



River Corridor Closure Project

Recovery Act Weekly Report

For the week ending April 18, 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

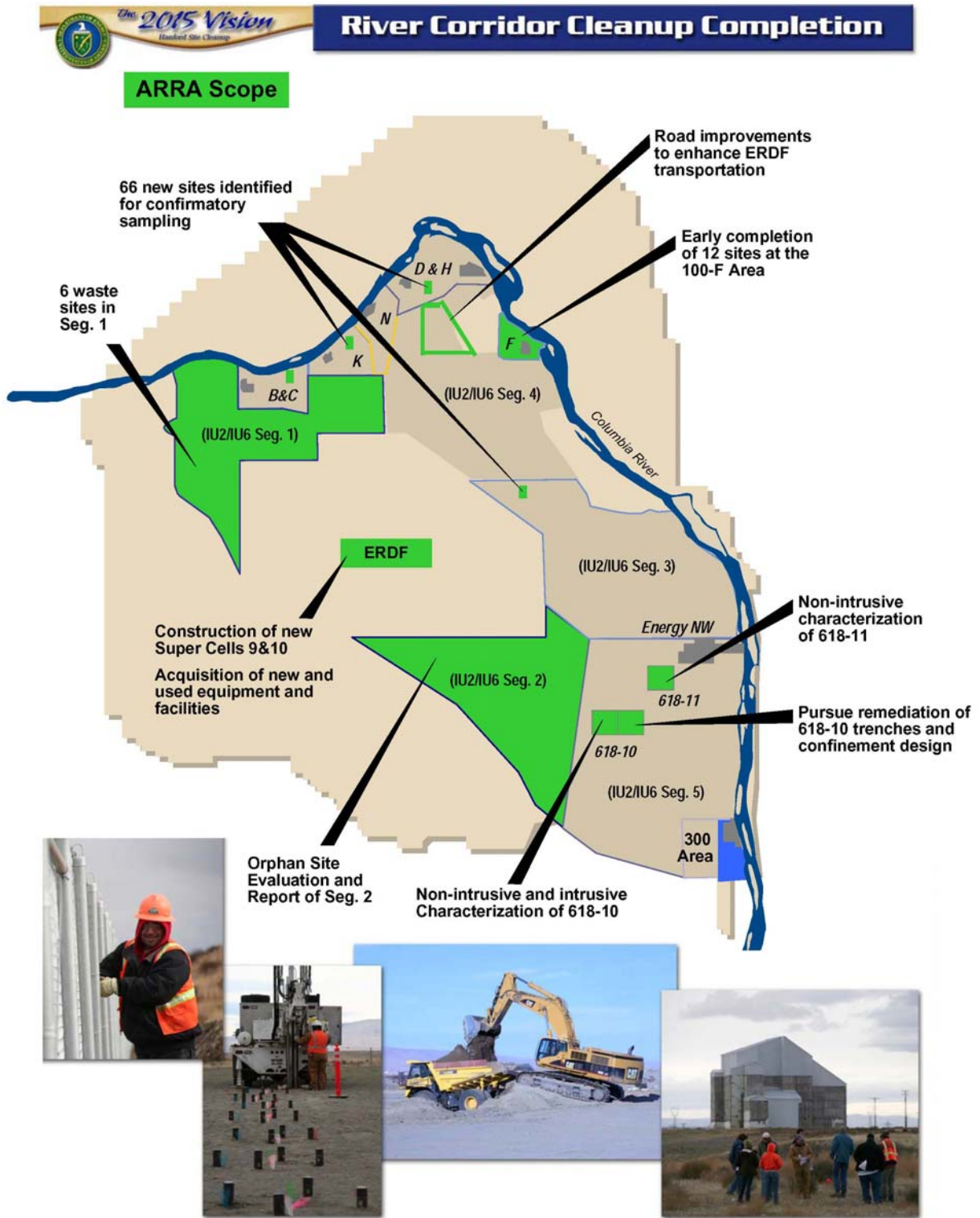
WCH is proposing to complete the early sampling process of 66 potential waste sites using ARRA funds. Confirmatory sampling is performed for sites that require additional information for determining if the site requires remediation.

