

Savannah River Site D&D, Soil & Groundwater Activities Site-Wide  
Recovery Act Project

**Project Operating Plan**

**BACKGROUND**

**Recovery Act Project:** Savannah River Site D&D, Soil & Groundwater Activities Site-Wide Recovery Act Project

**TAFS:** 89-09/10-0253

**Project Identification Code:** 2002152

**Recovery Act Bill Reference:** PL 111-5, Title IV – Energy and Water Development, Defense Environmental Cleanup (H.R. 1-26)

**Project Cost:** \$365,400,000

**Budget Authority:** 06049, FD.05.13.00.0 - \$365,400,000

**Program Office:** Environmental Management (EM)

**Recovery Program Plan:** EM - Defense

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**LEADS**

**Implementation:** Savannah River Site

**Breakthrough:** N/A

**Laboratory:** N/A

**I. SUMMARY & OBJECTIVES**

**Summary:**

This American Recovery and Reinvestment Act Project supports the mission of DOE and the Office of Environmental Management (EM) by 1) deactivating and decommissioning (D&D) facilities that provide no further value to reduce long-term liabilities and maximize resources for cleanup, 2) remediating sources of soil and ground water contamination with radioactive and hazardous constituents and 3) reconfiguring/relocating/replacing systems impacted by D&D that are required to support remaining site operations in a safe and cost effective manner to reduce risk.

**Other Site Areas (includes Facility Deactivation, Decommissioning, Remediation)**

- Remove 3,000,000 gallons of contaminated water from in the C Reactor disassembly basin building
- Remove more than 90% of the plutonium-238 source term from 235-F

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- Complete characterization of 4 A-Area waste units (approximately 18 acres)
- Complete remediation of the following waste units:
  - Gunsite 12
  - CMP Pits
- Decommission the following facilities (approximately 1,220,720 ft<sup>2</sup>):
  - Heavy Water Components Test Reactor
  - A-Line facility in F-Area
  - Consolidated Incineration Facility
  - A-Area excess or contaminated facilities, including 703-A and relocation of the Emergency Operations Center, presently located in the basement of this facility
  - D-Area Powerhouse (following construction of a new powerhouse)
  - K-Area Powerhouse, K Cooling Tower and other excess K Area facilities
  - 645-N, 690-N and 728-N
  - F/H Area Groundwater Treatment Unit

The required funding for this work is \$365.4M. This Recovery Act Project accelerates work that is scheduled in the SRS existing baseline. An update to the project baseline will be required.

This Recovery Act work ties to the following DOE and EM Strategic Goals and Themes:

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

DOE Strategic Goal 5 – Management and Excellence – Enabling the Department’s mission through sound management and business practices.

EM Goals – To safely disposition large volumes of nuclear waste; safeguard materials that could be used in nuclear weapons; deactivate and decommission thousands of contaminated facilities no longer needed by the Department to carry on its current mission; EM is fulfilling its commitments to reduce overall risk and complete cleanup across all sites for generations to come.

### **Public Benefits:**

Numerous on-site jobs will be created and/or retained by implementing this project, bolstering the local economy. In South Carolina, the unemployment rate is 11 percent. Major types of workers required for this work include construction labor, engineer, heavy equipment operator, field technician, truck driver, and administrative support worker. The large number of workers trained by completing this project will be available for future missions, including the energy park initiative planned for the SRS. Personnel brought in for this initiative could also provide a critical source of employees to support completion of the EM mission at the site necessitated by the current aging SRS workforce and attrition associated with the expanding nuclear industry. Surrounding area businesses will also experience a job creation benefit from this work scope

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initiative. Additional off-site jobs will likely be created in the surrounding communities due to the in flux of new workers.

This project fulfills the Government’s responsibility to address nuclear weapons waste; allows earlier completion of legal compliance agreement milestones; and enables reuse of DOE resources, including land and infrastructure, for other energy missions or community reuse through long-term leases. Moreover, EM sites can be used to establish Energy Parks once they are cleaned up, providing long-term quality jobs for the Recovery Project workforce.

Reducing the facilities in A Area will improve the opportunity for the public and industry to access Savannah River National Laboratory. Over 90% of the risk posed by plutonium contamination in building 235-F will be removed, reducing significantly the risk to site workers.

