

## Project Operating Plan

### BACKGROUND

<b>Recovery Act Project:</b>	Oak Ridge Defense Y-12 D&D Recovery Act Project
<b>TAFS:</b>	89-09/10-0253
<b>Project Identification Code:</b>	2002100
<b>Recovery Act Bill Reference:</b>	PL 111-5, Title IV – Energy and Water Development, Defense Environmental Cleanup (H.R. 1-26)
<b>Project Cost:</b>	\$327,000,000
<b>Budget Authority:</b>	06049, FD.04.11.00.0, \$327,000,000
<b>Program Office:</b>	Environmental Management (EM)
<b>Recovery Program Plan:</b>	EM - Defense
<b>Management Office:</b>	Stephen H. McCracken, Assistant Manager for Environmental Management, Oak Ridge Office, <a href="mailto:mccrackensh@oro.doe.gov">mccrackensh@oro.doe.gov</a> J.T. Howell, ORO Recovery Project Manager, Oak Ridge Office, <a href="mailto:howelljt@oro.doe.gov">howelljt@oro.doe.gov</a>

### LEADS

<b>Implementation:</b>	Oak Ridge Office
<b>Breakthrough:</b>	N/A
<b>Laboratory:</b>	N/A

## I. SUMMARY & OBJECTIVES

### Summary:

This Recovery Act project will render the highest risk excess facility at Y-12 (Alpha-5) ready for decontamination & demolition (D&D) by removing all legacy material; remediate the most significant source of mercury contamination to surface water at Y-12; and demolish five dilapidated, contaminated buildings. Specific projects include:

- Prepare the highest risk excess facility at Y-12 (Alpha-5) for accelerated D&D by completing all legacy material disposition from approximately 613,000 ft<sup>2</sup> of floor space.
- Eliminate the most significant source of off-site mercury transport, and the greatest environmental concern at Y-12, by completing remediation of the Y-12 storm sewers in the West End Mercury Area (WEMA).
- Complete cleanup of the Y-12 Salvage Yard (7 acres) by removing over 31,000 cubic yards of scrap material.
- Complete removal of legacy material from the entire second floor (84,000 ft<sup>2</sup>) of Beta-4 building.
- Complete cleanup and demolition of contaminated surplus facilities totaling 150,000 square feet, including Building 9211, Building 9769, Building 9220, Building 9224, and Building 9735.

- Complete cleanup and demolition of the contaminated surplus Filter House for Building 9206, eliminating a Defense Nuclear Facilities Safety Board concern.
- Complete expansion of sanitary landfill for disposal of debris and other materials.
- Expand EMWMF disposal facility by approximately 500K yd<sup>3</sup> to accept more clean-up and demolition waste.

This Recovery Act work meets the following 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 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. This project eliminates on-site sources of contamination which reduces the risk of a release of radioactive or other hazardous substances and potential impacts to the workers, the public, and the environment. The Y-12 footprint will also be reduced by 150,000 square feet. The Environmental Management Waste Management Facility and Oak Ridge Reservation Sanitary Landfill will be expanded to ensure permanent safe disposal of Oak Ridge Recovery Act project waste. The above activities will reduce the Environmental Management liabilities.

### **Recovery Act Project Impacts:**

This Recovery Act project eliminates on-site sources of contamination which reduces 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. The Y-12 footprint will be reduced by 150,000 square feet including the first demolition of process-contaminated buildings and release of valuable

real estate for modernization. Approximately 700,000 square feet of excess facilities will have legacy materials removed and disposed to reduce risks and to prepare for future demolition. The Y-12 salvage yard project will remove contaminated scrap material from approximately 7 acres and will make this soil area accessible for future remediation. The acceleration of the above activities will reduce 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
<b>Y-12 Defense</b>												

**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
<b>Y-12 Defense</b>												

**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
<b>Y-12 Defense</b>									
	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
<b>Y-12 Defense</b>									
	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.

