

## Project Operating Plan

### BACKGROUND

**Recovery Act Project:** Oak Ridge UE D&D Funded Recovery Act Project  
**TAFS:** 89-09/10-5657  
**Project Identification Code:** 2002210  
**Recovery Act Bill Reference:** PL 111-5, Title IV – Energy and Water Development, Uranium Enrichment D&D Fund (H.R. 1-25)  
**Project Cost:** \$118,000,000  
**Budget Authority:** 05998, FF.01.10.00.0 - \$118,000,000  
**Program Office:** Environmental Management (EM)  
**Recovery Program Plan:** EM – Uranium Enrichment Decontamination and Decommissioning Fund  
**Management Office:** Stephen H. McCracken, Assistant Manager for Environmental Management, Oak Ridge Office, [mccrackensh@oro.doe.gov](mailto:mccrackensh@oro.doe.gov)  
J.T. Howell, ORO Recovery Project Manager, Oak Ridge Office, [howelljt@oro.doe.gov](mailto:howelljt@oro.doe.gov)

### LEADS

**Implementation:** Oak Ridge Office  
**Breakthrough:** N/A  
**Laboratory:** N/A

## I. SUMMARY & OBJECTIVES

### Summary:

This Recovery Act Project will prepare the K-27 Uranium Enrichment Facility for demolition. This work includes removal of all High Risk Equipment components with greater than 350 grams of U-235 from the facility; complete duct cutting necessary for Non-Destructive Assay and waste characterization and foaming; complete Vent, Purge, Drain and Inspection of process piping greater than 3" in diameter; foam to the extent necessary for the removal of High Risk Equipment components greater than 350 grams of Uranium-235; complete Non-Destructive Assay characterization of process and auxiliary equipment; intrusive sampling of process and non-process gas equipment and building structure for waste management criticality incredible determination is established; deactivate the fire protection (lube oil drained, miscellaneous loose combustibles not attached to the building removed) and Radiation Criticality Accident Alarm Systems; remove asbestos (not including external transite); remove Technetium-99 cylinders; complete sampling and characterization; remove hazardous waste/universal waste, and remove associated tie lines. Completion excludes external transite removal, waste profile establishment, removal of Low Risk Equipment to be dispositioned at the Nevada Test Site, segmentation and mining, and submission of a Phased Construction Completion Report.

This Recovery Act work meets the following the Department of Energy (DOE) and Environmental Management (EM) strategic themes and goals:

DOE Strategic Theme 4 – Environmental Responsibility – Protect the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.

DOE Strategic Goal 4.1 – Environmental Cleanup – Complete cleanup of the contaminated nuclear weapons manufacturing and testing sites across the United States.

DOE Strategic Theme 5 – Management Excellence - Enabling the Department’s mission through sound fiscal and program management.

DOE Strategic Goal 5.1 – Integrated Management – Institute an integrated business management approach throughout DOE with clear roles and responsibilities and accountability to include effective line management oversight by both Federal and contractor organizations.

EM Strategic Goals – Decontaminating and decommissioning facilities that provide no further value to reduce long-term liabilities and maximize resources for cleanup. Fulfilling commitments to reduce risk and complete cleanup across all sites for future generations.

**Public Benefits:**

This Recovery Act Project will create and/or retain jobs in line with Recovery Act economic objectives. In addition, this project accelerates completion of existing environmental protection and site cleanup goals at the East Tennessee Technology Park, eliminating potential environmental threats to the areas surrounding the Oak Ridge Reservation. Completion of the pre-demolition activities described above for the K-27 facility will eliminate the risk of a criticality and allow the 383,000 square foot facility to be downgraded from a nuclear facility to a radiological facility reducing the Environmental Management liabilities.

**Recovery Act Project Impacts:**

The Recovery Act Project will eliminate on-site sources of contamination reducing the risk of a release of radioactive or other hazardous materials to the work force, public, and the environment. This project will create and/or retain jobs in line with Recovery Act economic objectives. In addition, this project accelerates completion of existing environmental protection and site cleanup goals at the East Tennessee Technology Park, eliminating potential environmental threats to the areas surrounding the Oak Ridge Reservation. Completion of the pre-demolition activities described above for the K-27 facility will eliminate the risk of a criticality and allow the 383,000 square foot facility to

be downgraded from a nuclear facility to a radiological facility reducing the Environmental Management liabilities.