### Recovery Act Project Impacts:

Investment in this project will accelerate soil and groundwater remediation and D&D in various areas around SRS. It will eliminate more than 90 percent of the plutonium-238 source term from a former metallurgical laboratory, significantly reducing risk to site workers. A former radioactive waste incinerator will be removed to the foundation and properly disposed of. The security posture in K-Area will be improved through the decommissioning of several excess facilities, including the unneeded cooling tower and coal fired power plant. Building 703-A, the former administration facility, will be demolished and the emergency operations center, now located in the basement of this facility, will be relocated. Large quantities of damaged asbestos are present throughout 703-A, which can pose long term health hazards to workers still employed in this facility.

This project will create and/or retain many new jobs for the skilled workforce currently available in the surrounding area to execute this project. In addition, the EM footprint at the 310 square-mile SRS will be reduced, enabling reuse of EM infrastructure for other energy missions or community reuse, and reducing life-cycle costs.

## II. COST & SCHEDULE

### Budget

**Table 1a: Budget Implementation 12 Week Obligations (\$M) [ENTER INTO SHAREPOINT DIRECTLY]**

	Week of ARRA Activities (Beginning Week of March 9)												
	1	2	3	4	5	6	7	8	9	10	11	12	
Savannah River Site D&D, Soil & Groundwater Activities Site-Wide Recovery Act Project 2002152													

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**Table 1b: Budget Implementation 12 Week Expenditures (\$M) [ENTER INTO SHAREPOINT DIRECTLY]**

	Week of ARRA Activities (Beginning Week of March 9)											
	1	2	3	4	5	6	7	8	9	10	11	12
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**Table 2a: Budget Implementation Monthly & Yearly Obligations (\$M) [ENTER INTO SHAREPOINT DIRECTLY]**

	FY 2009 Q3			FY 2009 Q4			FY 2010 Q1			
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Savannah River Site D&D, Soil & Groundwater Activities Site-Wide Recovery Act Project 2002152	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) [ENTER INTO SHAREPOINT DIRECTLY]**

	FY 2009 Q3			FY 2009 Q4			FY 2010 Q1			
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Savannah River Site D&D, Soil & Groundwater Activities Site-Wide Recovery Act Project 2002152	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	

Funds Returned and Offsetting Collections  
N/A

**Table 3: Funds Returned and Offsetting Collections (\$M) [ENTER INTO SHAREPOINT DIRECTLY]**

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
[Provide description and amounts for Funds Returned and Offsetting]							

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Collections]							
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Indirect Costs

This work will be performed by an existing M&O contractor using an approved indirect rate structure. The estimated percent of Recovery Act Project indirect costs is approximately 20%.

In accordance with the general principles of the Recovery Act, DOE Savannah River Site will take the following steps to minimize the impacts of indirect costs and enhance transparency and accountability of project:

- (a) Clearly identify the estimated full cost of projects to include total direct and indirect costs, indirect costs rates, and adjust existing indirect cost rate to account for the material infusion of funds provided in the Recovery Act;
- (b) Ensure all funds transferred to contractors/subcontractors are completed using the Approved Funding Program process described in Chapter 12 of the Accounting Handbook; and
- (c) The Federal Administrative Charge (FAC) of three percent is waived on reimbursable work funded by the Recovery Act and performed by DOE federal offices or the site contractor.

**Changes to Baseline Budget**

**Table 4: Changes to Baseline Budgets (\$M) [ENTER INTO SHAREPOINT DIRECTLY]**

Changes to Baseline Budget	Increase/Decrease	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Project Acceleration and less remaining scope after FY11	Decrease							

There will be significant decrease in the out years (after FY15) from the certified life cycle baseline based on the acceleration of various other areas across the SRS site. This out-year decrease is estimated to be up to \$406M.

**Milestones**

Table 6 provides milestones and performance measures 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 associated end-states, interim milestones, and performance measures. These all assume Recovery Act funding availability in the second quarter of fiscal year 2009. As detailed estimates and resource-loaded schedules (using Primavera 6.2) are developed, there likely will be some change to these estimates for costs, milestones and performance measures.

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This scope will be integrated into the Savannah River Site contractor performance baseline (but tracked and reported separately and uniquely). Therefore, DOE-SR will use the internal DOE-approved change control process for all Recovery Act project scope. It is assumed there will also be a future DOE-HQ change control process associated with costs, milestones and performance measures that have been reported to date and included in this plan.

**Table 5: Delivery Schedule for Capital Asset Projects [ENTER INTO SHAREPOINT DIRECTLY] N/A (until OECM and DOE agree on 413.3A graded approach)**

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

### **III. PERFORMANCE**

#### **Performance Measures**

The Project will regularly report on all aspects of project cost including indirect cost rate, schedule, performance, results and impacts. Reporting of the estimation of jobs created and retained will also be made.

