



*River Corridor Closure Project*

# **Recovery Act Weekly Report**

For the week ending November 8, 2009

Contract DE-AC06-05RL14655

## Overview

Background Summary of Projects that Washington Closure Hanford (WCH) will accomplish using ARRA funds (pending definitization of scope and contract modifications).

### A. The Environmental Restoration Disposal Facility (ERDF)

ERDF is the hub of the WCH scope of work and supports a major portion of other Hanford contractor (OHC) waste disposal. Wastes collected from sites around the Hanford complex are brought to ERDF for treatment and disposal. WCH operates the ERDF and is currently using ARRA funds to upgrade and expand its capabilities to meet the needs of Hanford's accelerating mission.

### B. The 618-10 Burial Grounds

The trenches at 618-10 have long been regarded as some of Hanford's worst waste sites. Using ARRA funds, WCH will characterize the site. Intrusive and non-intrusive techniques will be used, and the subsequent analysis of data will enable the project to pursue remediation of the site safely and effectively.

### C. The 618-11 Burial Grounds

Along with 618-10, the 618-11 Burial Grounds are among the biggest challenges faced by WCH using ARRA funds. The 618-11 characterization work will require special care because of its proximity to the Energy Northwest Generating Facility, north of the 300 Area.

### D. Waste Site Remediation

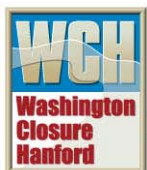
WCH is employing ARRA funds to clean up many failed waste sites not originally part of its contract. Sites in the 100-F and IU 2&6 segments 1&2 are proposed for waste site remediation in the two year period starting in October 2009.

### E. Confirmatory Sampling of other new sites

WCH is proposing to complete the early sampling process of 66 potential waste sites using ARRA funds. Confirmatory sampling is performed for sites that require additional information for determining if the site requires remediation. Details including chemicals of potential concern, specific sample locations, frequencies, sampling protocols, and analytical methods are presented in site-specific work instructions. Samples are then collected and analyzed for radionuclide and/or non-radionuclide chemicals of potential concern to determine if the site requires remedial action.

This weekly report will provide evidence of these activities as they occur in support of ARRA.

The following figure illustrates the overall scope of WCH's ARRA projects.





# Safety

## Safety Accomplishments

As of October 25, 2009, WCH and its subcontractors have safely worked over 79,000 hours of ARRA scope. Through November 6, 2009, there have been no safety incidents.

## Hazard Reductions

WCH's Safety Ownership Program (SOP) was launched as a tool for the River Corridor Closure project to focus on safety values. Safe work principles for all work, including ARRA, are organized under four SOP tenets:

- Tenet 1: Follow the Instruction
- Tenet 2: Ask the Question
- Tenet 3: Fix it Now
- Tenet 4: Own the Result.

Last week Guiding Principle was on how each worker controls the outcome of their work. This week's focus is on the third Guiding Principle of Tenet 4 – *Others Count on You*.

For the River Corridor Closure team performing ARRA and base scope, discussions emphasize how our involvement in the work processes and our commitment to be engaged is important to ensure the work we do is defined, controlled, and safe. Much like we count on the spotter during heavy equipment movement to prevent contact with overhead electrical lines, we count on subject matter experts to provide the necessary information and controls to keep us safe. And once our work instructions are approved and released, we count on each other to perform our work within these directions provided by our work instructions. Failing to do so can put us and our coworkers at risk.

Additionally, we count on each other to remind us if we forget our safety glasses, our dosimeter, if we get too close to the edge of a trench, or if we forget to hook up our fall restraint system. Our safety is directly enhanced and improved by the help and assistance provided by those around us. All workers should remember, the life you protect may protect you in the future!

To demonstrate this guiding principle, WCH kicked off a final Safety Ownership activity that involves evaluating fall protection at home.



## Contract CLIN 4 (ARRA) Status

Contract Mod #	Date	Scope	Obligated (\$M) (Inception to Date)	Not to Exceed (\$M) (Inception to Date)
099	4/9/09	ERDF Cell Expansion & Upgrades; 618-10 NIC	\$203.0	\$28.0
105	4/30/09	ERDF Cell Expansion & Upgrades; 618-10 NIC	\$203.0	\$44.5
126	7/23/09	H.37 Clause - Reporting Requirements	N/A	N/A
139	9/3/09	ERDF Cell Expansion & Upgrades; 618-10 NIC	\$253.6	\$44.5
142	9/30/09	ERDF Cell Expansion & Upgrades; 618-10 NIC; Road Upgrades; Remediation of Orphan Sites	\$253.6	\$123.8

Contract Modification #142 was the definitization of the Phase 1 scope of work and was incorporated into the Integrated Project Baseline (IPB) (Performance Measurement Baseline) beginning with October 2009 reporting. Negotiations for Phase 2 of the ARRA scope are expected to begin in November.

