery Act funding will be used by EM site contractors to accelerate cleanup of the former weapons complex and nuclear research facilities. The site contractors and subcontractors will hire workers to perform the additional soil and groundwater remediation, decontamination and decommissioning, and waste processing activities. Types of jobs created include well drillers, soil excavation personnel, construction and demolition personnel, waste processors and handlers, railroad train crews and waste truck drivers. The additional jobs are expected to extend through the entire period of Recovery Act activities in EM (through September 30, 2011).

2. Projects and Activities:

Kinds and scope of projects and activities to be performed

EM has demonstrated success in radioactive solid waste disposition, soil and groundwater remediation, and facility decontamination and decommissioning. EM will effectively spend the \$6 billion in Recovery Act funding because these cleanup activities are associated with:

- Proven technologies—on-the-shelf plans and projects ready to be implemented
- Regulatory infrastructure in place—established regulatory framework with regulator and community support
- Acquisition structure in place—flexible contract vehicles allow quick expansion of environmental cleanup workforces
- Project Management structure in place—ability to track and measure performance

EM has identified opportunities at three sites in three states that meet Recovery Act principles.

At the Portsmouth site in Ohio, the Recovery Act UED&D funds will be used to demolish surplus facilities, including electrical switchyard structures, cooling towers, and a pump house. Over 65 acres of contaminated soil will also be restored resulting in removal of the highest contaminant concentration groundwater plume source on the Portsmouth site. This will also result in the prevention further potential groundwater contamination. This scope will now be completed in 2011, instead of in 2030 without the Recovery Act funds.

At the Paducah site in Kentucky, Recovery Act UED&D funds will result in the removal and disposal of large process equipment and demolition of surplus chemical processing facilities. This project will accelerate by five to 22 years a reduction in legacy-contaminated areas and make significant progress in the disposition of contaminated materials and wastes.

At the East Tennessee Technology Park (ETTP) in Tennessee, Recovery Act UED&D funding will allow for the completion of the preparation of the K-27 Gaseous Diffusion building (383,000 square feet) at the East Tennessee Technology Park (ETTP) for demolition by the end of FY 2011, three to five months earlier than planned. The work will include non-destructive assay of diffusion equipment and piping, high risk equipment removal, foaming of equipment and piping, and the declaration of criticality incredibility. This work will place the K-27 building into a safe state that would permit a successor contractor to complete the demolition of the facility.

In addition, UE D&D Recovery Act funds will allow DOE to comply with Congressional direction to reimburse cleanup costs to companies that formerly processed uranium and thorium for sale to the federal government. The Title X Uranium/Thorium Reimbursement Program reimburses licensees of certain uranium and thorium processing sites for the portion of their cleanup costs attributable to the production and sales of uranium and thorium to the Federal Government during the Cold War Era. The Federal Government has a legislated financial liability for the environmental cleanup of uranium and thorium processing sites that sold their

product to the Federal Government. Cleanup of these sites is an environmental legacy of the Cold War. What distinguishes these sites is they are privately owned, and DOE's liability is limited to the share of their production related to federal sales. Twelve uranium and thorium licensees are currently eligible to receive reimbursements. Direct payments are made to licensees following audit and approval of eligible costs in claims submitted by each licensee.

The following table lists the amount of funding by project and presents associated activities:

Site	Project	Funding	Activities
East Tennessee Technology Park (ETTP)	Oak Ridge UE D&D Funded Recovery Act Project	\$118,200,000	Remove contaminated equipment to prepare building for demolition
Portsmouth	Portsmouth Recovery Act Project	\$118,200,000	Accelerate treatment and disposition of large LEU cylinders Accelerate repackaging and disposition of uranium material Remediate contaminated soil Accelerate removal of structures
Paducah	Paducah Recovery Act Project	\$78,800,000	Excavate burial waste materials Dismantle and dispose of major systems and process equipment and demolish buildings
Multiple	Title X Uranium/Thorium Reimbursement Program	\$68,950,000	Enable DOE to comply with Congressional direction to reimburse cleanup costs to companies that formerly processed uranium and thorium for sale to the federal government per 10CFR 765
Headquarters	Management Reserve	\$3,900,000	Management reserve for Recovery Act projects
Headquarters	Program Direction	\$1,950,000	Provide program direction for Recovery Act projects
	TOTAL	\$390,000,000	

