



River Corridor Closure Project

Recovery Act Weekly Report

For the week ending June 27, 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.

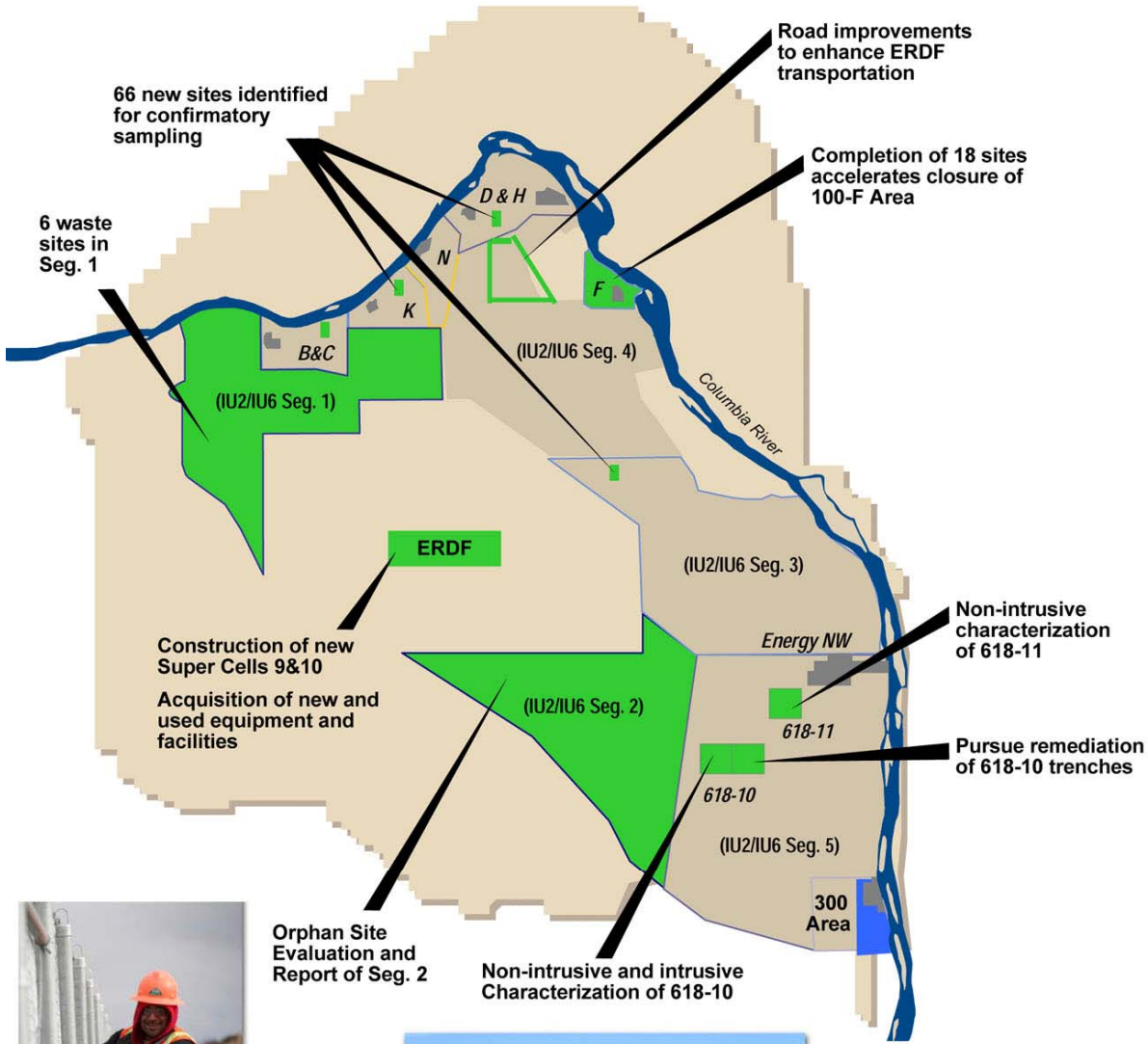
The following figure illustrates the overall scope of WCH's ARRA projects.