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)



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 the requirements for safe use of flexible power cords and cables in construction.

The Occupational Safety and Health Administration (OSHA) construction regulations require flexible cords and cables to be protected from damage. OSHA also requires that extension cord sets used with portable electric tools and appliances shall be of three-wire type and shall be designed for hard or extra-hard usage. Flexible cords used with temporary and portable lights shall be designed for hard or extra-hard usage.

NFPA 310.11: Proper marking requires that all conductors and cable be marked to indicate the following information:

- The maximum rated voltage
- The proper letter or letters for the type of wire or cable, as specified in the code
- The manufacturer's name, trademark, or other distinctive marking by which the organization responsible for the product can be readily identified
- The American Wire Gage (AWG) size or circular mil area.

These requirements seem simple enough to follow, but there is more to the law than meets the eye. OSHA incorporates the National Electrical Code, ANSI/NFPA 70, in Article 400. Table 400-4 lists various types of flexible cords, some of which are noted as being designed for hard or extra-hard usage. Examples of these types of flexible cords include hard service cord (types S, ST, SO, STO) and junior hard service cord (types SJ, SJO, SJT, SJTO). So what do all these acronyms mean?

S = Service; **J** = Junior; **O** = Oil Resistant; **T** = Thermoplastic/Vinyl; **W-A** = Weather Approved
P = Parallel; **E** = Elastomer.

SEOW: Extra hard service cord. Thermoplastic elastomer, oil resistant (TPE) construction jacket. 600 volt, weather resistant for outdoor use.

SJEW: Hard service Thermoplastic or rubber-insulated conductors and overall Thermoplastic jacket. All elastomer construction. 300 volt, 90 °C to 105 °C. Weather resistant.

SJEOW: Hard service Thermoplastic or rubber-insulated conductors and oil resistant overall Thermoplastic jacket. All elastomer construction. 300 volt, 90 °C to 105 °C. Weather resistant.



Safety (Continued)

SEW: Extra hard service cord TPE jacketed all Thermoplastic Elastomer (TPE) construction. 600 volt, 90 °C to 105 °C. Weather resistant for outdoor use.

STW: Extra hard service cord. Thermoplastic constructed jacket. 600 volt, weather resistant for outdoor use.

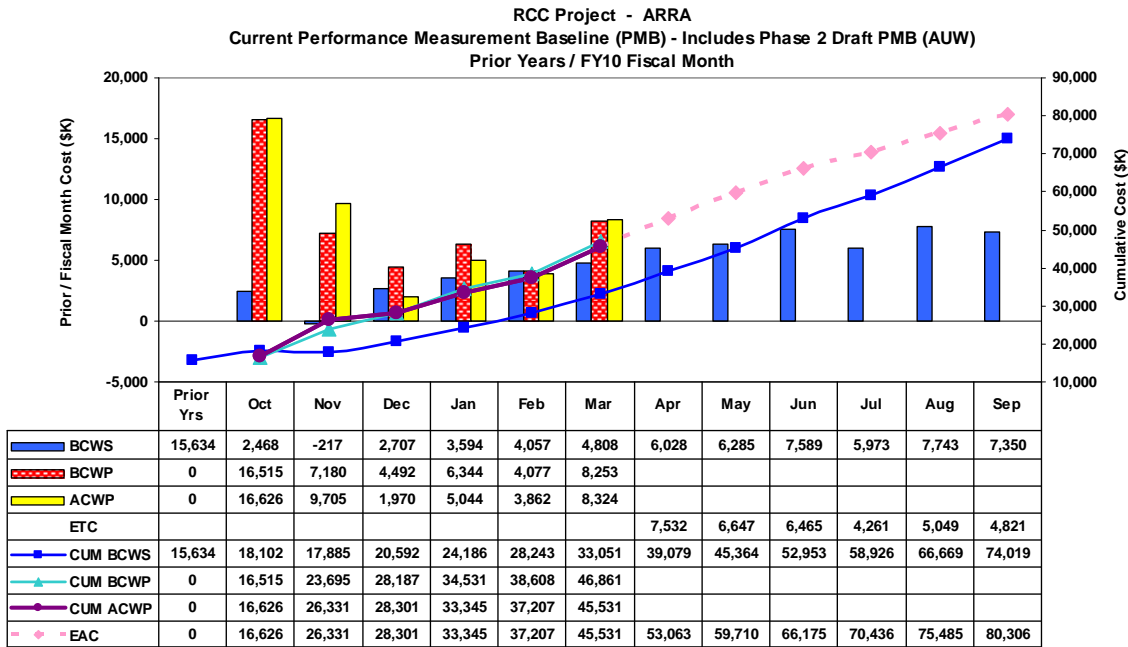
SJTW: Hard service cord. Thermoplastic constructed jacket. 300 volt, weather resistant for outdoor use.



