



*River Corridor Closure Project*

# Recovery Act Weekly Report

For the week ending May 2, 2010

Contract DE-AC06-05RL14655

*Protecting the Columbia River*

## 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

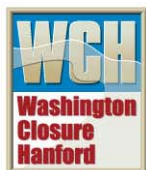
WCH is employing ARRA funds to clean up many failed waste sites not originally part of its contract. Sites in the 100-F and IU 2&6 segments 1&2 are proposed for waste site remediation in the two year period starting in October 2009.

### E. Confirmatory Sampling of other new sites

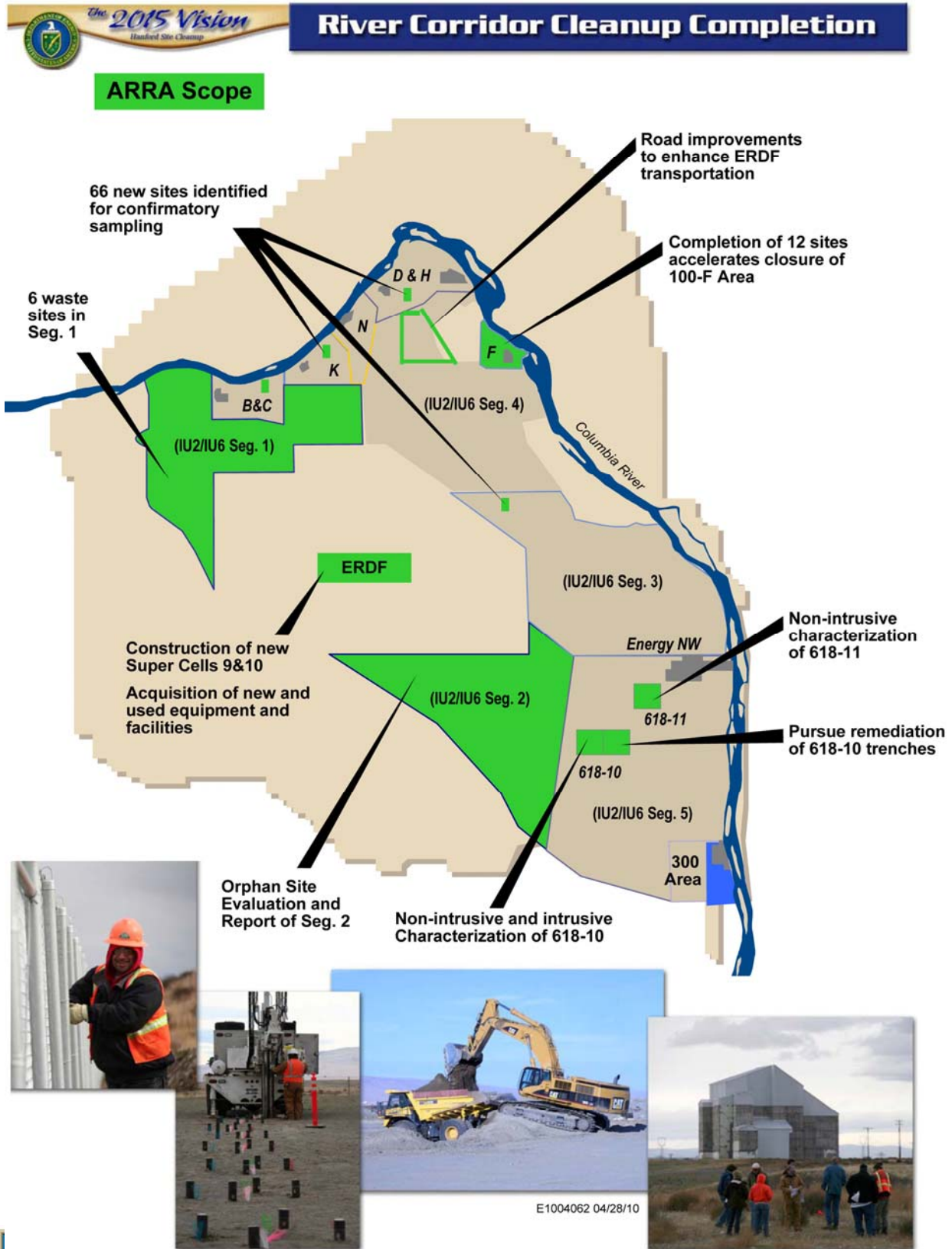
WCH is proposing to complete the early sampling process of 66 potential waste sites using ARRA funds. Confirmatory sampling is performed for sites that require additional information for determining if the site requires remediation.