Overview (Continued)

River Corridor Cleanup Completion

ARRA Scope



E1004062 06/15/10



Safety

Safety Accomplishments

As of May 23, 2010, WCH and its subcontractors have worked 207,291 hours of ARRA scope with no safety incidents.

Hazard Reductions

Last week's River Corridor Project's Weekly Roundup for safety focused on power tools and hand vibration. Certain power tools generate vibration levels so high that they can damage the blood vessels and nerves in your hands. The problem usually begins with numbness and tingling in your hands. After you have been exposed to vibration for a while your fingertips may become discolored or white, especially when they get cold. You may also lose grip strength.

In extreme cases, gangrene is possible. If you are regularly and frequently exposed to high levels of vibration through your hands from equipment, tools, or materials you are working with, you may be at risk of permanent damage to your hands and arms. This injury is sometimes called "white finger" or "hand arm vibration syndrome" (HAVS).

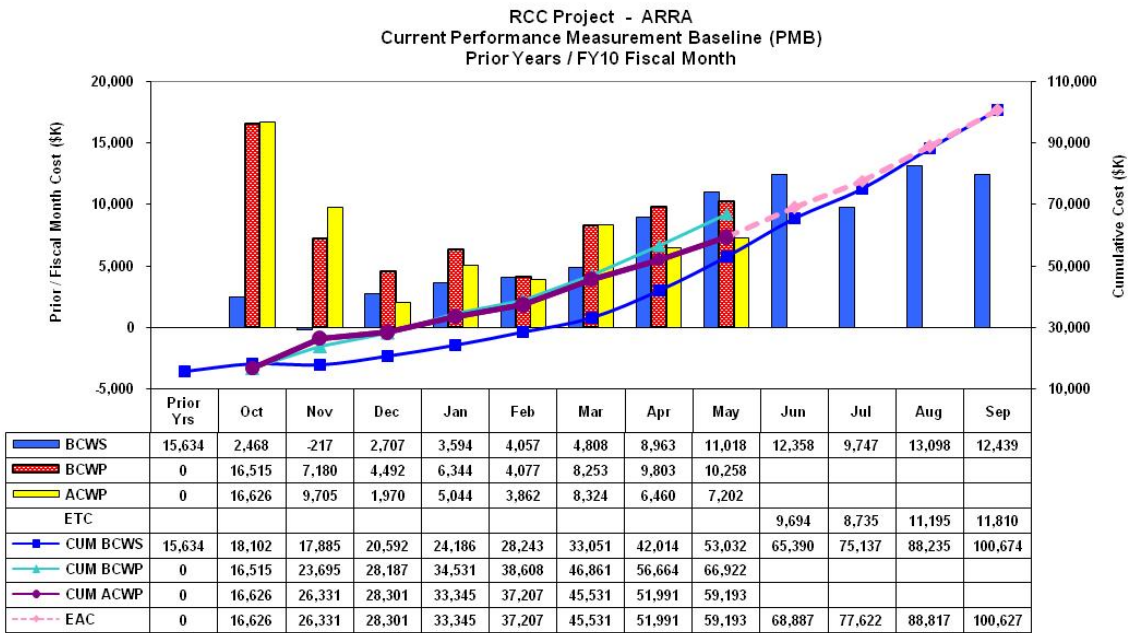
You are at greater risk of developing a vibration-related injury if you use vibrating power tools often or for long periods of time. These injuries can be prevented, but there is no cure once you have them. The possible harm caused by operating a vibrating tool is related to the level of vibration and the amount of time the tool is used. The higher the vibration level, the shorter the time the tool can be used safely. Here are some ways to reduce the risk:

