



*River Corridor Closure Project*

# **Recovery Act Weekly Report**

For the week ending January 24, 2010

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

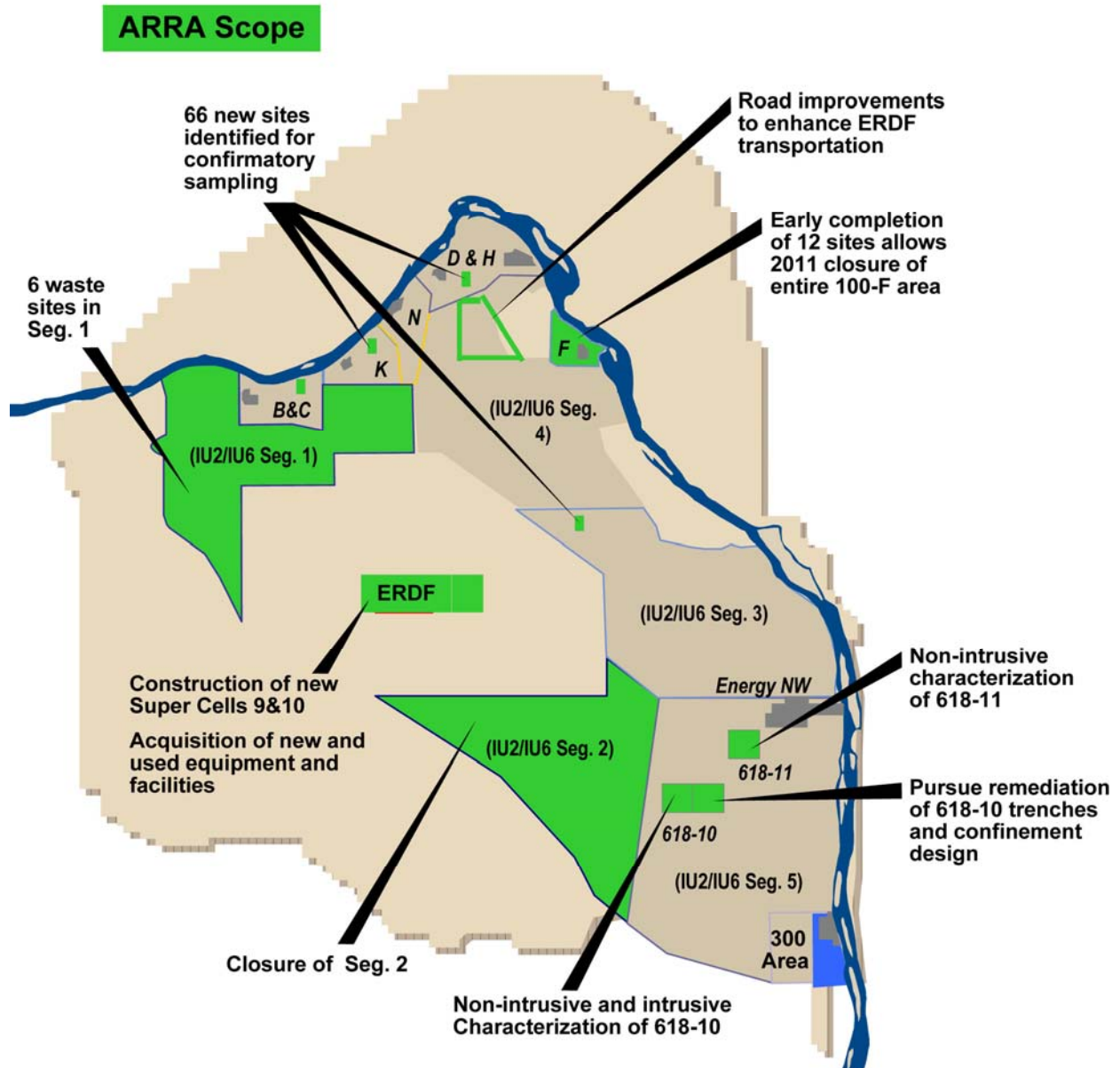
WCH is proposing to complete the early sampling process of 66 potential waste sites using ARRA funds. Confirmatory sampling is performed for sites that require additional information for determining if the site requires remediation. Details including chemicals of potential concern, specific sample locations, 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.