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)



E1004062 04/28/10

# Safety

## Safety Accomplishments

As of March 28, 2010, WCH and its subcontractors have worked more than 172,460 hours of ARRA scope with no safety incidents.

## Hazard Reductions

The River Corridor Closure Project's "Take 5 for Safety" is used to share safety information and lessons learned with all WCH employees. Last week's "Take 5 for Safety" focused on material handling and proper lifting techniques.

Moving material can involve many diverse methods from simple lifting to operations involving hoisting with a crane, forklifts, manually moving material on carts, using hand trucks, and stacking drums. The safe and efficient handling of materials is vital to what we do every day. Improper handling of materials can result in bodily injury.

According to the National Safety Council, back injuries account for more than 20% of all occupational illnesses. Accident investigation data reveals that many of these injuries resulted from improper body movement including not bending the knees, twisting, and turning.

It is important to plan before lifting anything. Knowing what you're doing and where you're going will prevent awkward and improper movements. As a reminder, Washington Closure Hanford's weight lifting limit for one individual is 55 pounds.

Please take the time to get an extra set of hands when needed. Remember, when lifting with more than one person, communication is critical. Make sure both of you agree on the travel path and the method for raising and lowering the material.

Proper lifting techniques include:

*Lifting objects close to your body:* You will be more stable if the object is held close to your body rather than at the end of your reach.

*Making sure your feet are shoulder width apart:* A solid base of support is important while lifting. Placing your feet too close together will be unstable, and too far apart will hinder movement. Keep the feet about shoulder width apart and take short steps.

*Bending your knees and keeping your back straight.* Raise and lower to the ground by bending your knees. Practice the lifting motion before you lift the object and think about your motion before you lift. Focus on keeping your spine straight-this is best achieved by tilting your head up focusing your gaze slightly above horizontal.

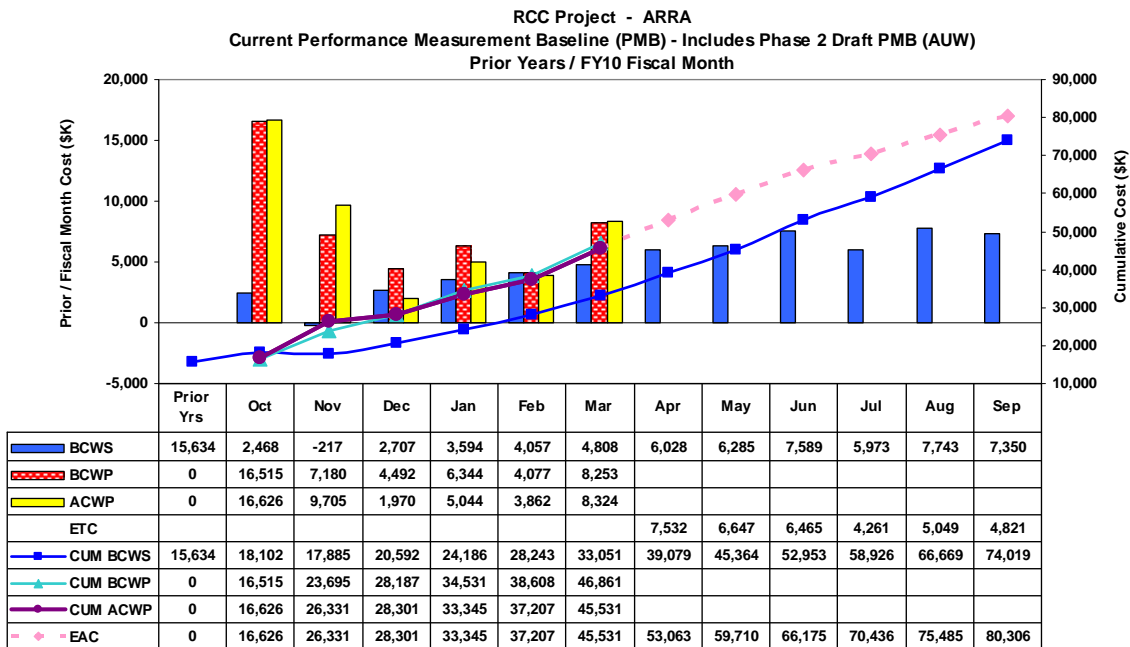
*Using materials handling equipment when necessary:* Washington Closure Hanford will provide carts, hand trucks, dollies, etc. Take the time to secure and use one, if appropriate. Be aware of sharp or rough edges, and wear gloves and eye protection. Make sure materials being moved remain secured and under control.



