

Project Operating Plan – Richland - Hanford Site – Soil and Groundwater - River Corridor Closure

Attachment B:

Richland - Hanford Site – Soil and Groundwater - River Corridor Closure Project Operating Plan

BACKGROUND

ARRA Project: Richland - Hanford Site – River Corridor Soil and Groundwater ARRA Project

TAFS: 89-09/10-0253

Project Identification Code: 2002143

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

Project Cost: \$72,432,000

Budget Authority: STARS Fund Code: 06049, FD0221

Program Office: Environmental Management (EM)

Recovery Program Plan: EM - Defense

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LEADS

Implementation: Richland – Hanford Site

Breakthrough: NA

Laboratory: NA

I. SUMMARY & OBJECTIVES

Summary:

The River Corridor Soil and Groundwater project (RL-0041.R2) involves the 618-10 and 618-11 burial ground trenches which present a risk to the Columbia River and are located near the City of Richland. The project scope includes the characterization of the 618-10 and 618-11 burial ground trenches containing radioactive and hazardous constituents. The project also initiates remediation of the 618-10 trenches. Both the remainder of the 618-10 trench and all Vertical Piping Units (VPU) remediation and all of the 618-11 remediation will be completed post ARRA. The required funding of \$72.4M from the American Recovery and Reinvestment Act (ARRA) supports the mission of DOE and the Office of Environmental Management (EM) by accelerating completion of existing cleanup goals, in many cases much earlier than originally planned. Recovery Act funding will provide the resources necessary to characterize and initiate the remediation of hazards at the Burial Ground 618-10 Trench in accordance with the requirement under

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the Tri-Party Milestone (M-16-00B) having a compliance date of September 30, 2018. Remediation of the burial ground trench also supports the 300-FF-2 Record of Decision. This work will also reduce environmental threats to areas surrounding the sites, including the Columbia River and will produce a significant number of jobs both directly and indirectly.

Non Intrusive Characterization

The absence of waste disposal records and the risk of the unknown dictate a two phased approach to characterization. The first phase will concentrate on non-intrusive characterization activities. The term "non-intrusive" denotes that the trench contents will be characterized using methods which prevent the contents from being accessible to personnel or the environment. The Non-Intrusive Characterization (NIC) Project Implementation Plan was submitted and approved in 2008. The plan includes the Sampling and Analysis Plan (SAP), DOE/RL-2008-27 that establishes the non-intrusive sampling requirements to be performed without removing waste materials from the area. If work under the NIC Study determines that a confinement is not required for excavation in the trenches, then the project will proceed with on-site monitoring, conducting readiness reviews, and performing potholes of two trenches in order to characterize waste types and forms.

The work scope for the first phase also includes review and documentation for project start-up activities necessary for mobilization, vertical pipe unit (VPU) and trench radiological characterization, and VPU soil sampling. This effort will provide data and information needed for planning the next stage of activities.

Intrusive Characterization

In the second phase, intrusive trench characterization activities will be conducted to provide additional information on the actual form, level of contamination, condition and retrievability of various waste types within the burial ground trenches. ARRA funding is being used to conduct the work necessary for an understanding of the quantity and condition of the material deposited in these burial grounds prior to remediation. The results of characterization efforts will be evaluated to establish the appropriate worker/environmental controls to safely proceed with future remediation activities.

618-10 Remediation

Remediation includes the completion of the Design Solution conceptual design and development of the Remediation Plan to provide the basis for Remediation of the 618-10 Burial Ground trenches. The planning base for the Remediation Plan will require completion of the NIC and Intrusive Characterization to fully define confinement and excavation/retrieval methodologies.

Beginning characterization work now accelerates the initiation of remediation of the 618-10 Burial Ground Trenches by approximately 5 years. The NIC, intrusive

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characterization and initiation of 618-10 remediation is scheduled for completion by the end of fiscal year 2011. The NIC of 618-11 is scheduled for completion by the end of fiscal year 2011 as well.

This project supports the following DOE and EM Strategic Goals and Themes:

- DOE Strategic Plan Theme 4 –Environmental Responsibility – Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.
- DOE Strategic Plan Theme 5 – Management Excellence – Enabling the Department’s mission through sound management and business practices.
- EM Recovery Goals – Reduce Legacy Environmental Footprint.

The original scope and purpose of the existing contract will not change with the addition of the ARRA funding. The overall goal is to accomplish the mission of DOE-RL by eliminating environmental threats to the Columbia River and reducing the overall footprint of the Hanford Site through remediation of burial grounds.

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 Hanford sites from the former nuclear weapons complex. This will reduce the potential safety and health risks.

Recovery Act funding will be used by Hanford 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. The additional jobs are expected to extend through the entire period of Recovery Act activities in EM.