3. Characteristics:

Types of Financial Awards to be used

EM does not contemplate significant activity in the area of financial assistance. A limited amount of funds provided under the Recovery Act may be awarded via financial assistance instrument. The awards will largely be limited to supplementing existing financial awards on current projects through additional task orders. The additional awards will support increased levels of activity resulting from acceleration of work.

Type of Recipient

Not applicable to the EM UED&D Program.

Type of Beneficiary

Not applicable to the EM UED&D Program.

4. Major Planned Program Milestones:

The following table shows the major planned program milestones for East Tennessee Technology Park (Oak Ridge), Paducah, and Portsmouth programs.

Milestone Type	Milestone Description	Date
Execution	Oak Ridge: Complete removal of all material and waste in K-27, making the facility ready for demolition	September 30, 2011
Execution	Paducah: Start removal activities at C-340 Complex	December 31, 2009
Execution	Paducah: C-340 Complex removal activities 80% complete	January 31, 2011
Execution	Paducah: Start D&D of C-340 Complex	May 31, 2011
Execution	Paducah: D&D activities at C-340 Complex 100% complete	September 30, 2011
Execution	Paducah: Start removal activities at C-746-A	February 28, 2010
Execution	Paducah: Complete removal activities at C-746-A	April 30, 2011
Execution	Paducah: Begin D&D of C-746-A	May 31, 2011
Execution	Paducah: D&D of C-746-A 80% complete	June 30, 2011
Execution	Paducah: D&D of C-746-A 100% complete	September 30, 2011
Execution	Paducah: Complete removal activities at C-410 Complex	April 30, 2010
Execution	Paducah: Start D&D of C-410 Complex	May 31, 2011
Execution	Paducah: D&D of C-410 Complex 80% complete	July 31, 2011
Execution	Paducah: D&D of C-410 Complex 100% complete	September 30, 2011
Procurement	Portsmouth: Issue Change Order (existing contract)	June 1, 2009
Procurement	Portsmouth: Definitize Change Order and issue modification (existing contract)	September 30, 2009
Procurement	Portsmouth: Complete RFP Evaluations	December 1, 2009
Procurement	Portsmouth: Award Contract	March 1, 2010
Execution	Portsmouth: Start X-633 Structure Demolition	November 30, 2009
Execution	Portsmouth: Start X-533 Structure Demolition	January 31, 2009
Execution	Portsmouth: Start X-760 Structure Demolition	February 28, 2010
Execution	Portsmouth: X-633 Structure Demolition Complete	February 28, 2010
Execution	Portsmouth: X-533 Structure Demolition Complete	March 31, 2010
Execution	Portsmouth: X-760 Structure Demolition Complete	April 30, 2010
Execution	Portsmouth: X-633 Slab Removal Complete	April 30, 2010
Execution	Portsmouth: X-533 Slab Removal Complete	May 31, 2010
Execution	Portsmouth: X-760 Slab Removal Complete	June 30, 2010
Execution	Portsmouth: X-633 D&D/Remediation Complete	September 30, 2010
Execution	Portsmouth: X-533 D&D/Remediation Complete	September 30, 2010
Execution	Portsmouth: X-760 D&D/Remediation Complete	September 30, 2010
Execution	Portsmouth: Start Large LEU Cylinders Processing	March 31, 2010
Execution	Portsmouth: Large LEU Cylinders Processing Complete	June 30, 2011
Execution	Portsmouth: Large LEU Cylinders Waste Disposition Complete	September 30, 2011

5. Monitoring and Evaluation:

The Department of Energy and the Office of Environmental Management will monitor and evaluate the performance of the program in two major areas; corporate control at the Department level, and EM Processes at the Office of Environmental Management level.

