

Office of Environmental Management

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1. Objectives

Program Purpose

The Department of Energy (DOE) Office of Environmental Management (EM) program non-defense funding is used for the environmental cleanup of multiple sites across the country that comprise the former nuclear weapons development and government-sponsored nuclear energy research complex. The applicable sites are as follows: Moab Uranium Mill Tailings Site in Utah, the Oak Ridge National Laboratory (ORNL) in Tennessee, Energy Technology Engineering Center (ETEC) and SLAC National Accelerator Laboratory (SLAC) in California, Brookhaven National Laboratory and West Valley Demonstration Project (WVDP) in New York, Argonne National Laboratory in Illinois, and Los Alamos National Laboratory (LANL) in New Mexico.

EM non-defense-funded Recovery Act work will accelerate completion of existing environmental protection and site cleanup goals, including decontamination and decommissioning (D&D) excess nuclear facilities and disposal of radioactive waste from the EM sites, in many cases much earlier than originally planned. In addition, this work will reduce environmental threats to areas surrounding the sites. Recovery Act funded work will produce a significant number of jobs both directly and indirectly.

Public Benefits

Public benefits resulting from Recovery Act funding range from job creation, to cost savings over the life-cycle of the EM program, to enhanced environmental protection due to the cleanup and closure of the EM sites from the former nuclear weapons complex. High-risk facilities, such as nuclear reactors and other structures, will be deactivated and demolished. This will reduce the potential safety and health risks.

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 solid radioactive 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 eight sites in six states that meet Recovery Act principles.

At the Moab Uranium Mill Tailings Remedial Action site, Recovery Act funds will be used to accelerate relocation of uranium mill tailings away from the Colorado River, resulting in an additional two million tons of mill tailings disposed by 2011, accelerating the completion of the site cleanup by three years (from 2028 to 2025). The Recovery Act work will be accomplished by increasing the number of railcars and shipments.

At the Oak Ridge National Laboratory (ORNL), Recovery Act funds will be used for a portfolio of projects that will include demolition and disposition of surplus contaminated facilities and remediation of contaminated soil. The ORNL investment will create jobs for the existing skilled workforce in eastern Tennessee. In addition, Recovery Act non-defense funds will be used to complete legacy material removal and disposition from four buildings at ORNL. The activities to be performed were part of EM's scope to cleanup the ORNL but were not scheduled to begin until 2017. The soil remediation, waste cleanup and building demolition to be performed under this project will now be complete by 2011.

At the Energy Technology Engineering Center (ETEC) facility near Los Angeles, California, Recovery Act Non-Defense funds will provide funding for the U.S. Environmental Protection Agency to conduct radiological assessments necessary to complete an environmental impact statement and enable completion of site cleanup. Recovery Act funds will also be used to supplement ongoing RCRA Facility Investigations and RCRA Corrective Action for soil and groundwater Solid Waste Management Units (SWMUs) and Operable Units (OUs).

At the SLAC National Accelerator Laboratory (SLAC), Recovery Act funds will be used to accelerate excavation and disposal of contaminated soil and accelerate installation of groundwater treatment systems, completing the cleanup project one year earlier (2011 instead of 2012).

At the Brookhaven National Laboratory, Recovery Act Non-Defense funds will go to remove the graphite pile from the Brookhaven Graphite Research Reactor and demolish surplus ancillary structures. Recovery Act Non-Defense funds will also result in removal of contaminated soil

and buried pipelines for disposal off-site, protecting the surrounding soil and groundwater. These activities were originally scheduled for completion in 2020 but will now be complete in 2011.

At the West Valley site, Recovery Act funds will be used to begin work on demolition of former process buildings and installation of a system to prevent migration of groundwater contamination. Radioactive waste treatment and disposal activities will also be accelerated to shrink the area of site contamination.

At the Argonne National Laboratory Recovery Act Non-Defense funds will be used to accelerate demolition of excess contaminated facilities and waste cleanout activities. This new scope would have been transferred to EM in 2017 but is now being started in 2009.