## **II. COST & SCHEDULE**

### **Budget**

**Table 1a: Budget Implementation 12 Week Obligations (\$M)**

	Week of ARRA Activities (Beginning Week of March 9)											
	1	2	3	4	5	6	7	8	9	10	11	12
Oak Ridge UE D&D												

**Table 1b: Budget Implementation 12 Week Expenditures (\$M)**

	Week of ARRA Activities (Beginning Week of March 9)											
	1	2	3	4	5	6	7	8	9	10	11	12
Oak Ridge UE D&D												

**Table 2a: Budget Implementation Monthly & Yearly Obligations (\$M)**

	FY 2009 Q3			FY 2009 Q4			FY 2010 Q1			
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Oak Ridge UE D&D	FY 2010 Q2			FY 2010 Q3			FY 2010 Q4			
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	
	FY 2011 Q1			FY 2011 Q2			FY 2011 Q3 & Q4			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr – Sept			
	FY 2012			FY 2013			FY 2014			FY 2015

**Table 2b: Budget Implementation Monthly & Yearly Expenditures (\$M)**

	FY 2009 Q3			FY 2009 Q4			FY 2010 Q1			
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Oak Ridge UE D&D	FY 2010 Q2			FY 2010 Q3			FY 2010 Q4			
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	
	FY 2011 Q1			FY 2011 Q2			FY 2011 Q3 & Q4			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr – Sept			
	FY 2012			FY 2013			FY 2014			FY 2015

The expenditure profile in Table 1b and 2b and the performance measures provided in Table 6 are based on the best available information about the Recovery Act requirements and pre-work authorization project definitions. Rough order of magnitude estimates have been developed to date for costs and the associated end-state performance measures. It is expected that as the detailed estimates and resource-loaded schedules (using Primavera 6.2) are developed, there will be changes to these estimates and performance measures.

This Recovery Act scope will be integrated into the Oak Ridge baseline, but tracked and reported separately and uniquely, using an approved change control process.

Funds Returned and Offsetting Collections

**Table 3: Funds Returned and Offsetting Collections (\$M)**

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
N/A							

Indirect Costs:

This work will be performed by an existing Management and Integration contractor utilizing an approved indirect rate structure.

The estimated rates are: FY 2009 15.5 %, FY 2010 15.5 %, and FY 2011 16.1%.

Additionally, all Oak Ridge contractor indirect rates are subject to an annual audit review and require final approval by the contracting officer.

Changes to Baseline Budget

**Table 4: Changes to Baseline Budgets (\$M)**

Changes to Baseline Budget	Increase/Decrease	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Project Acceleration	Increase							

**Milestones:**

Please see Table 6 below.

**Table 5: Delivery Schedule for Capital Asset Projects**  
**N/A (until OECM and EM agree on 413.3A graded approach)**

<b>Program/OECM Milestone</b>	<b>Delivery (End) Date</b>	<b>Comments</b>
Develop capital asset projects Integrated Project List	N/A	N/A
Develop Parametric Performance Baseline (Individual Projects)	N/A	N/A
If < \$100 M Perform IPR, > \$100 M Perform EIR (Individual Projects)	N/A	N/A
Approve Performance Baseline	N/A	N/A
Approve Start of Construction	N/A	N/A
Approve Project Completion	N/A	N/A

**Note:** No projects meet definition of capital asset.

### **III. PERFORMANCE**

#### **Performance Measures:**

Performance measures provided in Table 6 are based on the best available information about Recovery Act requirements and pre-work authorization project definitions. Rough order of magnitude estimates have been developed to date for costs and the associated end-state performance measures. It is expected that there will be changes to the estimates and performance measures.

This Recovery Act scope will be integrated into the Oak Ridge baseline, but tracked and reported separately and uniquely, using an approved change control process.

**Table 6: Project Performance Targets**

Recovery Act Project Identification Code	2002210
Linkage To S-1 Priorities	Economic prosperity and national security and legacy (see Table 8)
Linkage to Current Program Goal (if applicable)	DOE Strategic Theme 4 – Environmental Responsibility – Protect the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.

	EM Strategic Goals - Decontaminating and decommissioning facilities that provide no further value to reduce long-term liabilities and maximize resources for cleanup. Fulfilling commitments to reduce risk and complete cleanup across all sites for future generations.
Two-Year Outcome-Oriented Performance Measure	By the end of FY 2011: <ul style="list-style-type: none"> <li>• Make K-27 (383,000 square foot facility) ready for demolition.</li> </ul>
First Year Performance Target	By the end of FY 2009 initiate procurement actions and/or mobilize work force to: <ul style="list-style-type: none"> <li>• Make K-27 ready for demolition.</li> </ul>
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• K-27 - Mobilize Staff to Perform Pre-Demolition Activities</li> </ul>
Q4 - Project-Level Quarterly Performance Milestone(s)	
Second Year Performance Target	By the end of FY 2010: <ul style="list-style-type: none"> <li>• Continue to make K-27 ready for demolition.</li> </ul>
Q1 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• K-27 - Complete Life Safety Installation</li> </ul>
Q2 - Project-Level Quarterly Performance Milestone(s)	
Q3 - Project-Level Quarterly Performance Milestone(s)	
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• K-27 - Complete Duct Cutting</li> </ul>
Third Year Performance Target	By the end of FY 2011: <ul style="list-style-type: none"> <li>• K-27 (383,000 square foot facility) ready for demolition.</li> </ul>
Q1 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• K-27 - Complete National Historic Preservation Act Artifact Removal</li> </ul>
Q2 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• K-27 - Complete Vent, Purge &amp; Drain Process Systems, Complete Waste Handling Plan Relocate Tc-99 Cylinders</li> </ul>
Q3 - Project-Level Quarterly Performance Milestone(s)	
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• K-27 - Building Demolition Ready</li> </ul>