- Use the right tool for the job. Using the wrong tool can mean more vibration, tighter hand grip, or longer tool use.
- Don't use more force than necessary when using tools or machines.
- Use as light a hand grip as possible. Using a lighter grip helps reduce your exposure to vibration.
- Keep tools and machines in good working order. Badly maintained tools may produce more vibration. Oiling and cleaning tools daily increases the life of the tool and reduces vibration.
- Out-of-balance or off-center grinding wheels, pads, and spindles are major contributors to vibration. Some tools use auto-balancing technology to compensate for off-center pads/wheels.
- Try to avoid long periods of equipment use without a break.
- Use reduced-vibration power tools. Many tools are now available that are designed to produce less vibration.
- Use anti-vibration gloves. Select gloves that minimize the loss of tactile sensitivity.
- Always keep your hands warm when using any vibrating tool. Cold hands are more vulnerable to the effects of vibration.



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
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
205	5/26/10	Reallocate Funds for Equipment and GPPs	\$253.6	\$178.0
210	6/23/10	Funding deobligation	\$229.3	\$178.0



ARRA Proposals 1, 2 and 3 Actuals (\$K)

Apportionment Number	Apportionment Title		May 2010	Inception To Date	Cost Authority
RL-0041.R1.2	ERDF Cell Expansion	PMB	5,104	42,217	139,072
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	2,098	16,976	38,907
Sub Total		PMB	7,202	59,193	177,979
Fee			3,207	5,865	
Total			10,409	65,058	

* PMB is the Performance Measurement Baseline.



ERDF

Super Cells 9 and 10 Construction

WCH subcontractor TradeWind Services and its subcontractor, DelHur Industries, continue to install the liner and leachate collection system for super cell 9. The system collects and removes liquid, or leachate, as it drains through the waste materials.

The liner consists of a low-permeability compacted soil layer, two layers of 60-mil high-density polyethylene (HDPE), a 1-foot layer of gravel with a 12-inch perforated drainage pipe, a geocomposite layer, and two geotextile layers. A 3-foot protective soil layer covers the liner system.

TradeWind/DelHur has placed about 80% of the low permeability compacted soil layer, which is called admix. Admix is manufactured by mixing excavated soil with imported bentonite in an onsite pugmill.

The project team also is installing the secondary HDPE and geocomposite layers, and constructing the lysimeter pipe and sump system. The lysimeter sump liner consists of a 60-mil HDPE layer, two geotextile layers, a 2.5-foot gravel layer, and a 3-foot admix layer.



TradeWind Services/DelHur Industries personnel begin to place admix on the north slope of super cell 9 at the Environmental Restoration Disposal Facility.

ERDF (Continued)



TradeWind Services/DelHur Industries personnel continue to install the secondary high-density polyethylene liner in super cell 9 at the Environmental Restoration Disposal Facility.

ERDF (Continued)



The 60-mil high-density polyethylene is rolled out in 540-by-22-foot sections and heat-welded together.

The project team continues with the installation of the leachate transmission pipe from super cell 9 to a new leachate holding tank. Five of the six sections of transmission pipe have been installed, and construction of a new leachate holding tank continues. The new holding tank, which will accommodate leachate from super cells 9 and 10, will measure 100 feet in diameter and have a capacity of 425,000 gallons. Each of ERDF's two existing holding tanks measures 80 feet in diameter with a capacity of 275,000 gallons.

About 100,000 gallons of leachate are pumped into the holding tanks each month before being sent to the Hanford Effluent Treatment Facility. There, it is treated and released into a permitted drain field. The filter media and removed contaminants are returned to ERDF for disposal.

The onsite screening plant has been assembled and tested. The plant will be used to screen the gravel for the 1-foot gravel drainage layer of the liner system. Construction of the crest pad buildings for super cells 9 and 10 also continues.

ERDF (Continued)



TradeWind Services/DelHur Industries personnel work on a new leachate holding tank near the main entrance to the Environmental Restoration Disposal Facility.

Facility and Equipment Upgrades

WCH continues to prepare a work order to Pacific Northwest National Laboratory (PNNL) for the new waste container tracking system PNNL designed for ERDF. PNNL is expected to start work on the project in mid-July.