To counteract the unemployment rate in Washington State of 9.2 percent and bolster the local economy, numerous on-site jobs will be created and/or retained at Hanford by implementing this project. Types of jobs created or retained will include well drillers, soil excavation personnel, construction and demolition personnel, waste processors and handlers, railroad train crews, waste truck drivers, construction laborers, engineers, heavy equipment operators, field technicians, and administrative support workers. The large number of workers trained by completing this project would be available for future missions. 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 Hanford workforce and attrition associated with the expanding nuclear industry. Surrounding area businesses will also experience job creation benefits from this work scope initiative. Additional benefits of off-site jobs will likely be created in the surrounding communities due to the influx of new workers.

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ARRA Project Impacts:

Investment in this project will aid in the reduction of the overall operational footprint of the Hanford Site through cleanup of contaminated areas adjacent to the Columbia River. Potential out-year savings include accelerating field remediation of this ARRA project originally scheduled to take place by 2015 to be completed during FY 2009-2011 providing a rough order of magnitude (ROM) savings of \$8M. This acceleration will enable reuse of EM infrastructure for other energy missions and/or community uses.

II. COST & SCHEDULE

Budget

Adjustments to obligations based on contract definitization are expected per EM approval.

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
Hanford – 1041 Soil and Groundwater				62								

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
Hanford – 1041 Soil and Groundwater	0	0	0	0	0	0	0	0	0	0	0	.4

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			
Hanford – 1041 Soil and Groundwater	NA	NA	0	0	0	0	0	0	0			
	FY 2010 Q2			FY 2010 Q3			FY 2010 Q4					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept			
	-5.4	0	0	0	0	0	0	0	0			
	FY 2011 Q1			FY 2011 Q2			FY 2011 Q3 & Q4					
	Oct	Nov	Dec	Jan	Feb	Mar	Apr – Sept					
	0	0	0	0	0	0	15.8					
	FY 2012			FY 2013			FY 2014			FY 2015		
	0			0			0			0		

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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
Hanford – 1041 Soil and Groundwater	NA	NA	.3	.4	.8	.7	.4	1.7	1
	FY 2010 Q2			FY 2010 Q3			FY 2010 Q4		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
	1	6	1	1	3	3	2	4	4
	FY 2011 Q1			FY 2011 Q2			FY 2011 Q3 & Q4		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr – Sept		
	3	2	1	1	2	4	28.7		
	FY 2012		FY 2013		FY 2014		FY 2015		
	0		0		0		0		

Funds Returned and Offsetting Collections

Note: No returned funds or any offsetting collections are expected to be received as a result of carrying out any ARRA projects. However, definitization of contracts will result in obligation adjustments based on EM approval.

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

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

Indirect Costs

This work will be performed by facility management contractors utilizing an approved indirect rate structure. All Hanford contractor indirect rates are subject to an annual audit review by the Defense Contract Audit Agency (DCAA) and require final approval by the Contracting Officer.

The River Corridor Closure (RCC) contractor indirect rates and disclosure statement are being audited by the Defense Contract Audit Agency. Once the audits are completed final approval by the Contracting Officer is required.

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
Program Direction After FY 2010	Increase	0	0	0	0	0
Continuation of New Programs	Increase	...	0	0	0	0	0	0
Project Acceleration	Increase	...	0	0	0	0	0	0

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Note: The RL ARRA projects involve accelerating existing projects. This will result in changes to the baseline budgets in the long term. Potential out-year savings include accelerating field remediation originally scheduled to take place by 2015 to be completed during FY 2009-2011 through utilization of ARRA funds. Work scope delineated in this POP was funded in the WCH contract mod A099 dated 4/9/2009. Corrected baseline funding will be finalized with the submittal and approval of the Contract Performance Baseline.

Milestones

The milestones and performance measures provided in Table 7 are based on the best available information about ARRA requirements and existing project definitions. Estimates have been developed to date for costs and associated end-state and interim milestones and performance measures. As the detailed estimates and resource-loaded schedules (using Primavera 6.2) are developed, completed updates will be made to the milestones and measured.

As this scope is integrated into the RL baseline, but tracked and reported separately and uniquely, the internal DOE approved change control process will be applied to all ARRA scope.