## ERDF

### **Super Cells 9 and 10 Construction**

Bids have been received for the excavation of super cell 10 and the construction of the liner system for super cells 9 and 10. The liner system consists of multiple layers of plastic, other impermeable materials, and a leachate collection system to retain and remove liquids as they drain through the waste materials. Technical and cost analyses also are underway. WCH will submit the award package in early December to DOE. Final award is expected in February after the DOE review.

Under subcontract to WCH, DelHur Industries has excavated 1,145,504 cubic yards of material for super cell 9 (including 263,913 cubic yards of stockpile removal).

American Fencing of Hermiston, Oregon, completed the new fence extending the ERDF boundary for construction of super cells 9 and 10 for the Truck and Pup operations. DelHur Industries personnel have started taking down the old fence.

### **Facility and Equipment Upgrades**

Mission Support Alliance has received bids from companies to repair several Hanford Site roads used by ERDF haul trucks to transport radioactive and mixed waste for disposal at ERDF. Work will involve patching numerous potholes on Federal Avenue and Route I. A 900-foot stretch of broken-up road on Route I will be scraped and a 2-inch overlay will be applied. The repairs will keep roads operational through winter, with more extensive repairs to be made next spring.

DelHur continues work to install the cement foundation for the reader board at the third scale, which is being installed on the back road into ERDF. The reader board, part of the waste track system, is expected to be installed next week. The scale is scheduled to begin operation the first week of December.

Richland subcontractor George A. Grant Inc. completed survey work on the back road into ERDF. Grading is expected to begin next week and paving is on schedule to be completed by Thanksgiving.

Paving will improve traffic flow and safety on the road, which has experienced significantly more activity because of the super dumps, construction traffic, and disposal of waste material from other Hanford contractors. The project is expected to be completed by the first week of December.



## ERDF (Continued)



*Work continues on the back road into the Environmental Restoration Disposal Facility. The road is on schedule to be completed by December.*

The new lights at the at the lay-down area for containers entering ERDF through the East gate are operational.

Request for proposals for the design of new septic and refueling systems have been prepared and will be issued next week.

One more haul truck was received, bringing the total to 10 of 20. Twelve more waste containers also arrived, raising the total to 89 of 150 received to date. The trucks are from Peters and Keats of Lewiston, Idaho, and the containers are from Rule Steel of Caldwell, Idaho.

### **Upcoming Activities**

- Continue excavation of super cell 9. Excavation is on schedule to be completed in January.
- Request for proposals for a maintenance facility are expected to be issued by the middle of the November.

## 618-10 Burial Ground

### 618-10 Non-Intrusive Characterization/Trench Remediation Project

North Wind Inc. began installing cone penetrometers into the waste trenches. At least 10 cone penetrometers targeted to a depth of 30 feet are required to be installed per day, but work is ahead of schedule. So far, 76 cone penetrometers have been installed.



*A North Wind Inc. employee works to install cone penetrometers at the 618-10 Burial Ground.*

Cone penetrometers are steel tubes that will house the instruments used to determine the type, amount, and distribution of radioactive materials within the waste trenches and vertical pipe units (VPUs). VPUs typically consist of five bottomless 55-gallon drums welded together into which Hanford workers dumped highly radioactive waste during the mid-1950s and early 1960s.