**National Strategic Benefits**

**Table 7: National Strategic Benefits**

1. N/A
2. N/A

**IV. MANAGEMENT**

**Secretarial-level Items**

The initiative outlined in this plan support the following Secretary of Energy’s Priorities:

- Economic Prosperity
- National Security and Legacy

**Table 8: Secretary's Priorities**

<b>Secretary’s Priorities</b>	<b>Project Impacts (Qualitative)</b>	<b>Project Impacts (Quantitative)</b>
Science and Discovery		
Clean, Secure Energy		
Economic Prosperity	Jobs	Create or preserve jobs.
National Security and Legacy	Removal of contaminated legacy equipment and waste from the K-27 Facility reduces overall risk to workers, the public and environment	Downgrade 383,000 square foot facility from a nuclear facility to a radiological facility to facilitate future demolition.
Climate Change		

**Collaboration and Coordination:**

The following external partners will play a vital role in the successful completion of the Recovery Act scope:

- Regulatory
  - Environmental Protection Agency, Region IV
  - Tennessee Department of Environmental Conservation
  - Tennessee Department of Transportation

- Defense Nuclear Facilities Safety Board
- License Disposal Sites
  - Nevada Test Site
  - Energy Solutions, Utah
  - Other Available Commercial Facilities
- Other Stakeholders
  - Oak Ridge Site Specific Advisory Board

**Federal Infrastructure Investments:**

There are no infrastructure investment project activities associated with this Recovery Act Project.

These facilities contain hazardous and radiological material. Accelerating the removal and proper disposal reduces risk of releases of this material to the environment.

**Line Management:**

Oak Ridge will use existing business and project management systems and practices to effectively monitor and report on the Recovery Act projects, including:

- Fully implement all Recovery Act transparency and reporting requirements through modifications to the contract that will fund this Recovery Act Project.
- Continue applying project management principles to Recovery Act Project execution, including reviewing and validating Environmental Management project cost and schedule baselines consistent with the Department of Energy’s Order 413.3A and identifying project risks and strategies for managing them.
- Continue monitoring of the contractors’ Earned Value Management System reports to ensure the Recovery Act Project is on track and, if not or if trends are in a negative direction, to develop and implement corrective actions.
- Use an Integrated Project Team of Federal and contractor staff with project knowledge and subject matter expertise essential to the successful planning and execution of the project – including safety, risk management, engineering, quality assurance, contracts administration, and project controls.
- Conduct periodic project reviews to inform senior management of the status of the Recovery Act projects.

**Needs from Staff Offices:**

- Timely business clearance approval or waiver from Headquarters for definitization modification.
- Priority execution of security clearance requests.

**1) Human Capital**

Oak Ridge is committed to ensuring the safety of workers and the public during the accomplishment of the additional work under the Recovery Act, and additional

measures and personnel are required beyond those currently in place. Accordingly, the current Environmental Management contractor (i.e., Bechtel Jacobs Company LLC) who will be performing work funded under Recovery Act has an existing Safety Assurance Plan.

We are in the process of completing our staffing analysis to ensure we are able to perform adequate oversight of this work to ensure the safety of workers and the public. Additional requirements for Facility Representatives, Safety System Subject Matter Experts, project control engineers/specialists, estimators, and schedulers will be determined and provided as necessary through Technical Support Services Contract(s).

**Table 9: Information on Hiring Under the Recovery Act**

<b># &amp; Type of Positions</b> (Title, Series and Grade)	<b>Location</b> (HQ or Field – w/location)	<b>Federal or Contractor</b>	<b>Timeframe</b> (1-6mos; 6+mos; other; specify date needed if possible)
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Note: Oak Ridge requirements for Recovery Act projects are included in the Oak Ridge Defense ORNL D&D Recovery Act Project Operating Plan.