At Los Alamos National Laboratory, Recovery Act Non-Defense funds will support accelerated cleanup of nuclear facilities and contaminated areas. Specifically, this work will result in the complete demolition of one non-defense facility (one building and four structures) approximately 16,000 sq. feet in area one year earlier (2011 instead of 2012).

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

Site	Project	Funding	Activity Categories
Moab	Moab Recovery Act Project	\$108,350,000	Remove ~2 million additional tons of uranium mill tailings
Oak Ridge National Laboratory	Oak Ridge Non-Defense Recovery Act Project	\$78,800,000	D&D of surplus facilities Removal and disposition legacy material from ORNL Central Campus and Bldg. 2026 Complex
Argonne National Laboratory (ANL)	ANL Recovery Act Project	\$98,500,000	Disposition RH and CH TRU waste (new EM scope) Remove non-TRU waste and nuclear material from Hot Cell Facility Demolish buildings
West Valley Demonstration Project	West Valley Recovery Act Project	\$73,875,000	Process contact handled transuranic and mixed legacy low level waste Mitigate groundwater plume Demolish building
Energy Technology Engineering Center (ETEC)	ETEC Recovery Act Project	\$54,175,000	Conduct radiological assessments (Environmental Protection Agency) Supplement ongoing soil and groundwater investigation, cleanup and closure
Brookhaven National Laboratory (BNL)	BNL Recovery Act Project	\$42,355,000	Demolish buildings and remove components, including the graphite pile, of reactor Begin removal of contaminated soil
Los Alamos National Laboratory (LANL)	LANL Non-Defense Recovery Act Project	\$14,775,000	D&D of buildings at TSTA

Site	Project	Funding	Activity Categories
SLAC National Accelerator Laboratory	SLAC Recovery Act Project	\$7,925,000	Complete cleanup of site, including excavation of soil and installation of groundwater treatment systems
Headquarters	Program Direction	\$2,415,000	Provide program direction for Recovery Act projects
Headquarters	Management Reserve	\$1,830,000	Management reserve for Recovery Act projects
	TOTAL	\$ 483,000,000	

3. Characteristics

Types of Financial Awards to be used

EM does not contemplate significant activity in the area of financial assistance. Some 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 activity resulting from acceleration of work.

Type of Recipient

Not applicable to the EM Non-Defense Program.

Type of Beneficiary

Not applicable to the EM Non-Defense Program.

4. Major Planned Program Milestones

The following table shows the major planned program milestones at Moab and Oak Ridge National Laboratory.

Milestone Type	Milestone Description	Date
Planning	Oak Ridge – Begin field mobilization for 2000 Complex East	December 31, 2009
Planning	Oak Ridge – Begin field mobilization for 2000 Complex West	June 30, 2010
Execution	Oak Ridge – Complete D&D of 2000 Complex East	December 31, 2010
Execution	Oak Ridge – Complete D&D of 2000 Complex West	March 31, 2011
Execution	Oak Ridge – Complete D&D of General Maintenance Facilities/ Southeast Lab Complex	March 31, 2011
Execution	Oak Ridge: Complete removal and disposal of legacy materials from 58,000 sq ft of excess facilities.	September 30, 2011
Execution	Oak Ridge – Complete D&D of 125,000 sq ft of surplus facilities	September 30, 2011
Planning	Moab – Start hiring process	May 31, 2009

Milestone Type	Milestone Description	Date
Execution	Moab – Start accelerated tailings haul (22 cars/7 days)	June 30, 2009
Planning	Moab – Start hiring for ramp-up scenario (34 cars/7 days)	August 31, 2009
Execution	Moab – Complete overpass on State Highway 279	September 30, 2009
Planning	Moab – Complete hiring for ramp-up scenario (34 cars/7 days)	September 30, 2009
Execution	Moab – Start 34 cars/7 days accelerated haul	September 30, 2009

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 which require 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 worked 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	9	11	2		Cynthia Anderson
Radioactive 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	15	42	27		Cynthia Anderson
Industrial Facilities 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	17	18	1		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 Non Defense Program.

9. Barriers to Effective Implementation:

A number of barriers to successful implementation of EM Defense 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 Non-Defense Environmental Cleanup 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.