Table 5: Delivery Schedule for Capital Asset Projects

Program/OECM Milestone	Delivery (End) Date	Comments
Develop capital asset projects Integrated Project List	6/17/2009	N/A
Develop Parametric Performance Baseline (Individual Projects)	7/24/2009	N/A
If < \$100 M Perform IPR, > \$100 M Perform EIR (Individual Projects)	N/A	Decided by EM to perform only on RL-0011 and RL-0040 EIRs
Approve Contractor's Performance Baseline	4/15/2010	N/A
Approve Start of Construction	N/A	N/A
Project Completion	9/30/2011	N/A

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III. PERFORMANCE

Table 6: Performance Measures

Hanford Site – River Corridor Soil and Groundwater	
ARRA Project Identification Code	2002143
Subproject: Soil and Water Remediation	
Key Performance Parameter 1:	Complete characterization and remediation of 618-10 Burial Ground.
Associated Key Metrics:	<ul style="list-style-type: none"> • Trench scheduled starts (#) • Trench scheduled completes (#)

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

Contractors will continue to use approved processes and procedures to meet these requirements. Additionally, the contractor shall certify in each monthly report that the costs included in the report for ARRA work were incurred only to accomplish the ARRA work in accordance with the accelerated work scope.

Table 7: Project Performance Targets

ARRA Project Identification Code	2002143
Linkage To S-1 Priorities	National Security and Legacy – Eliminate environmental threats to Columbia River., Remediation of waste sites, Decontamination and Decommissioning of legacy facilities
Linkage to Current Program Goal (if applicable)	EM Goals – Environmental responsibility to protect the environment; remediate existing waste sites; and to D&D contaminated facilities no longer needed to carry on current EM mission.
Three-Year Outcome-Oriented Performance Measure	By the end of fiscal year 2011, remediate 618-10 Burial Grounds Trenches
First Year Performance Target (2009)	Initiate procurement activities for River Corridor Soil and Groundwater
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Issue notice to proceed • Initial Change Request submitted. • Award contract for 618-10 Non-Intrusive Characterization • Initiate procurement activities for River Corridor Soil and Groundwater
Q4 - Project-Level Quarterly Performance	<ul style="list-style-type: none"> • Mobilize for 618-10 non-Intrusive Characterization

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Milestone(s)	
Second Year Performance Target (2010)	Complete Characterization of River Corridor Soil and Groundwater (618-10 Trenches)
Q1 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Develop 618-10 Trench Remediation Plan • Initiate 618-10 Non Intrusive Characterization Trenches & VPUs
Q2 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Continue 618-10 Non Intrusive Characterization Trenches & VPUs
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Complete 618-10 Non Intrusive Characterization Trenches & VPUs • Mobilize and Commence 618-10 Intrusive Characterization of Trenches
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Complete 618-10 Trench Intrusive Characterization
Third Year Performance Target (2011)	Complete Remediation Planning and initiate remediation of 618-10 Trenches
Q1 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Complete 618-10 Trench Remediation Plan
Q2 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Mobilize and set up for 618-10 Remediation
Q3 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Initiate 618-10 Trench Remediation
Q4 - Project-Level Quarterly Performance Milestone(s)	<ul style="list-style-type: none"> • Continue 618-10 Trench Remediation

Note: The scope of the KPPs is subject to change due to completion of definitization and baseline approval per DOE O 413.3A.

Remaining Funds Management

For Recovery Act work at DOE-RL, cost estimates and schedules were developed at high confidence levels. Because of this, the possibility exists that ARRA project funds will be available to apply to additional scope during FY 2010 - 2012 as a result of cost savings due to efficiencies or under utilization of Management Reserve (MR) and Contingency. If available, these remaining funds could further help DOE realize the accelerated cleanup of the Hanford Site and support the Hanford ARRA mission of creating jobs, reducing the footprint and realizing lifecycle cost savings. Subsequently, preliminary planning has been performed to identify a list of existing base-funded work scope that may be funded by the ARRA.

The approach DOE-RL is taking to manage these funds includes:

- Quantifying the efficiencies, and MR/contingency under utilization to-date and forecasting efficiencies and underutilization of MR/contingency through FY 2011

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- Identifying and estimating scope candidates that exist outside currently defined ARRA prime contractor scope that would also support the mission of jobs, footprint reduction and lifecycle cost savings,
- Reviewing the current baseline to definitize priority, cost, targets, and metrics for remaining candidates that could be accelerated.

Once these tasks are completed, a re-apportionment request will be submitted in June 2010 to ensure current performance commitments are sufficiently funded and to align remaining ARRA funds (including projected efficiencies, unused MR and contingency dollars) with the highest priority work scope. Additionally, the POPs will be revised and submitted that define priority, cost, targets and metrics for the remaining work scope. The following table identifies potential candidates for scope acceleration.

Table 8: Remaining funds scope candidates

N/A

National Strategic Benefits

This project provides for protection of the Columbia River and therefore has significant benefit to the Pacific Northwest. It does not directly provide national strategic benefit such as reduction of carbon emissions or oil consumption.