I. Corporate controls

Recovery Leadership & Operations

The DOE Recovery Office is the central point for implementation and execution of Recovery Act activities. A recovery operations team will oversee implementation management, such as monitoring project status, evaluating cost and schedule progress, ensuring thorough reporting, coordinating with external entities, and holding monthly performance and review meetings with senior departmental managers on the implementation status of specific recovery projects.

Recovery Funding Oversight, Performance

In addition to DOE's standard funds control mechanisms, Recovery Act funds are subject to additional process controls to ensure funds are not co-mingled, are tracked to enable reporting, and are spent responsibly. DOE recovery funds are released for implementation in a staged approach. Programs develop initial project plans that include performance metrics requiring management approval.

Office of Internal Review (OIR)

DOE's OIR helps programs ensure that internal controls are in place, effective, and support the risk based approach to managing Recovery Act activities. OIR programs are being implemented or expanded to ensure the Recovery Act objectives are met and DOE managers and partners are both held accountable for successful execution and also have the appropriate tools to ensure that success. These programs include coordinating DOE's "Internal Control Acknowledgment" program, conducting agency wide assessments and analyses and performing oversight of Recovery Act programs, including site and field visits. OIR works with key impacted programs to produce initial vulnerability assessments identifying potential program specific and cross-cutting risks to ensure successful execution.

II. EM Processes

EM has chartered an integrated project team (IPT), the EM Recovery Act Team, to ensure proper planning and execution of Recovery Act funds. The IPT is led by the program manager and has ultimate responsibility and accountability for delivering the project successfully. The program manager is a member of the federal Senior Executive Service and possesses the executive core competencies required to lead the project through this period of government transformation. The program manager is supported by Federal Project Directors (FPD) who have satisfied the certification requirements prescribed in the Department's Project Management Career Development Program (PMCDP), and have been certified by the PMCDP Certification Review Board. The FPDs are senior federal managers and are seasoned project directors certified by the PMCDP Certification Review Board. The IPT members are experts in the areas of safety/operational readiness, planning, project management, budget, contracting, regulatory

compliance, and communications. The team is actively engaged with the field office sites in all elements of Recovery Act implementation

EM has assigned Recovery Act Site Representatives to support the field offices. These individuals will streamline communications and decision-making between Headquarters and the field sites, while facilitating the integration, rapid sharing of lessons learned, and compliance with Recovery Act requirements.

As a prerequisite to receiving Recovery Act funds, the site offices have been required to submit to Headquarters checklist items that ensure each site is in a state of readiness and has implemented measures that prevent waste, fraud, and abuse. The checklist items verify that each site office has the necessary systems and processes in place for safety, oversight, contracting, change control, reporting, risk management, and regulator and stakeholder involvement.

At Headquarters, EM is engaging with other offices such as General Counsel, the Chief Financial Officer, the Office of Management and Administration, the Office of National Environmental Policy Act Compliance and others to ensure all appropriate requirements for the use of Recovery Act funds are met. Independent assessments will be conducted for the EM Recovery Act projects.

At the EM sites, the vast majority of the work will be executed through the expansion of existing contracts. This approach greatly reduces the risk associated with project performance. Appropriate funding modifications will be enacted to implement and segregate the Recovery Act funds for reporting purposes. All projects will be executed by the contractors according to DOE Order 413.3A, Program and Project Management, with appropriate performance measurement baselines and DOE oversight. Acceptable performance on these projects will also be measured using performance metrics (e.g., cost, schedule, and scope) as established in baselines; cost and schedule performance indicators (cost performance index and schedule performance index) according to DOE-approved Earned Value Management Systems will be used as required by DOE Order 413.3A.

In addition, the EM Headquarters Integrated Project Team will be conducting on-site reviews to examine the readiness to execute the EM Recovery Act scope and assist in understanding of guidance and requirements.