# Cost/Contract Status

| Contract Mod # | Date    | Scope  | Obligated (\$M)<br>(Inception to Date) | Not to Exceed (\$M)<br>(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;<br>Phase 2 Scope | \$253.6                                | \$123.8                                    |
| 174            | 2/22/10 | ERDF Cell Expansion & Upgrades; 618-10 NIC;<br>Phase 2 Scope | \$248.2                                | \$123.8                                    |
| 182            | 3/25/10 | ERDF Cell Expansion & Upgrades; 618-10 NIC;<br>Phase 2 Scope | \$248.2                                | \$155.8                                    |
| 185            | 4/19/10 | Phase 1 and Phase 2 Scope                                    | \$248.2                                | \$178.0                                    |
| 192            | 4/27/10 | Phase 1 and Phase 2 Scope                                    | \$253.6                                | \$178.0                                    |

Contract Modification #192 re-obligated \$5.4M to the contract that had previously been de-obligated.



ARRA Actuals (includes PMB and Proposal 2)

| Apportionment Number | Apportionment Title                        | PMB or Balance * | Mar 2010 | Inception To Date | NTE Amount |
|----------------------|--|------------------|----------|-------------------|------------|
| RL-0041.R1.2         | ERDF Cell Expansion                        | PMB              | 4,608    | 29,814            |            |
|                      |  | Balance          | 951      | 3,388             | 44,000     |
| RL-0041.R2           | River Corridor Soil & Groundwater (618-10) | PMB              | 2,186    | 10,235            |            |
|                      |  | Balance          | 578      | 2,093             | 5,000      |
| <b>Sub Total</b>     |  | PMB              | 6,794    | 40,049            |            |
|                      |  | Balance          | 1,529    | 5,481             | 49,000     |
| <b>Fee</b>           |  |                  | 204      | 2,454             |            |
| <b>Total</b>         |  |                  | 8,527    | 47,984            |            |

\* PMB is the Phase 1 Performance Measurement Baseline. Balance is Proposal 2 Not to Exceed draft PM (AUW)



## ERDF

### Super Cells 9 and 10 Construction

TradeWind Services and its prime subcontractor, DelHur Industries, have removed 1,425,013 cubic yards of soil since excavation operations began February 10. An estimated 1.675 million cubic yards of soil will be removed from super cell 10 by mid-May.



*TradeWind Services/DelHur Industries personnel continue to remove soil from super cell 10 at the Environmental Restoration Disposal Facility. Excavation is on pace to be completed by mid-May.*

The onsite pug mill began operation. The mill is used to manufacture the soil bentonite (admix) material for the low permeability compacted soil liner for super cells 9 and 10. The liner system collects and removes liquid, or leachate, as it drains through the waste materials. The system will consist of the admix layer, a leachate collection layer, a leak detection layer, and two high-density polyethylene (HDPE) liners covered with a 3-foot protective soil layer.