**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 and facility and operating contractor utilizing an approved indirect rate structure.

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

The facility and operating contractor estimated rates are:  
 FY 2009 11.8%, FY 2010 10.0%, and FY 2011 9.0%.

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
New Projects	Increase							
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	
Develop Parametric Performance Baseline (Individual Projects)	N/A	
If < \$100 M Perform IPR, > \$100 M Perform EIR (Individual Projects)	N/A	
Approve Performance Baseline	N/A	
Approve Start of Construction	N/A	
Approve Project Completion	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	2002100
Linkage To S-1 Priorities	Economic prosperity and national security and legacy (see Table 8)
Linkage to Current Program Goal (if applicable)	DOE Strategic Goal 4.1 – Environmental Cleanup – Complete cleanup of the contaminated nuclear weapons manufacturing and testing sites across the United States.  EM Goals - Decontaminating and decommissioning facilities that provide no further value to reduce long-

	<p>term liabilities and maximize resources for cleanup. Fulfilling commitments to reduce risk and complete cleanup across all sites for future generations.</p>
Two-Year Outcome-Oriented Performance Measure	<p>By the end of FY 2011:</p> <ul style="list-style-type: none"> <li>• Remove and dispose legacy materials from ~700,000 square feet.</li> <li>• Decrease footprint by 150,000 square feet.</li> <li>• Remove and dispose 31,000 cubic yards of scrap.</li> <li>• Complete expansion of sanitary landfill.</li> <li>• Expand EMWMF disposal facility by approximately 500K yd<sup>3</sup>.</li> <li>• Complete remediation of the Y-12 storm sewers in the West End Mercury Area.</li> </ul>
First Year Performance Target	<p>By the end of FY 2009 initiate procurement actions and/or mobilize work force to:</p> <ul style="list-style-type: none"> <li>• Remove and dispose legacy materials.</li> <li>• Decrease footprint.</li> <li>• Remove and dispose scrap.</li> <li>• Expand the sanitary landfill.</li> <li>• Expand EMWMF disposal facility.</li> <li>• Remediate the Y-12 storm sewers in the West End Mercury Area.</li> </ul>
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• NNSA-Y-12 Site Office issues interim Work Authorization Directive to the contractor to initiate Recovery Act work.</li> <li>• Alpha-5 and Beta-4 - Mobilize radcon and industrial hygiene teams to initiate health and safety characterization, initiate legacy material removal, complete first shipment of waste for disposal.</li> <li>• West End Mercury Area - Issue Request for Proposal for inspection storm sewers.</li> <li>• Salvage Yard - Mobilize subcontractor, initiate legacy material removal, initiate container characterization and re-packaging operations, complete first off-site shipment of waste for disposal.</li> <li>• Environmental Management Waste Management Facility - Start expansion construction, award Expansion Construction Quality Assurance subcontract.</li> </ul>
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Alpha-5 and Beta-4 - Complete Waste Handling Plans for legacy material disposal and salvage yard debris.</li> <li>• West End Mercury Area - Complete Video</li> </ul>