6. Measures:

EM major performance measures include acres of land that will be cleaned up, percentage of the site footprint reduction that will be achieved, waste that will be removed off-site (by waste type), and D&D square footage that will be achieved. EM manages all of its work using project management protocols and will apply the same rigor in managing the Recovery Act projects. Projects will also regularly report monthly, quarterly, and project-to-date project performance measures include cost and schedule variances, cost and schedule performance indexes, contingency use, milestone status reports, risk register updating/status reporting, indirect cost

rate, results, and impacts. EM will make project review information available to the public through the EM website, as appropriate.

Measure Text	Measure Type	Measure Frequency	Direction of Measure	Unit of Measure	Explanation of Measure	Year	Original Program Target	Revised Full Program Target	Target (incremental change in performance)	Actual	Goal Lead
Nuclear Facilities Demolished	Output	Monthly	+	Each	Each EM facility is accounted for in the Facility Information Management System (FIMS). When the facility is demolished, it is recorded in FIMS as demolished. Demolition is usually removal of all structures and equipment down to the foundation.	2009 – 2011	1	1	0		Cynthia Anderson
Radiological Facilities Demolished	Output	Monthly	+	Each	Each EM facility is accounted for in the Facility Information Management System (FIMS). When the facility is demolished, it is recorded in FIMS as demolished. Demolition is usually removal of all structures and equipment down to the foundation.	2009 – 2011	17	17	0		Cynthia Anderson
Industrial Facilities Demolished	Outcome	Monthly	+	Each	Each EM facility is accounted for in the Facility Information Management	2009 – 2011	63	78	15		Cynthia Anderson

Measure Text	Measure Type	Measure Frequency	Direction of Measure	Unit of Measure	Explanation of Measure	Year	Original Program Target	Revised Full Program Target	Target (incremental change in performance)	Actual	Goal Lead
Industrial Facilities Demolished (cont)					System (FIMS). When the facility is demolished, it is recorded in FIMS as demolished. Demolition is usually removal of all structures and equipment down to the foundation.						

7. Transparency and Accountability:

DOE leverages its existing corporate systems to track and report on Recovery Act activities and to ensure effective funds management. The DOE's iManage Data Warehouse (IDW) is a corporate enterprise system integrating financial, budgetary, procurement, and program information to monitor project execution. Each Recovery Act program is tracked using unique Treasury Appropriation Fund Symbols (TAFS); each component project is identified by a unique Project Identification Code (PIC).

IDW is a central data warehouse linking common data elements from each of the Department's corporate business systems and serving as a "knowledge bank" of information about portfolios, programs or projects including budget execution, accumulated costs, performance achieved, and critical milestones met. The IDW contains information from multiple corporate systems and will be a tool used to meet information needs for Recovery Act oversight and reporting to Recovery.gov.

The Performance Measure Manager (PMM) is the Department's performance tracking system. PMM tracks high-level budgetary performance and is being expanded to accommodate Recovery Act performance tracking needs. Performance evaluations will be organized and reported along with results from the Department's annual budgetary activities in the Annual Performance Report (APR). Performance results will be uploaded into the IDW for required agency reporting.

DOE's Agency Wide Recovery Plan for additional information on DOE's financial and performance tracking mechanisms. The plan can be found here: www.energy.gov/recovery.

At the EM Sites, appropriate funding modifications will be enacted to implement the Approved Funding Programs and segregate the Recovery Act funds for reporting purposes. Separate budget and accounting codes have been established for Recovery Act work in order to manage, implement, measure and account for these funds. To ensure adequate controls only 80 percent of Recovery Act funds are being allotted to the sites for obligation against contracts. The remaining 20 percent is being held at Headquarters and will be released after the projects are demonstrating adequate performance. Additionally, only 24 percent (i.e., 30 percent of the 80 percent) of Recovery Act funds can incur costs until all contractor baseline plans have been submitted, reviewed, and approved.