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; Phase 2 Scope	\$253.6	\$123.8
174	2/22/10	ERDF Cell Expansion & Upgrades; 618-10 NIC; Phase 2 Scope	\$248.2	\$123.8
182	3/25/10	ERDF Cell Expansion & Upgrades; 618-10 NIC; Phase 2 Scope	\$248.2	\$155.8

Contract Modification #174 de-obligated \$5.4M from the 618-10 NIC scope. A re-obligation contract modification of equal value is in process for ERDF Cell Expansion & Upgrades. Contract Modification #182 increased the Not to Exceed amount by \$32M.



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
Sub Total		PMB	6,794	40,049	
		Balance	1,529	5,481	49,000
Fee			204	2,454	
Total			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, continue to excavate super cell 10 at a brisk pace – approaching the 60 percent mark with 1,116,700 cubic yards excavated to date. An estimated 1.675 million cubic yards of soil will be removed from super cell 10.



TradeWind Services subcontractor DelHur Industries continues excavation of super cell 10 at the Environmental Restoration Disposal Facility.

ERDF (Continued)



Crews have been removing about 30,000 cubic yards of soil per day on a regular basis at the Environmental Restoration Disposal Facility.

A series of hydraulic conductivity tests were performed on a test pad that was constructed of the soil/bentonite (admixture) for the compacted soil liner used in the liner and leachate collection system for super cells 9 and 10. The purpose of the tests were to show that the specified soil density, moisture content, and hydraulic conductivity values can be achieved with the full-scale compacted soil liner to be constructed for the super cells.

Plastic measuring tubes were inserted into six boreholes drilled into the test pad to measure the drop in water levels within the pipes as water penetrates into the liner. The results were sampled and tested. Testing will be completed early next week, and full-scale liner construction is scheduled to begin April 26.

The liner system collects and removes liquid, or leachate, as it drains through the waste materials. The test pad was constructed with the materials, equipment, and procedures that will be used to build the actual admix layer. The liner system consists 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.

ERDF (Continued)



Plastic measuring tubes were inserted into six boreholes drilled into the admix test pad at the Environmental Restoration Disposal Facility.

Facility and Equipment Upgrades

WCH conducted a kickoff meeting with ELRFowler, a joint venture between ELR Consulting and Fowler General Construction, which was awarded a \$7 million subcontract to design and construct an operations center and maintenance facilities at ERDF. Both are small local businesses. ELR Consulting is based in Kennewick, Washington, and Fowler General Construction is based in Richland, Washington. ELRFowler will begin design work immediately with construction to begin this summer, and completed next year.

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.

ERDF (Continued)

Sage Tech/WH Pacific continues work on the design of the new fueling station. The final design is due to WCH on April 26.

Columbia Engineers and Constructors continues work on the 90% design of ERDF's new septic system. The 90% design is due to WCH on April 26. In addition, two test pits were dug to characterize soil for the new septic system.