Table 9: National Strategic Benefits

Recovery Act National strategic goals	Benefits
Promote Energy Efficiency	N/A
Deploy Renewable Power	N/A
Modernize the Grid	N/A
Reduce Oil Consumption	N/A
Restore America's Scientific Leadership	N/A
Reduce Legacy Environmental Footprint	N/A
Reduce Greenhouse Gas Emissions	N/A

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IV. MANAGEMENT

Secretarial-level Items

Table 10: Secretary's Priorities

Secretary's Priorities	Project Impacts (Qualitative)	Project Impacts (Quantitative)
Science and Discovery	N/A	N/A
Clean, Secure Energy	N/A	N/A
Economic Prosperity	<ul style="list-style-type: none"> • Create new jobs. • Retain existing jobs. 	<ul style="list-style-type: none"> • Support overall RL goal of 3900 jobs (See Note)
National Security and Legacy	<ul style="list-style-type: none"> • Eliminate environmental threats to Columbia River. • Remediation of waste sites • Decontamination and Decommissioning of legacy facilities 	<ul style="list-style-type: none"> • Remediate 12 trenches
Climate Change	N/A	N/A

Note: Quantitative goal of 3900 jobs is subject to change based on EM and OMB guidance.

Collaboration and Coordination

Commercially-operated waste treatment/storage/disposal Facilities will be needed to support treatment of waste generated during the ARRA Project. Coordination with these interfaces already exists however will be enhanced throughout this project.

The DOE-RL Procurement Division will continue to work closely with DOE-EM and DOE-MA to insure timely business clearance approval for procurement actions that exceed local authority.

There are many external interfaces associated with the normal base program and Recovery Act project work and operations at Hanford. These include:

- **Regulatory** Environmental Protection Agency, Washington Department of Ecology, Department of Transportation, and Defense Nuclear Facilities Safety Board
- **Community** Hanford Advisory Board, Benton and Franklin Counties, cities of Richland, Pasco and Kennewick, Surrounding States, Nevada, and Utah

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- **Industry** Environmental Engineering/Remediation, Waste Management, Construction, Cement, Container, Transportation, Housing, Utilities, etc.
- **Other** Other RL Contractors, Labor Unions, Parent Companies, Local Universities/Colleges

Federal Infrastructure Investments

N/A

Line Management

In executing this ARRA project, DOE-RL will implement the project management requirements of DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*. DOE-RL will use the flexibility afforded by DOE O 413.3A and tailor its requirements to this project. This tailored approach will maintain the utility and value of clear project definition, configuration management and change control, and sound project controls, including earned value management.

DOE-RL intends to use existing EM site systems and practices to effectively monitor and report on the ARRA Project activities, including:

- Fully implement all ARRA transparency and reporting requirements through modifications to the contract that will fund this ARRA Project.
- Continue using approved programs and procedures currently in place with Hanford contractors and their subs, applying project management principles to ARRA 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 ARRA 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 ARRA Project to EM's senior-most executives.
- Secure support service contractors to provide support to federal staff in the areas of procurement, project controls, safety, and project support.
- Assign appropriately qualified staff to the ARRA 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.

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- 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 of the project – including safety, risk management, engineering, quality assurance, contracts administration, and project controls.
- Develop detailed risk management plans for the ARRA Project to identify and mitigate risks, and assign roles and responsibilities for managing the risks.

Needs from Staff Offices

N/A

Human Capital

DOE-RL will continue to use support service contractors to provide support to federal staff in the areas of procurement, project controls, safety and project support.

Note: DOE-RL has developed an integrated incremental staffing profile to support staff administering ARRA work. This staffing profile is wholly contained in Central Plateau D & D Project Operating Plan (2002140)

Table 11: Information on Hiring Under the ARRA

# & Type of Positions (Title, Series and Grade)	Location (HQ or Field – w/location)	Federal or Contractor	Timeframe (1-6mos; 6+mos; other; specify date needed if possible)
N/A	N/A	N/A	N/A

Procurement

Though scope will be accelerated with the addition of ARRA funds, the original scope and purpose of the River Corridor Closure contract will not change. The purpose of this contract continues to be furnishing safe, compliant, cost-effective and energy-efficient services to further the DOE-RL mission.

This contract applies performance-based contracting approaches; expects the Contractor to implement techniques that maximize performance efficiencies, through innovation and scope completion, and minimize the description of how to accomplish the scope of work. The contractor is responsible for determining the specific methods and approaches for accomplishing the work scope in accordance with contract required environmental, safety and health (ES&H) requirements. The intent of the proposed contract modifications is to provide additional funding to meet the original contract funding profile and accelerate defined work that was contemplated in the contract period.

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Table 12: Procurement Plans

Activity	Type	New/Exist (N/E)	Changes (E), Needs (N)	Status	Expected Complete	Issues (Y/N)
River Corridor Closure Contract - Environmental Remediation Work	Contract	E	(E) Funding Modifications	Contract Mod A099 April 9 2009	Complete	N