# Overview (Continued)



## Safety

### Safety Accomplishments

As of December 22, 2009, WCH and its subcontractors have worked more than 112,000 hours of ARRA scope with no safety incidents.

### Hazard Reductions

This week's River Corridor Closure Project's Weekly Roundup on Safety Awareness focused on knowing when to use your headlights.

Headlights are for seeing and BEING seen! Be sure to recognize the circumstances where lights are necessary for safety. The sobering statistic is that while only 25% of the miles we drive are at night, about 50% of the fatalities occur in the darkness – 25,000 people each year. What can you do about it?

Turn your lights on when:

- Visibility is poor if you are driving away from a setting (or rising) sun. At dusk, it is difficult to see in that shadowy time after sunset before it gets completely dark. Watch for hazards, bicyclists, pedestrians, or animals.
- You encounter fog, dust, heavy rain, or snow. Reflected light from air-suspended particulates or precipitation can blind you, so use your low beams or properly installed fog lamps.
- You want to grab the other driver's attention. Turning on your headlights can be the most effective way to do this. On two-lane roads for example, there's potential for head-on conflicts with other passing vehicles. Turn on your headlights and you make it almost impossible for the oncoming vehicle NOT to see you.

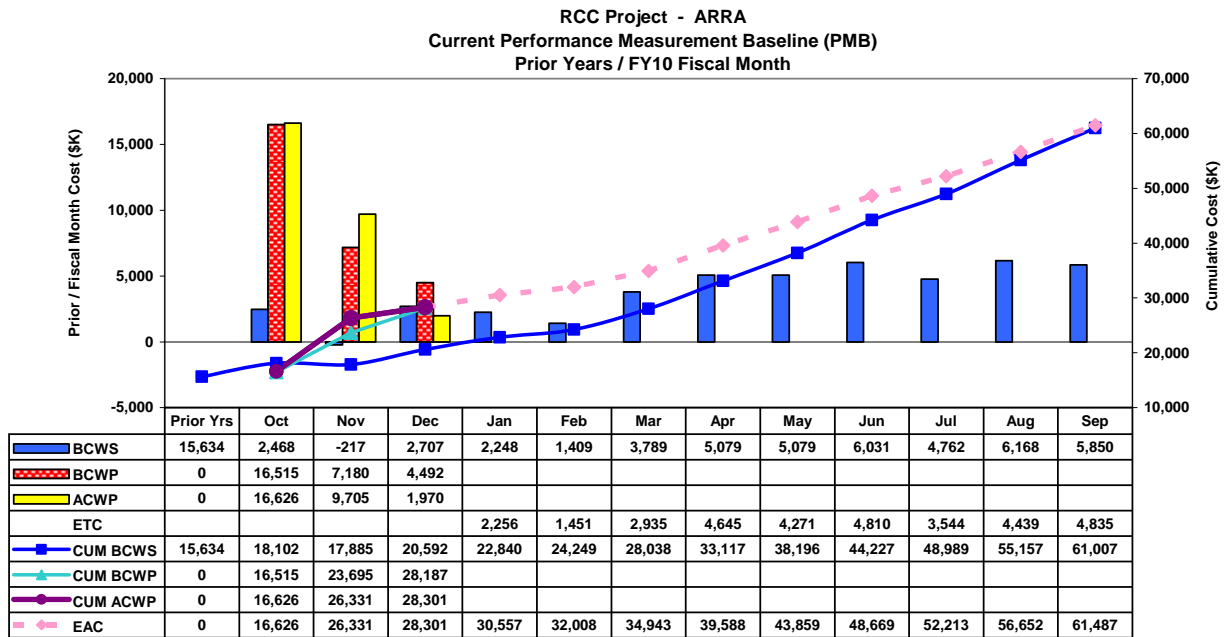
Fog lamps are mounted low, underneath your line of sight, and they can help you see when regular headlamps cause difficulties. Without fog lamps, using low beams prevents light from being reflected back into your eyes much the same way.