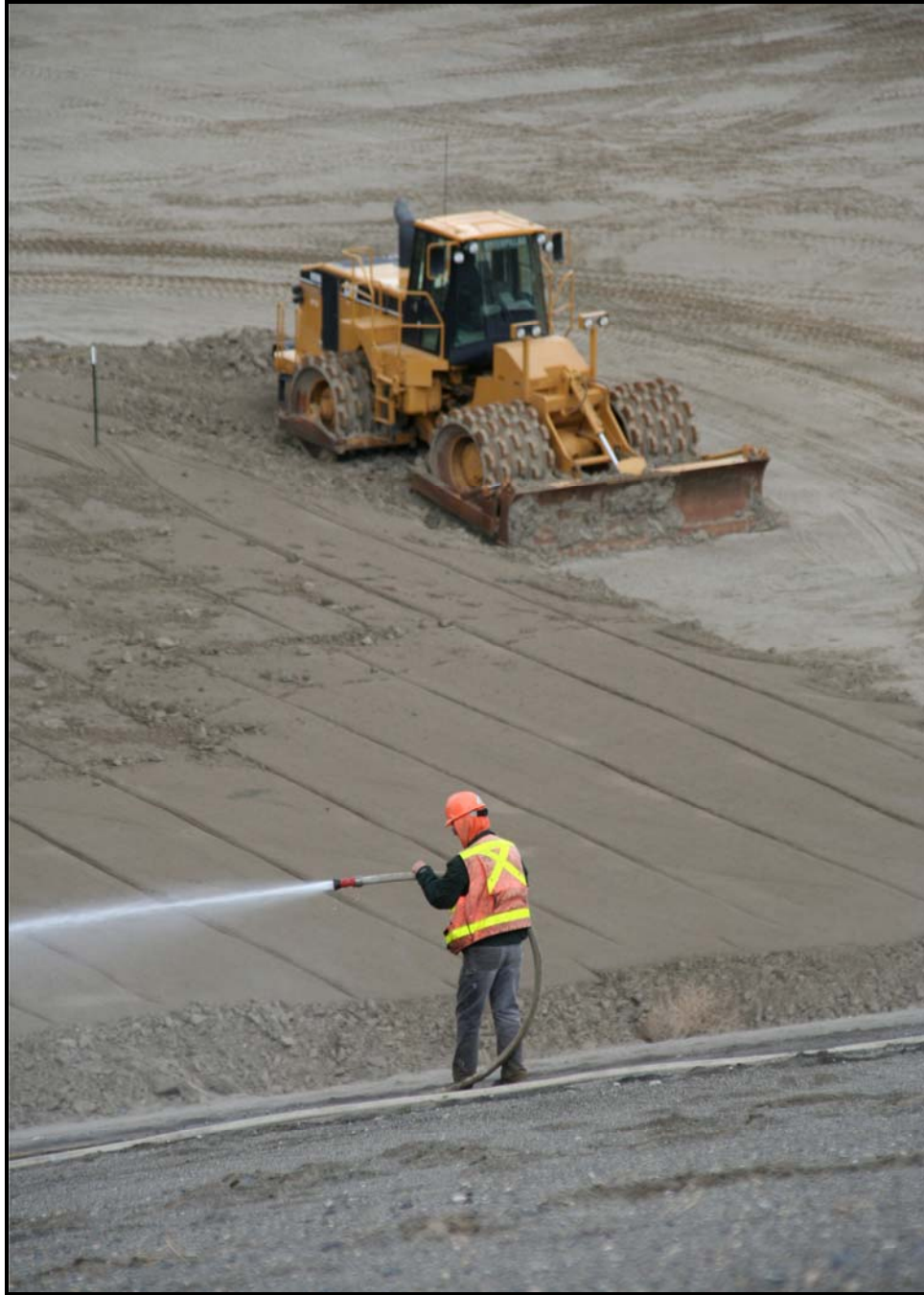
The pug mill can produce about 400 tons of admix per hour. Placement of the admix in super cell 9 is scheduled to begin next week.

## ERDF (Continued)



*The pug mill manufactures the soil/bentonite admix material that will be used in the liner system of super cell 9 at the Environmental Restoration Disposal Facility.*

## ERDF (Continued)



*A worker sprays water on the south slope of super cell 9. Placement of the admix layer is expected to begin next week.*



## ERDF (Continued)

### Facility and Equipment Upgrades

ELRFowler continues design work of ERDF's new operations and maintenance facilities. ELR Fowler, which is a joint venture between ELR Consulting and Fowler General Construction, also continues to work on contract submittals (e.g., health and safety, quality, scheduling).

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

WCH is reviewing the final design of the new fueling station submitted by Sage Tech/WH Pacific. WCH will soon prepare to issue a request for proposal (RFP) for construction of the fueling station.

WCH has received Columbia Engineers and Constructors' 90% design of ERDF's new septic system. WCH will begin evaluating the design next week.

Pacific Northwest National Laboratory (PNNL) scientists and engineers completed a proof-of-concept demonstration of a new container tracking system to be used at ERDF. PNNL will submit a final report on the demonstration next week. As part of the demonstration, Radio Frequency Identification and global positioning system tags were attached to waste containers to show how accurately the system can track waste shipments and container location, and generate maintenance reports.