Pacific Northwest National Laboratory (PNNL) scientists and engineers continue to prepare for a proof-of-concept demonstration of a new container tracking system to be used at ERDF. The onsite demonstration has been rescheduled for April 19. The demonstration will attach Radio Frequency Identification and global positioning system tags to waste containers to show how accurately the system can track waste shipments and container location, and generate maintenance reports.

Bids to install lights at the upgraded transportation yard were received. Work to install the lights is scheduled to begin this spring.

Indian Eyes, a Pasco, Washington-based company, is scheduled to deliver a front-end loader to ERDF on April 19. WCH has awarded the subcontract for a heavy-duty forklift to Powers Equipment Company of Pasco, Washington. Delivery is expected in mid-May.

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

Upcoming Activities

- Continue removal of soil from super cell 10.
- Prepare for construction of liner and leachate collection system.
- PNNL demonstration of container tracking system will be conducted.



Profile

Springtime means tour time at the Environmental Restoration Disposal Facility (ERDF).

The U.S. Department of Energy's Hanford public tour season kicked off Tuesday, April 13, and Hanford's massive disposal facility is one of the main attractions. The tours run through September 15.

Visitors to ERDF have more than ever to see this season. The disposal facility, which accepts low-level radioactive, hazardous, and mixed wastes generated throughout the Hanford Site is experiencing its fourth expansion since operations began in 1996. More than \$100 million in American Recovery and Reinvestment Act dollars are being spent to expand the facility by 50 percent.



The U.S. Department of Energy's public tours of the Hanford Site kicked off last week. The tour stops at the Environmental Restoration Disposal Facility, where visitors are briefed on the facility's operations and procedures.

Profile (Continued)

One of the first things visitors notice at ERDF is the activity. Transportation shuttle trucks are bustling in and out of the facility, and disposal shuttle trucks are unloading waste in record numbers. The disposal operations team broke the 400-container barrier with 413 reached in mid-January, 501 in early March, and one week later disposed of 578 waste containers – a record that most likely won't last for long.

Visitors are briefed on waste disposal operations and procedures, the construction of the facility's liner and leachate collection system, and the excavation of the disposal cells. This spring, visitors can witness excavation of super cells 9 and 10.

Of course, all work is being conducted with safety as the No. 1 priority. The disposal staff at ERDF has never had a lost-time accident in 14 years of operation, and ERDF drivers have logged more than 15 million miles with only one at-fault accident.

"The tours are a great opportunity for us to show the public all the cleanup progress we're making at Hanford," said Jeff Armatrout, ERDF's Operations Manager. "The people are great. They're inquisitive and very thankful. We're glad to have them out here."

The tours, which also makes stops at the historic B Reactor and the Cold Test Facility, attract a wide variety of visitors – from people who know very little of the Hanford project to former Hanford workers.

The free tours are so popular that all 2,544 seats for the season sold out less than 14 hours after internet registration began. Seats will be made available when cancellations are received, with openings reposted at www.hanford.gov. The tours run through September 15 and are available to U.S. citizens 18 years and older.



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 206 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.

The project team completed a mockup in support of soil sampling activities. Collecting and analyzing samples will allow the team to assess the vertical distribution of contaminants in the soils adjacent to and below the VPUs.

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. An emergency drill in support of soil sampling activities also was conducted.



618-10 Burial Ground (Continued)



A soil sampling mockup was conducted at the 618-10 Burial Ground. Workers use a glove bag to transfer the samples to a bottle.

Project start-up activities continue for intrusive characterization. Procurement packages for trench remediation labor and equipment are being developed, and work continues to construct roads, firebreaks, and work areas for drum processing.

Intrusive characterization will provide information on the actual form, level of contamination, and the condition of various waste types. Remediation of the burial ground will include excavation, handling, packaging, and sampling of buried radioactive and chemical materials in a variety of forms including drums, debris, and soil.

618-10 Burial Ground (Continued)



Road work continues at the 618-10 Burial Ground. Crews are constructing a road around the site, a firebreak, and a drum processing area.

618-10 Burial Ground (Continued)



The 618-10 Burial Ground is experiencing more activity as preparations ramp up for intrusive characterization and remediation.