# Cost/Contract 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 is the definition of the Phase 1 scope of work and was incorporated into the Integrated Project Baseline (IPB) (Performance Measurement Baseline) beginning with October 2009 reporting.



ARRA Actuals (includes PMB and Proposal 2)

Apportionment Number	Apportionment Title	PMB or Balance *	Dec 2009	Inception To Date	NTE Amount
RL-0041.R1.2	ERDF Cell Expansion	PMB	696	21,922	
		Balance	475	2,083	12,000
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	1,274	6,380	
		Balance	50	183	5,000
Sub Total		PMB	1,970	28,301	
		Balance	526	2,265	17,000
Fee			204	1,840	
<b>Total</b>			<b>2,700</b>	<b>32,407</b>	

\* PMB is the Phase 1 Performance Measurement Baseline. Balance is Proposal 2



## ERDF

### Super Cells 9 and 10 Construction

WCH has been approved to award a subcontract worth up to \$30 million for the addition of two super cells to the facility. The subcontract is for the excavation of super cell 10, and the construction of the liner and leachate collection systems for super cells 9 and 10.

Designed to be expanded as needed, the first two cells went online when the facility opened in 1996. Built two cells at a time, the facility has been expanded three times since it opened – in 1999, 2003, and 2008. Each cell measures 500 feet square by 70 feet deep.

The super cells measure 500 feet by 1,000 feet by 70 feet deep. ERDF's current capacity is 11 million tons of contaminated material. Nearly nine million tons have been disposed to date. With the addition of super cells 9 and 10, ERDF's capacity will be nearly 17 million tons.

WCH subcontractor DelHur Industries has reached the specified depth of super cell 9 and is now shaping the sidewalls of the super cell. To date, DelHur has excavated 1,789,637 cubic yards of material, including 263,913 cubic yards of stockpile removal.



*Washington Closure Hanford subcontractor DelHur Industries has excavated close to 1.8 million cubic yards of dirt from super cell 9 at the Environmental Restoration Disposal Facility.*

## ERDF (Continued)



*DelHur Industries personnel excavate the south ramp of super cell 9 at the Environmental Restoration Disposal Facility.*

### **Facility and Equipment Upgrades**

WCH is reviewing prequalification questionnaires returned from companies interested in expanding the truck maintenance facility, and constructing the new equipment and container maintenance facilities. A request for proposals (RFP) is scheduled to be sent out by the end of the month.

The transportation truck maintenance facility will include two additional truck bays, an exterior awning that will cover a concrete pad, and a conference room. The container maintenance facility will include a large container repair line, a maintenance shop, a weld area, a lunch area, and an exterior awning over a concrete pad. The equipment maintenance facility will include two service lines, an operational storage facility, a large concrete pad, and an exterior awning over a smaller concrete pad.

WCH continues to evaluate bids for the design and construction of a new septic system and an onsite refueling station. The award package is expected to be extended at the end of January. The existing septic system is near its capacity and unable to handle the additional demands of

## ERDF (Continued)

the proposed facility upgrades. The new system will be capable of servicing both the proposed facilities and the existing facilities.

ERDF designers and engineers continue to work with Pacific Northwest National Laboratory (PNNL) personnel on a new container tracking system. WCH is planning to adapt a system originally designed by PNNL for Army cargo containers to meet ERDF's needs. PNNL is developing a demonstration of the system. The system would allow for ERDF operations personnel to identify how many full and empty containers are available at the generator sites as well as ERDF.

Adjustments to the wireless communication system are being made at the new scale and reader board on the back road to the facility. Waste shipments will be entered real-time into the Waste Management Information System (WMIS). The scale is expected to be operational by the end of January.