WCH has issued a notice to proceed to George A. Grant of Richland, Washington, for the installation of a lighting system at the upgraded transportation yard. The yard is used for truck-and-trailer combinations and other equipment.

Hanford subcontractor Mission Support Alliance (MSA) continues preparations to make further repairs on three Hanford Site roads. The roads are used to transport waste material to ERDF.

Powers Equipment Company of nearby Pasco, Washington, is expected to be delivered next week.



## ERDF (Continued)

### Upcoming Activities

- Continue removal of soil from super cell 10.
- Begin to manufacture admix used in construction of liner and leachate collection system of super cells 9 and 10.
- PNNL will submit a report on its proof-of-concept demonstration of the container tracking system.

### Video

[Pug Mill Operation at the Environmental Restoration Disposal Facility.](#)



## Profile

Jim Day spent 30 years living in Alaska where he devoted much of his free time to snapping photos of the state's picturesque landscape.

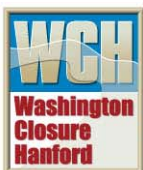
Two years ago, a job opportunity brought Day to the Hanford Site. He worked as a construction and maintenance electrician at the tank farms and vitrification plant. However, earlier this spring, Day saw a job posting that he felt matched his skills perfectly – a position with RC Construction Services (RCCS), a local subcontractor for Washington Closure Hanford.

Day began work for RCCS on April 5 as an electrical field engineer. He was assigned to the Environmental Restoration Disposal Facility, Hanford's landfill for low-level radioactive and mixed wastes. While the massive disposal facility might not be as scenic as "The Last Frontier," it was a welcomed sight for Day.

"The Recovery Act provided a great opportunity for me," said Day, who has worked in the electrical trade since 1994. "I've got a steady job that allows me to work both in the office and in the field."



*Jim Day, recently hired by Washington Closure Hanford subcontractor RC Construction Services, will oversee all electrical work on Recovery-Act funded projects at the Environmental Restoration Disposal Facility.*



## Profile (Continued)

Day was employed by Atlantic Richfield Company (ARCO) as a QC inspector in Alaska. At ERDF, he will oversee all electrical work associated with ERDF projects funded by the American Recovery and Restoration Act.

ERDF is in the midst of its fourth expansion and upgrade since beginning operations in 1996. The excavation of super cell 10 is three quarters complete, and the construction of the liner and leachate collection system for super cell 9 is soon to begin.

Day's top priority, though, will be the design and construction review of ERDF's new operations center and maintenance facilities. The disposal facility also is adding a new fueling station and a new septic system. All work is supported by the Recovery Act.

"Before I got here, I didn't know much about the place," he said. "But I'm learning in a hurry. I like how everybody works together to make the facility run smoothly. I'm looking forward to being a member of the team and to new challenges."

## 618-10 Burial Ground

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

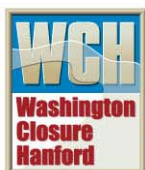
Nonintrusive characterization activities continue at the 618-10 Burial Ground. Measurements have been collected for 80 cone penetrometers in the trench area and 295 in the vertical pipe unit (VPU) area.

The 618-10 Burial Ground operated from 1954 to 1963 and received low- and high-level radioactive waste from 300 Area laboratories and fuel development facilities. The burial ground consists of five groups of trenches and 94 VPUs. The VPUs were constructed by welding five bottomless drums together and buried vertically about 10 feet apart. WCH is obtaining radiological characterization data of the VPUs and trenches using a multi-detector probe (MDP) designed for measuring a wide range of radiation sources. The MDP is inserted into the cone penetrometers to measure radiation sources.

Meanwhile, preparations continue for soil sampling. Collecting and analyzing soil samples will allow the team to assess the vertical distribution of contaminants in the soils adjacent to and below the VPUs.

In preparation of soil sampling, the project team completed a project startup review (PSR) used to ensure that the soil sampling project is ready to be safely implemented. The team also developed a detailed procedure with proper hazard controls to allow the work to be performed safely.

To collect the samples, a cone penetrometer is driven adjacent to and approximately 2 feet below a selected VPU. A plastic sleeve is used to contain the sample, which is transferred to a glove bag for sample collection to a sample bottle. Sample handling and processing is performed inside a table-mounted glove bag.



