

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

This PSRP has been updated from previous versions in compliance with Management Procedures Memorandum No. 2010-06, dated May 2010 and reflects progress on milestones and performance measures in the Department of Energy (DOE) Office of Environmental Management (EM) program.

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 funds will be used to demolish surplus facilities, including electrical switchyard structures, cooling towers, and a pump house. Investment in this project will accelerate the decontamination and decommissioning (D&D) of three surplus building complexes (11 individual buildings) at the Portsmouth Gaseous Diffusion Plant, removal of estimated quantities of soil, and disposition of excess uranium material. The disposition of the excess uranium material will consist of eight lots of uranium in various forms including low enriched uranium oxides, low enriched uranium fluorides, uranium metal compounds, and uranium metals. ARRA activities at Portsmouth will also include plume remediation, removal of excess material and equipment and demolition of above grade structures as part of the D&D activities.

At the Paducah site in Kentucky, Recovery Act funds will result in the removal and disposal of large process equipment and demolition of surplus chemical processing facilities. Investment in this project will accelerate the D&D of three facilities at the Paducah GDP, two large chemical processing facilities and one contaminated metals smelting facility. ARRA work will include acceleration and completion of dismantlement and disposal of major systems and large process equipment allowing for demolition. 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 Oak Ridge, ARRA UED&D funds support the mission of the Department of Energy Office of Environmental Management by performing limited pre-demolition activities in the K-27 Uranium Enrichment Facility and by demolishing the K-33 Facility.

The K-27 Building consists of nine building units occupying a 383,000 square feet "footprint" with more than 1.1 million square feet of total floor area. Work to be accomplished includes asbestos abatement, vault clean-out including excess material removal, construction electrical upgrades, lube oil system draining and disposal, coolant draining and removal, and waste removal and disposal.

The K-33 Building occupies a 1.4 million square feet "footprint" with over 2.8 million square feet of total floor area. This building was constructed of concrete and steel with an exterior of corrugated transite. All process piping, ducts, processing equipment and interior asbestos insulation were removed under a previous contract. Radiological and chemical contamination exists throughout the structure. Work to be accomplished includes performing pre-demolition activities (such as demolishing tie-lines, clearing the perimeter area, and removal of waste) and demolishing the facility to the slab.

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	\$119,800,000	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	\$80,400,000	Excavate burial waste materials Dismantle and dispose of major systems and process equipment and demolish buildings

Site	Project	Funding	Activities
Multiple	Title X Uranium/Thorium Reimbursement Program	\$69,650,000	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	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 original milestones in Section 4 of the May 2009 PSRPs represented preliminary work scope proposed by the EM Sites in the early part of the ARRA program prior to contracts being awarded, negotiated, or definitized. Many of these early milestones were focused on project initiation, hiring, contracting and early concepts of how and when the work would be completed. The sites have achieved the majority of the May 2009 PSRP milestones related to project startup and contracting as shown in the following table. All projects are executing the approved scope and nearly all contracts were fully definitized by September 2009.

Milestones for the major projects are listed below:

Milestone Type	Milestone Description	Date	Actual 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	December 12, 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	February 09, 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, 2011	
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	May 6, 2009
Procurement	Portsmouth: Definitize Change Order and issue modification (existing contract)	September 30, 2009	August 31, 2009
Procurement	Portsmouth: Complete RFP Evaluations	December 1, 2009	November 19, 2009
Procurement	Portsmouth: Award Contract	March 1, 2010	May 3, 2010
Execution	Portsmouth: Start X-633 Structure Demolition	November 30, 2009	December 23, 2009
Execution	Portsmouth: Start X-533 Structure Demolition	January 31, 2009	February 9, 2010
Execution	Portsmouth: Start X-760 Structure Demolition	February 28, 2010	December 18, 2009 (start date of deactivation activities)
Execution	Portsmouth: X-633 Structure Demolition Complete	February 28, 2010	This work was re-scheduled to be accomplished by January 30, 2011
Execution	Portsmouth: X-533 Structure Demolition Complete	March 31, 2010	This work was re-scheduled to be accomplished by October 30, 2010
Execution	Portsmouth: X-760 Structure Demolition Complete	April 30, 2010	Structure Demolition no longer accomplished under ARRA
Execution	Portsmouth: X-633 Slab Removal Complete	April 30, 2010	Slab Removal no longer accomplished under ARRA

Milestone Type	Milestone Description	Date	Actual Date
Execution	Portsmouth: X-533 Slab Removal Complete	May 31, 2010	Slab Removal no longer accomplished under ARRA
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	No longer accomplished under ARRA
Execution	Portsmouth: Large LEU Cylinders Processing Complete	June 30, 2011	No longer accomplished under ARRA
Execution	Portsmouth: Large LEU Cylinders Waste Disposition Complete	September 30, 2011	No longer accomplished under ARRA

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 were 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, where applicable 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 has conducted 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 square miles or 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 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	Unit of Measure	Explanation of Measure	Year	Original (June 2009) ARRA Program Target	Revised (May 2010) ARRA Program Target	Target to Date	Actual to Date	Goal Lead
D&D Debris and Remediated Soil Disposed	Output	Monthly	Cubic meters	Cubic meters of radiologically contaminated debris and soil disposed as the result of D&D and soil remediation activities	2009 – 2011	0	84,112	0	21,038	Cynthia Anderson
Facility Square Footage Demolished	Output	Monthly	Square feet	The building floor space demolished as a result of D&D activities.	2009 – 2011	0	513,489	0	0	Cynthia Anderson
Nuclear Facility Completions (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	0	Cynthia Anderson
Radiological Facility Completions (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	2	0	0	Cynthia Anderson
Industrial Facility Completions (Demolished)	Outcome	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	63	11	0	0	Cynthia Anderson
Remediation Complete	Outcome	Monthly	Each	The number of waste sites where all active (soil and groundwater) remediation activities are complete	2009 – 2011	0	14	0	0	Cynthia Anderson

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 413.3A 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.