### Upcoming Activities

- Evaluate bids for the design and construction of new septic and onsite refueling systems.
- Continue to develop RFP for design and construction of truck maintenance facility, container maintenance facility, and equipment maintenance facility.

### Video

[Excavation of super cell 9 at the Environmental Restoration Disposal Facility \(ERDF\).](#)





## Profile

It's a good thing Adam Dietmeyer is one of those guys who doesn't mind getting his hands dirty. For the past five months, Dietmeyer and his fellow DelHur Industries employees have been digging and dumping nearly 1.8 million cubic yards of soil at the Environmental Restoration Disposal Facility (ERDF).

Dietmeyer is a heavy equipment operator for DelHur, a Washington Closure Hanford subcontractor based in Port Angeles, Washington. DelHur has completed excavation of ERDF's first super cell, work supported with dollars from the American Recovery and Reinvestment Act.

Previously, ERDF was expanded two disposal areas, or cells, at a time. Design upgrades have allowed for the two cells to be combined into one super cell. Super cell 9 measures 500 feet wide, 1,000 feet across, and 70 feet deep at the base.



*Adam Dietmeyer, a heavy equipment operator with Washington Closure Hanford subcontractor DelHur Industries, has been working at the Environmental Restoration Disposal Facility since September 2008.*

## Profile (Continued)

“It’s not very glamorous work, but it’s got to be done,” said Dietmeyer, who has been operating heavy equipment for the past 15 years.

Dietmeyer, who has worked for various construction companies in western Washington over the years, was hired by DelHur in June 2008. His first job with DelHur was to help build an 8-mile hauling road near Curlew, Washington, a small community located in the northwest part of the state.

In September 2008, Dietmeyer was assigned to ERDF, where DelHur was excavating cells 7 and 8. He operates nearly every piece of equipment – excavators, payhaulers, bulldozers, and graders.

“I do it all. Whatever they ask me to do, I’ll do. I know people who are looking for work, so I’m glad I have a place to go every morning,” Dietmeyer said of the project.

Dietmeyer said he’s been impressed with DelHur, which also constructed cells 1 and 2, 3 and 4, and 7 and 8 at the facility.

“It’s a very good company,” he said. “They really care about their employees. If you need something to help do your job or if you’ve got something to deal with at home, they’ll go the extra mile for you.”

## 618-10 Burial Ground

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

Nonintrusive waste characterization activities were temporarily suspended this week at the burial ground when a Radiological Control Technician (RCT) detected contamination on a survey probe inserted into a cone penetrometer. One of the purposes of the survey probe is to determine if contamination is present prior to inserting instrumentation into the cone penetrometer. Cone penetrometers are narrow steel cylinders that were installed around buried, vertical pipes containing radioactive materials. The vertical pipe units, or VPUs, are five bottomless 55-gallon drums welded together to form a pipe. From 1954 to 1963, highly radioactive waste generated from Hanford's 300 Area was dumped into the VPUs.

Little in the way of disposal records exist for the wastes placed at the burial ground. That's why WCH is taking such a methodical, time-consuming approach to determining what's buried there.

After detecting contamination, the RCT immediately stopped work, capped the cone penetrometer, and began radiation surveys of the work crew. Contamination was found on three articles of clothing and the area was posted as a High Contamination Area (HCA). No additional contamination was noted.

The source of the contamination is under investigation and a recovery plan is being developed. Radiological characterization of the burial ground will not resume until results of an ALARA review are incorporated into work plans and the plans are reviewed by Project Management.

WCH is characterizing vertical pipe units (VPUs) using a multi-detector probe (MDP), which measures radiation sources through the walls of the cone penetrometers. The MDP includes two gamma-ray detectors used as spectrometers, two neutron detectors, and a gross gamma detector. The information gathered will help identify the type and location of radioactive materials within the VPUs. As the MDPs are withdrawn from the cone penetrometers, measurements are taken each foot with a 3-minute count time.

All 476 cone penetrometers have been installed with 64 characterized to date.