At the sites, EM manages all of its activities using strict project management principles. Federal Project Directors responsible for managing the Recovery Act projects are required to be trained and certified for the magnitude and total cost of each project.

- Certification Level 4: Total Project Cost (TPC) exceeding \$400 million (M)
- Certification Level 3: TPC greater than \$100M and equal to or less than \$400M
- Certification Level 2: TPC greater than \$20M and equal to or less than \$100M
- Certification Level 1: TPC greater than \$5M and equal to or less than \$20M

If a Federal Project Director is managing a portfolio of projects, the required Federal Project Director certification level is determined by the project with the highest TPC dollar value. EM

may assign lower or higher required project management certification levels than may be indicated by the TPC alone to cleanup projects of various complexity, risk, and visibility per coordination with the Certification Review Board (CRB). Likewise, when new hires or reassigned incumbents assume Federal Project Director positions, their certification level may be higher or lower than that indicated by the TPC dependent on a project's degrees of complexity, risk, or visibility.

Annual performance goals for all federal managers executing Recovery Act work will be developed. The managers' success in meeting these goals will be assessed as part of their annual performance reviews.

8. Federal Infrastructure Investments:

Not applicable to the EM UED&D Program.

9. Barriers to Effective Implementation:

A number of barriers to successful implementation of EM Uranium Enrichment D&D (UED&D) funded Recovery Act activities were identified by the Sites in the Office of Environmental Management (EM) complex including:

- Project planning and management
- Contract management and performance
- Staffing shortages which affect ability to oversee the Recovery Act work
- Personnel to be trained in a timely manner
- Compliance with Safety requirements in aging facilities
- Transportation impacts
- Continued need to have effective interaction with stakeholders and regulators as Recovery Act work progresses.

The risk mitigation to these barriers at the Sites include the establishment of Federal Project Directors responsible for managing the Recovery Act projects who are trained and certified for the magnitude and total cost of each project. At EM Headquarters, an Integrated Project Team has been established for the management and oversight of Recovery Act work at the EM Sites. In addition, separate budget and accounting codes have been established for Recovery Act work in order to manage, implement, measure and account for these funds. EM Headquarters will hold in reserve 20 percent of funding from the sites in order to ensure acceptable performance is met. All projects subject to the requirements of DOE Order 413.3 will be executed by the contractors according to DOE Order 413.3A with appropriate performance measurement baselines and Department of Energy oversight. Independent assessments and monthly monitoring reviews will be conducted of the EM Recovery Act projects and a schedule for these assessments and reviews has been established. Contractor performance evaluations/information will be conducted in accordance with FAR 42.15, Contractor Performance Information. Also,

FAR Subpart 15.3, Source Selection, covers the use of past performance information during source selection.

Regarding staffing shortages and personnel training, EM Sites are actively recruiting resources to perform this work and in the interim may be using qualified subcontractors to execute Recovery Act work as well as ensure proper work practices are followed. All workers will need to meet appropriate training and qualification requirements before work can begin.

To ensure safety requirements are met, the EM Sites will review and supplement as necessary safety documentation before work proceeds. DOE staff will ensure the proper safety measures are in place. Oversight of this work will be accomplished by qualified, experienced Federal staff.

EM Recovery Act work is a continuation of work already identified and may be part of already established environmental compliance agreements with our stakeholders and regulators. EM is also aware of a continued need to work with our stakeholders and regulators on meeting our current environmental compliance agreements as well as transportation requirements including routes, and has been in ongoing dialogue with our stakeholders and regulators on Recovery Act work since enactment of this law in February 2009.

10. Environmental Review Compliance

Funding from the Uranium Enrichment Decontamination and Decommissioning Fund account is predominantly being used for existing projects and activities for which NEPA reviews; Comprehensive Environmental Response, Compensation and Liability Act documentation; and compliance with other environmental requirements are complete. Where compliance is not complete, DOE will incorporate appropriate actions into its project planning and implementation.