## 618-10 Burial Ground (Continued)



*Handling and processing of soil samples collected at the 618-10 Burial Ground will be performed inside a table-mounted glove bag.*

Project start-up activities continue for intrusive characterization. Work packages for intrusive characterization mockups have been completed, and work continues on the development of procurement packages for trench remediation labor and equipment. The construction of roads, firebreaks, and work areas for drum processing at the site also was completed.

### **Upcoming Activities**

- Continue radiological characterization activities in VPU area.
- Continue to develop procurement packages for trench remediation labor and equipment.
- Complete project start-up for intrusive characterization mockups.

## 100-F Area

WCH continues to evaluate proposals from four small, disadvantaged businesses for the remediation of the 12 waste sites at F Area. WCH also continues work on a preliminary waste profile.

The \$4 to 5 million project will involve the excavation of radioactive and hazardous soil and debris and the packaging of this material into shipping containers. Miscellaneous waste such as drums, bottles, tanks, or vessels may require repackaging and special handling prior to shipping. Oversized debris may require size reduction to facilitate waste loading.

The remediation sites are: 100-F-26:4 process sewer pipeline section; 100-F-26:7 sodium dichromate and sodium silicate pipelines; 100-F-44:8 fuel oil pipelines; 100-F-44:9 process fuel pipeline section; 100-F-45 buried riverbank effluent pipeline; 100-F-47 electrical substation foundation; 100-F-48 coal pit debris; 100-F-49 maintenance garage lube pit foundation, pipelines, drywells; 100-F-51 fish laboratory footprint, pipelines; 100-F-55 contaminated ash layer; 100-F-56 scattered surface debris, stains; 100-F-57 buried pipeline cradle debris; and 100-F-58 asbestos containing surface debris.

The project team also continues work on the air monitoring plan and an engineering report for the septic holding tank to be installed at the site.



## IU 2 & 6 Segment 1

Remediation is complete at five of the six IU 2 & 6 Segment 1 waste sites discovered during the 2008 orphan site evaluation. Earlier this year, a global positioning environmental radiological survey indicated that one of the sites, 600-342, did not require additional remediation.

IU 2 & 6 Segment 1 encompasses about 23 square miles of the northeastern portion of the Hanford Site, away from the nine surplus plutonium production reactor areas. Segment 1 sites were unique in the fact they were used primarily for housing and support areas. The sites were small and contained mostly surface debris.

Excavation and load-out activities recently were completed at sites 600-341 and 600-344. Site 600-341 consisted of four areas that contained dry cell battery remnants and/or battery debris, and 600-344 was a stained area.

Remediation of sites 600-343, 600-345, and 600-346 was completed in March. Site 600-343 consisted of residual ash from burned material and dumped asphalt in an excavated trench, site 600-345 was a stained area with oil filters, site 600-346 consisted of four small fly ash dump areas with metal debris.

Work instructions (waste site specific verification closeout sample plans) are being prepared to determine the number and location of waste site closeout samples including field quality control samples, sampling methodologies, analyte list, and analytical methods. Once the work instructions are reviewed and approved by DOE, Richland Operations Office and the U.S. Environmental Protection Agency, verification closeout samples will be collected for laboratory analysis.





## IU 2 & 6 Segment 1 (Continued)



*Remediation was completed this week at five IU 2 & 6 waste sites.*

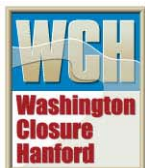
## Confirmatory Sampling

The project team continues to develop sampling instructions for waste sites at the 100-D and 100-IU 2/6 Areas, along with a new site in the 100-F Area. This includes conducting historical research, 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. More than 50% of the confirmatory work instructions have been issued, which includes DOE and regulator approval. All of the work instructions for the 100-K Area have been approved.

The team also is developing Remove, Treat, and Dispose (RTD) memos for 22 sites that have been determined to require waste site remediation. The memos provide a basis for developing the design for waste site cleanup. All of the RTD memos have been issued.

The request for proposal (RFP) for the confirmatory sampling contractor was issued April 20, and a pre-bid meeting was held this week.

The scope of the RFP is to support implementation of the confirmatory work instructions (e.g., excavation and sampling). The contract is scheduled to be awarded in May, with field work beginning in July. 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 remediation to meet regulatory standards.



## General

### **Mentoring/Training**

No significant mentoring/training this week.

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

No significant media events this week.

### **Contracting Actions**

- Received Cat 988 Loader from Indian Eyes.