Doug Shoop, the deputy manager of the U.S. Department of Energy's Richland Operations Office, recently visited the burial ground along with four other DOE managers. The purpose of the visit was to receive an update on nonintrusive waste characterization activities.

The 618-10 Burial Ground is the most complex burial grounds WCH has tackled to date. Information on the burial ground is limited, so work is proceeding very cautiously. Available records indicate the buried wastes included radiologically 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 wastes in shielded drums.



## 618-10 Burial Ground (Continued)



*The 618-10 Burial Ground contains 94 vertical pipe units and 23 trenches.*

## 618-10 Burial Ground (Continued)



*Doug Shoop, deputy director of DOE's Richland Operations Office, and Mark French, federal project director for the River Corridor, visited the 618-10 Burial Ground last week to get an update on work underway at the site including nonintrusive characterization. Pictured from left are Dennis Crass, North Wind; French and Shoop, DOE; and Tom Foster, WCH Field Remediation.*

### Upcoming Activities

- Obtain management approval to restart radiological characterization activities.
- Continue reviewing subcontractor submittals
- Continue confinement design criteria development activities.
- Continue soil sampling project startup review development activities.

## F Area

The prequalification process for companies interested in remediating the remaining F Area waste sites is complete. Eight teams have qualified to receive a request for proposal (RFP). Work also continues to prepare design drawings for the waste sites.

Remediation will involve the excavation of radioactive and hazardous soil and debris, and the packaging of the material to be shipped to ERDF. A wide range of contaminated soil, miscellaneous debris, buried equipment, and structural materials may be encountered during remedial activities.

The remediation sites are: 100-F-26:4 pipeline, 100-F-26:7 pipeline, 100-F-44:8 piping, 100-F-44:9 pipeline, 100-F-45 riverbank pipeline, 100-F-47 substation, 100-F-48 coal pit debris, 100-F-49 maintenance garage, 100-F-51 fish lab, 100-F-55 ash layer, 100-F-56 scattered surface debris, 100-F-57 pump house pipe cradle debris, and 100-F-58 scattered ACM debris.

## IU 2 & 6 Segment 1

A change notice that authorizes the existing remedial action subcontractor based at 100-H Area to conduct field work at IU 2 & 6 segment 1 is expected to complete early next week. A project startup review (PSR) process is underway. The PSR process is used to ensure that the project is ready to be safely implemented. Early in the PSR process, the project develops a review checklist of items to be verified before project startup. Typical checklist items fall into the categories of site, buildings, equipment and materials, personnel, regulatory paperwork, and authorization basis and other safety documents. Upon completion of PSR checklist verification and documentation, a PSR review and approval meeting is conducted. The IU 2 & 6 project is about 50% complete with the checklist verification and documentation process.

The six waste sites at IU 2& 6 segment 1 contain mostly surface debris that must be removed and transported to ERDF.

## Confirmatory Sampling

The team is still in the process of drafting sampling instructions for waste sites at the 100-D, 100-IU 2 and 6, and 100-K Areas. This 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.

Planning for 100-D Area pipeline waste sites also continues. These sites consist of many pipe segments that are frequently not related to one another. Therefore, pipeline sites are usually broken into smaller, more manageable subsites based on usage, location, and relationship to other waste sites. The team drafted sampling instructions for each subsite, as appropriate, and is meeting with DOE and Ecology to brief them ahead of document reviews.



## Confirmatory Sampling (continued)

Work also continues on developing procurement documentation. In February, WCH will issue an RFP for a company to provide excavation and sampling support for all 66 sites. Sites that pass the confirmatory sampling process will be closed out and no further action will be required under the existing interim record of decision. Those that fail will be recommended for cleanup to meet regulatory standards, currently not included in Recovery Act scope.



## General

### **Mentoring/Training**

No significant activities this week.

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

No significant activities this week.

### **Contracting Actions**

- Received consent from DOE Headquarters on ERDF Super Cells 9 & 10 construction request for proposal.