Within ninety days after the effective date of the contract modification, the contractor shall propose to the Contracting Officer a Contract Performance Baseline, including a supplemental Performance Evaluation and Measurement Plan to accommodate the Recovery Act Project scope.

The period of performance for the Recovery Act work begins April xx, 2009 through September 30, 2011.

The following reporting procedure will apply to the submission of monthly cost reports for Recovery Act work specified in the accelerated work scope baseline.

- (a) DOE will conduct a review of the contractor's proposed EVMS for compliance with ANSI/EIA-748 according pursuant to DOE Order 413.3A. The contractor shall submit an EVMS Certification Plan to DOE by April 30, 2009, and receive EVMS certification no later than September 30, 2009.
- (b) The contractor shall certify in each monthly report that the costs included in the report for Recovery Act work were incurred only to accomplish the Recovery Act work in accordance with the accelerated work scope.

**Table 6: Project Performance Targets** **[ENTER INTO SHAREPOINT DIRECTLY]**

Recovery Act Project Identification Code	Savannah River Site D&D, Soil & Groundwater Activities Site-Wide Recovery Act Project 2002152
Linkage To S-1 Priorities	National Security and Legacy - Accelerate decommissioning of nuclear facilities and contaminated areas in areas of SRS
Linkage to Current Program Goal (if applicable)	DOE Strategic Goal 4 –Environmental Responsibility – Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.  EM Goals – Environmental responsibility to protect the environment and to D&D contaminated facilities no longer needed to carry on current EM mission
<b>Three</b> -Year Outcome-Oriented Performance Measure	By the end of FY 2011, accelerate D&D, soil and groundwater remediation in various areas around SRS.
First Year Performance Target (2009)	Eliminate more than 90 percent of the plutonium-238 source term from a former metallurgical laboratory, significantly reducing risk to site workers
Q3 - Project-Level Quarterly Performance Milestone(s)	Submit regulatory documentation to SCDHEC and EPA for decommissioning the consolidated incineration facility 261-H
Q4 - Project-Level Quarterly Performance Milestone(s)	Award A Area facility D&D contract, Issue Request for Proposal (RFP) for demolition of 184-K Power House, Definitize PEMP/Award Fee Plan vis formal contract modification, Issue Request for Proposal (RFP) for the D&D of Heavy Water Components Test Reactor (770-U), Issue Request for Proposal (RFP) for demolition of 185-3K Cooling Tower, Complete demolition of 292-F Stack adjacent to 235-F,
Second Year Performance Target (2010)	Complete procurements for various D&D and remediation systems
Q1 - Project-Level Quarterly Performance Milestone(s)	Award contract for demolition of 184-K Power House, Award contract for demolition of 185-3K Cooling Tower
Q2 - Project-Level Quarterly	Complete removal of Chemical, Metals, and

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Performance Milestone(s)	Pesticides Pits Waste Unit above ground remediation system
Q3 - Project-Level Quarterly Performance Milestone(s)	Complete construction of H Area groundwater base injection system
Q4 - Project-Level Quarterly Performance Milestone(s)	Complete D&D of F A-Line (221-F) Building, Complete demolition of 185-3K Cooling Tower
Third Year Performance Target (2011)	Complete D&D and soil/groundwater remediation in various areas across the site
Q1 - Project-Level Quarterly Performance Milestone(s)	Complete characterization of four A Area waste units, Complete D&D of K-Area Powerhouse (184-K)
Q2 - Project-Level Quarterly Performance Milestone(s)	Complete D&D of F/H groundwater treatment facilities, Complete D&D of 728-N Cask Repair Facility, 645-N Storage Facility for non-radioactive hazardous waste, and 690-N Process Heat Exchanger Repair Facility
Q3 - Project-Level Quarterly Performance Milestone(s)	
Q4 - Project-Level Quarterly Performance Milestone(s)	Complete D&D of Heavy Water Components Test Reactor (770-U), Complete D&D of 261-H Consolidated Incinerator Facility (CIF)

**National Strategic Benefits**

**Table 7: National Strategic Benefits [ENTER INTO SHAREPOINT DIRECTLY]**

1. Carbon Emission Reductions: Estimated 5-year undiscounted CO <sub>2</sub> reduction (in metric tones of CO <sub>2</sub> equivalent) are N/A
2. Oil Consumption Reductions: Estimated 5-year reduction in undiscounted oil consumption (in barrels of oil equivalent) is N/A