## Burial Ground (Continued)

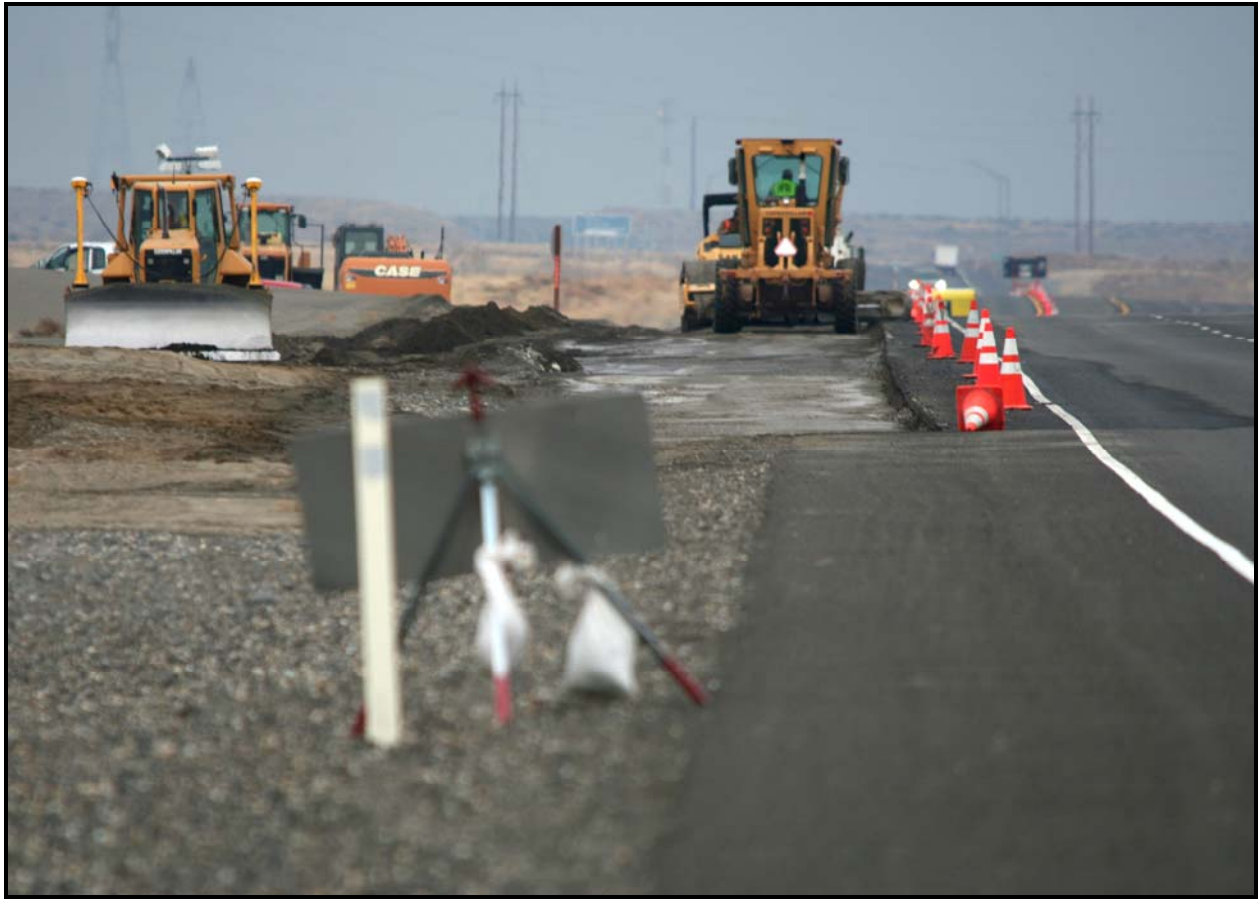


*Cone penetrometers will house multidetector probe measurement instruments, which will be used to determine the amount of radioactive materials in the waste trenches.*

The 618-10 Burial Ground is the most complex burial ground WCH has tackled to date. Records indicate the waste trenches contain contaminated laboratory instruments, bottles, boxes, filters, aluminum cuttings, irradiated fuel element samples, metallurgical samples, electrical equipment lighting fixtures, barrels, laboratory equipment and hoods, and high-dose-rate waste in shielded drums. The burial ground is roughly 6 acres in size and covered with about 4 feet of clean soil. It is located about 6 miles north of Richland and a few hundred yards from the Hanford Site's main highway.

Road construction continues near the burial ground. Road crews are working to install entrance and exit lanes, pave the median, and restripe the road. The project is on schedule to be completed by November 19.

## Burial Ground (Continued)



*Road construction continues near the 618-10 Burial Ground.*

### Upcoming Activities

- Continue installation of cone penetrometers in trenches.
- Initiate trench radiological characterization.
- Continue confinement design criteria development activities.
- Continue startup review (checklist) for soil sampling, scheduled to begin in March.
- Continue records research activities.
- Continue reviewing subcontractor submittals.

### Video

[Click here to view the video showing installation of cone penetrometers into the 618-10 Burial Ground trenches. As of November 6, work is ahead of schedule with 76 penetrometers installed](#)

## 100-F Area

Preparations to begin cleanup work are progressing. Design drawings and the integrated hazards evaluation are moving forward. Work continues on volume calculations and materials list calculations. Historical, cultural, and ecological evaluations also continue. The information will be used to develop requests for proposals, which will be issued in early 2010. About 20 small areas that make up one waste site were staked. These areas were discovered more than a year ago during a walkdown and were found to contain asbestos. A design plan for remediating these areas is underway.

## IU 2 & 6 Segment 1

Cultural and ecological reviews continue. The cultural resources supervisor at WCH, is planning to conduct a cultural walkdown in the near future.



## Confirmatory Sampling

Initial planning has been completed for confirmatory sampling of 66 sites near the Columbia River. Some sites were used as burn pits and tar dumps, others were used to store batteries or are suspected of housing dichromate facilities. It is not clear what the remaining sites might contain, therefore, sampling is required.