	<p>Inspection of storm sewers, complete "Engineering Study" reporting on results of storm sewer inspection.</p> <ul style="list-style-type: none"> <li>• Biology Complex Buildings 9211, 9220 and 9224 - Issue hazardous material abatement subcontract Request for Proposal.</li> </ul>
Second Year Performance Target	<p>By the end of FY 2010:</p> <ul style="list-style-type: none"> <li>• Expand EMWMF disposal facility by approximately 500K yd<sup>3</sup>.</li> <li>• Continue removal and disposal of legacy materials.</li> <li>• Continue footprint reduction.</li> <li>• Continue removal and disposal of scrap.</li> <li>• Continue expansion of sanitary landfill.</li> <li>• Continue remediation of the Y-12 storm sewers in the West End Mercury Area.</li> </ul>
Q1 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Alpha-5 - Complete removal of enough excess nuclear material to downgrade the facility hazard category to a "non-nuclear facility".</li> <li>• Buildings 9211, 9220, 9224, and 9769 - Initiate hazardous material abatement.</li> <li>• Sanitary Landfill - Initiate development of bid package for sanitary landfill expansion.</li> <li>• Sanitary Landfill - Complete design.</li> <li>• Environmental Management Waste Management Facility - Complete installation of the clay liner.</li> </ul>
Q2 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Alpha-5 - Complete removal of all legacy material from the 4th floor.</li> <li>• 9206 Filter House - Initiate field work, beginning with utility isolations.</li> <li>• Sanitary Landfill - Complete regulatory review of sanitary landfill expansion final design.</li> <li>• Sanitary Landfill - Award sanitary landfill expansion subcontract.</li> <li>• Environmental Management Waste Management Facility - Complete installation of geosynthetic liner.</li> </ul>
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• West End Mercury Area - Complete Remedial Action Work Plan/Waste Handling Plan for the storm sewers.</li> <li>• Beta-4 - Complete removal of legacy material from the high bay and office areas on the 2nd floor.</li> </ul>

	<ul style="list-style-type: none"> <li>• Building 9735 - Initiate demolition.</li> </ul>
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Alpha-5 - Complete removal of all legacy material from the 2nd floor.</li> <li>• Building 9735 - Complete demolition.</li> <li>• Environmental Management Waste Management Facility - Complete Cell Expansion construction and gain Regulatory approval.</li> </ul>
Third Year Performance Target	<p>By the end of FY 2011:</p> <ul style="list-style-type: none"> <li>• Complete removal and disposal of legacy materials from ~700,000 square feet.</li> <li>• Complete footprint reduction by 150,000 square feet.</li> <li>• Complete removal and disposal of 31,000 cubic yards of scrap.</li> <li>• Complete expansion of sanitary landfill.</li> <li>• Complete remediation of the Y-12 storm sewers in the West End Mercury Area.</li> </ul>
Q1 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Salvage Yard - Complete disposition of all containerized waste.</li> </ul>
Q2 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Sanitary Landfill - Complete expansion construction.</li> <li>• Alpha-5 - Complete removal of all legacy material from the 3rd floor.</li> <li>• Beta-4 - Complete removal of legacy material from the Production Storage and Work Area on the 2nd floor.</li> <li>• Building 9769 - Complete demolition.</li> </ul>
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Salvage Yard - Complete disposition of all materials.</li> </ul>
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> <li>• Alpha-5 and Beta-4 - Complete legacy material disposition for Alpha-5 and the 2nd floor of Beta-4.</li> <li>• Building 9211, 9220 and 9224 - Complete building demolition.</li> <li>• Salvage Yard - Issue the Phased Construction Completion Report to Regulators for approval.</li> <li>• West End Mercury Area - Complete cleaning and re-lining of storm sewers and issue Phased Construction Completion Report to Regulators for approval.</li> </ul>

**National Strategic Benefits**

**Table 7: National Strategic Benefits**

1. N/A
2. N/A

**IV. MANAGEMENT**

**Secretarial-level Items**

The initiatives 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 legacy material from the highest risk excess facilities at the Y-12 site. Demolish 5 contaminated facilities. Remediate on-site storage salvage yard.	Remove and dispose legacy materials from ~700,000 square feet. Decrease footprint by 150,000 square feet. Remove and dispose 31,000 cubic yards of scrap.
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.

However, ancillary benefits will be achieved through the elimination of facilities resulting in reduced electrical power consumption and corresponding reduction of greenhouse gas emissions. Reuse/Recycle of excess materials could result in reduced consumption in fossil fuels required to process raw materials.

These facilities contain hazardous or 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 large procurement actions.
- Priority execution of security clearance requests.

- Timely coordination with National Nuclear Security Administration.

**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 and NNSA contractors who will be performing work funded under Recovery Act have existing Safety Assurance Plans.

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.