Upcoming Activities

- Continue trench radiological characterization activities.
- Continue work on the project start-up for intrusive characterization.
- Continue roadwork, fence relocation, and construction of drum processing areas and firebreaks.

Video

[**Progress Continues at the 618-10 Burial Ground.**](#)

100-F Area

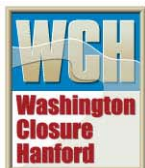
WCH has received bids from companies interested in remediating the 12 waste sites and will begin the evaluation process. Remediation of the waste sites will involve the excavation of radioactive and hazardous soil and debris and the packaging of this material into shipping containers. Miscellaneous waste 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 continues work on the air monitoring plan. A draft is being prepared for transmittal to the regulator.

Discussions have begun with the Hanford Site electric utility for relocating an active power pole that lies within the foot print of waste site 100-F-26:7, as well as installing a pole to enhance bat habitat at F Area. An engineering report also is being prepared for the septic holding tank for trailers to be installed at the site.

A walkdown was held with the Miscellaneous Restoration Project to begin project interfaces. The Miscellaneous Restoration Project will be removing railroad tracks and abandoned aboveground utilities at F Area in fiscal year 2011.



100-F Area (Continued)



An aerial view of the 100-F Area.

IU 2 & 6 Segment 1

Remediation is complete at three of the six waste sites discovered at IU 2&6 Segment 1 during the 2008 orphan site evaluation. Remediation of sites 600-343, 600-345, and 600-346 is complete. Some remediation work also was completed at site 600-341, which consists of four areas. Completion of remediation of 600-341 and 600-344 will proceed after the historical and cultural review.

Earlier this year a global positioning environmental radiological survey indicated that site 600-342 did not require additional remediation. Work to complete closeout documentation for this waste site continues. The waste site will be officially completed (interim closed out) upon review and approval of the waste site reclassification form by the U.S. Department of Energy, Richland Operations Office (RL) and the U.S. Environmental Protection Agency (EPA).

The three fully excavated sites are relatively small and contain mostly surface debris. 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, and site 600-341 consists of four areas that contain dry cell battery remnants and/or battery 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 RL and EPA, verification closeout samples will be collected for laboratory analysis.

Planning continues to complete excavation and loadout activities at the two remaining 600-341 locations and waste site 600-344, pending completion of the cultural resource review process. Cultural resource documentation and recommendations prepared for this remaining scope have been transmitted by RL to the State Historic Preservation Office for review.



Confirmatory Sampling

The project team continues to develop sampling instructions for waste sites at the 100-D and 100-IU 2/6 Areas. It continues to conduct historical research and consult regulatory documents, develop a list of contaminants of potential concern to be sampled, and determine potential sample locations for review by DOE and Hanford Site regulators. Approximately 40% 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 is also 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. Eleven of the memos have been issued and the remaining 11 will be issued in April.

Work continues on the request for proposal (RFP) for the confirmatory sampling contractor. Confirmatory sampling will involve trenching, excavation, hot/cold tapping, backfilling, and sampling to determine the nature and extent of any contamination present. The successful company will be required to furnish the necessary facilities, equipment, labor, materials, supplies, and tools necessary to excavate, stockpile, sample, decontaminate equipment and tools, backfill, and transport excavated materials away from excavation as needed and practical.

The contract is scheduled to be awarded in May 2010, with field work beginning in July 2010. 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 events this week.

Media, Visits, Press Releases

Dae Chung, DOE-Headquarters (HQ) Principal Deputy Assistant Secretary, Office of Environmental Management, visited the Hanford Site on April 13. Chung received briefings at several sites including the 618-10 Burial Ground and ERDF.



Dae Chung, DOE-HQ Principal Deputy Assistant Secretary, Office of Environmental Management, was briefed on work at the 618-10 Burial Ground and ERDF.

Contracting Actions

- ERDF Access Road Paving contract is completed.
- Construction Quality Assurance is being performed for super cells 9 and 10.
- Ortec Detective was delivered to 618-10.