## IV. MANAGEMENT

### Secretarial-level Items

**Table 8: Secretary's Priorities** [ENTER INTO SHAREPOINT DIRECTLY]

Secretary's Priorities	Project Impacts (Qualitative)	Project Impacts (Quantitative)
Science and Discovery		
Clean, Secure Energy		
Economic Prosperity	Job creation and/or retention	
National Security and Legacy	EM footprint reduction	1 million square feet of facilities D&D'ed
Climate Change		

### Collaboration and Coordination

The DOE Nevada Test Site, EnergySolutions in Utah, and other commercially-operated waste treatment/ storage/disposal Facilities will be needed to support treatment and disposal of waste generated during the Recovery Act Project. Coordination with these interfaces already exists however will be enhanced throughout this project. Maintaining continuity of available disposal capacity for Class A and Greater-Than Class A Mixed Low Level Radioactive Waste is important to the project.

The Savannah River Ecology Laboratory (SREL) operated by the University of Georgia will continue to provide the support for the ecological risk assessments.

The DOE-SR Office of Acquisition Management will continue to work closely with DOE-EM and DOE-MA to insure timely business clearance approval for procurement actions that exceed local authority.

DOE-SR will work with DOE-EM and other headquarters organizations to revise or provide clarification to DOE Order 5400.5 (DOE Rad Release Criteria) to facilitate material disposition.

DOE-SR will work with DOE-EM and other headquarters organizations to streamline the HUD review process for excess facilities and/or to obtain a exception/deviation from the process.

The Savannah River National Laboratory will continue to provide the technical and research core competency capabilities, DOE Order 435.1 compliance, and provide special analytical services.

Training programs and/or courses may be set up in the local universities and/or technical colleges for identified positions which may require additional training outside of standard site training courses.

There are many external interfaces associated with the normal operations at SRS. These include:

- **Regulatory** SRS Citizens Advisory Board, Environmental Protection Agency, South Carolina Department of Health and Environmental Control, Department of Transportation, Nuclear Regulatory Commission, and Defense Nuclear Facilities Safety Board

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- **Community** SRS Citizens Advisory Board, Central Savannah River Area Counties, Surrounding States, Nevada, New Mexico, and Utah
- **Industry** Environmental Engineering/Remediation, Waste Management, Construction, Cement, Container, Transportation, Housing, Utilities, etc.
- **Other** Other SRS Contractors, Labor Unions, Parent Companies, Local Universities/Colleges

### 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

DOE-SR intends to use existing EM site systems and practices to effectively monitor and report on the Recovery Act Project activities, 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 EM project cost and schedule baselines consistent with DOE Order 413.3 and identifying project risks and strategies for managing them.
- Continue use of industry standard Earned Value Management System (EVMS) to compare actual project scope, cost, and schedule performance against planned performance as depicted in the baseline.
- Continue monitoring of the contractors' EVMS 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.
- Hold monthly management reviews to provide updates on the Recovery Act Project to EM's senior-most executives.
- Secure support service contractors to provide limited augmentation of federal procurement, budget and finance, project controls, and technical oversight capabilities for the Recovery Act Project.
- Assign appropriately qualified staff to the Recovery Act Project to provide technical and programmatic oversight of the contractors performing the work and be the day-to-day governmental interface and manager for the project.
- Use an Integrated Project Team (IPT) of Federal and contractor staff with project knowledge and subject matter expertise essential to the successful planning and execution

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of the project – including safety, risk management, engineering, quality assurance, contracts administration, and project controls.

- Develop detailed risk management plans for the Recovery Act Project to identify and mitigate risks, and assign roles and responsibilities for managing the risks.

### Needs from Staff Offices

#### 1) Human Capital

DOE Savannah River Operations Office (DOE-SR) intends to use support service contractors to provide limited augmentation to federal staff in the areas of procurement, budget and finance, project controls, and technical oversight. DOE-SR is nearly staffed to the DOE Environmental Management program's "Best In Class" federal staffing levels for both acquisition and project controls. In addition, DOE-SR is currently in the process of hiring additional federal Facility Representative technical and safety oversight staff. Therefore, execution of this Recovery Act Project requires no additional federal hires, or details of federal staff, and therefore require no hiring or retention incentives. Priority execution of security clearance requests may be required.

**Table 9: Information on Hiring Under the Recovery Act [ENTER INTO SHAREPOINT DIRECTLY]**

<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)
N/A	N/A	N/A	N/A