The team continued drafting sampling instructions for waste sites at the 100-D Area. Development of sampling instructions includes conducting historical research and consulting regulatory documents, developing a list of contaminants of potential concern to be sampled, and determining potential sample locations for review by DOE and Hanford Site regulators. Initial drafts of six other sampling instructions have been completed. The next step is for these drafts to be formatted, edited, and sent for review by WCH subject matter experts and sampling personnel.

The team has also begun planning for 100-D Area pipeline waste sites. These sites consist of many pipe segments that are frequently not related to one another. Pipeline sites are usually broken into smaller, more manageable subsites based on usage, location, and relationship to other waste sites. Individual sampling instructions are then drafted for each subsite.

Work also continues on developing a scope of work and other procurement documentation. In late 2009 or early 2010, WCH will issue a request for proposals for excavation and sampling support for the 66 sites. Sites that pass the confirmatory sampling process will be closed out and no further action will be required under the existing interim action record of decision. Those that fail will be recommended for cleanup to meet regulatory standards.

Sampling of the sites is expected to begin in spring 2010.



## Profile

Theresa Queen is part of ARRA-funded projects to determine if 66 potential waste sites along the Columbia River need to be cleaned up.

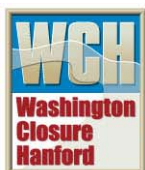
As a scientist working on sample design and cleanup verification, she helps create sample designs and analyze waste sites to determine if they contain radioactive or chemically contaminated materials that require remediation. These sites include buried pipelines, accidental spills, debris pits, suspect underground storage tanks, and soils around former buildings.

Queen, who grew up in Richland and attended Hanford High School, graduated in 2008 from Creighton University in Omaha, Nebraska, with a bachelor's degree in biology. She worked during school breaks at Pacific Northwest National Laboratory, where she completed a post-bachelor's research assistantship. While at PNNL, Queen worked in the subsurface flow and transport laboratory.

However, when it came time to begin her professional career, Queen was ready to trade her lab coat for a hard hat and work boots.

"I wanted to get some experience away from the lab," said Queen, who began working at WCH in May. "I like my job at Washington Closure because it gives me an opportunity to get out in the field. I have a nice mix of office and field work."

Queen is working on initial planning for confirmatory sampling of the 66 waste sites, and is currently developing sampling instructions for waste sites at the 100-D Area. This work includes drafting a list of potential contaminants to be sampled and determining contaminant locations. While it is clear that some of these sites were used as burn pits and tar dumps, it is not known what other sites might contain or whether they even need to be cleaned.



## Profile Ground (Continued)



*Theresa Queen, who joined Washington Closure in May, takes part in a recent walkdown at the 100-D Area.*

## Mission Support/General Support

### Accomplishments

- WCH continued the incorporation of the Phase II ARRA scope into the *2015 Vision Roadmap*.
- WCH continued to support ARRA Phase II Technical and Cost Proposal questions.
- WCH completed the reconciliation of the performance measurement baseline to the executed Phase I contract modification.
- Developed an ARRA one-page communication flier, available for dispersal every Monday morning.
- Established WBS basis for reporting sub-projects with DOE-RL
- Completed the questionnaire sent by DOE-RL for use in an upcoming assessment of our Job Status Reporting

### Upcoming Events

- Continue to work on finalizing the *2015 Vision Roadmap* to include incorporation of Phase II ARRA proposal scope. Planned issuance moved to November 2009.
- Continue preparation of Phase II proposed performance measurement baseline.
- Continue to provide support towards definitization of the Phase II Technical and Cost.



## General

### **Mentoring/Training**

No significant activities this week.

### **Media, Visits, Press Releases**

- A staff writer and political reporter from The Oregonian newspaper in Portland, Oregon, will tour ARRA projects to collect information for an upcoming story about the projects and their funding. He plans to visit ERDF, B/C areas, and the 618-10 Burial Ground, and he would like to interview newly hired ARRA employees.
- An article in the local newspaper is expected to be published soon on progress and readiness to receive increasing volumes of contaminated waste at the Environmental Restoration Disposal Facility.

### **Contracting Action**

- Issued a Notice to Proceed with the ERDF access road paving.
- Bids received for excavation of ERDF super cell 10 and liner construction of super cells 9 and 10. Bids currently under commercial and technical review.
- One year staff augmentation contract issued for an electrical engineer.
- An expression of interest was posted for companies interested in providing a mobile assay lab for the 618-10 project.
- A requisition is being written for a Civil Survey Master Agreement for the 618-10 project.
- One year staff augmentation contract issued for a TRU waste strategy expert for the 618-10 Burial Ground.