The system will accurately track waste shipments and equipment, and generate real-time reports. PNNL conducted a proof-of-concept demonstration of its system in April. As part of the demonstration, Radio Frequency Identification and global positioning system tags were attached to waste containers to show how accurately the system tracks waste shipments and container location, as well as generates maintenance reports.

ELRFowler, a joint venture between local companies ELR Consulting and Fowler General Construction, continues work on the design of ERDF's new maintenance facilities and operations center. The 90% design is due in mid-July.

The upgraded transportation truck maintenance facility will include two additional truck bays, a large concrete pad, an exterior awning that will cover two smaller concrete pads, and a

ERDF (Continued)

conference room. The new 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 new 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 subcontractor George A. Grant is preparing to begin construction of a new lighting system at ERDF's transportation yard. Construction is scheduled to start next week. The transportation yard is used for truck-and-trailer combinations and other equipment.

WCH provided comments to Columbia Engineers and Constructors on the final design of ERDF's new septic system. Columbia Engineers and Constructors, a small business based in Richland, Washington, is addressing the comments.

WCH awarded a contract to Indian Eyes, LLC, for a Cat 770 off-highway truck and another contract to Powers Equipment Company for two Genie articulating boom man lifts. Both are small local businesses. The equipment is scheduled to be delivered to ERDF in mid-July. The existing method to transport clean soils for operational cover within the ERDF facility is to use shuttle trucks with 20-yard containers. The Cat 770 will transport 40 tons of soil, increasing productivity and return of the shuttle trucks to disposal operations. The man lifts will be used for elevated work, such as installing rigging, washing out hazardous waste containers, applying fixatives, and adjusting lights.

Hanford Site contractor Mission Support Alliance (MSA) is preparing for repair work on three Hanford Site roads. Design work has been completed for Routes 1 and 2, and continues for Route 4. A request for bids has been issued for construction work on Route 1. The roads are used to transport waste material to ERDF.

Construction of an onsite fueling station, designed by Sage Tech and WHPacific, is scheduled to begin mid- to late summer. Currently, disposal equipment is fueled by a subcontractor that makes daily deliveries, and transportation uses the 200 East fuel station. Sage Tech is based in Richland, Washington. WHPacific is an Alaska-based company with an office in Richland, Washington. It specializes in all facets of building engineering, land development, water resources, survey, architecture, and transportation.

WCH awarded a subcontract to Sage Tech and WHPacific to develop a design basis for a new batch plant. The batch plant will manufacture concrete used to mix with debris, ensuring no void space during disposal operations. Last week, WCH awarded a subcontract to Peters and Keatts Equipment Inc. for two concrete mixer trucks in support of a new batch plant. Bids for a new pump truck are being evaluated. Peters and Keatts is based in Lewiston, Idaho.

A change notice has been issued to TradeWind Services for the construction of weather enclosures for the crest pad buildings associated with cells 1 and 2.

Upcoming Activities

- Continue to manufacture admix and place in super cell 9.
- Continue construction of the liner and leachate collection system for super cell 9.
- Continue work on the crest pad buildings for super cells 9 and 10.



ERDF (Continued)

- Issue work order to PNNL for new container tracking system.

Video

[*Progress continues with the expansion of the Environmental Restoration Disposal Facility.*](#)

Profile (Continued)

Dave Sterley has been involved in a wide variety of projects during his career in the construction field. While working for the Alaska Department of Transportation & Public Facilities (DOT&PF), Sterley was involved in the construction of numerous highways, bridges, ferry terminals, airports ... just about anything you could imagine.

Sterley, a longtime resident of Alaska, accepted an early retirement plan from the Alaska DOT&PF in 1999 and moved to Chewelah, Washington, to be close to family. Chewelah, named after the native word that means snake in the grass, is a town of about 2,300 located 45 miles north of Spokane.

However, retired life didn't last long for Sterley. In 2001, he took a job with DelHur Industries, a Port Angeles, Washington-based company with expertise in landfill cell construction, environmental remediation, and waste treatment.

Sterley is a quality control engineer. He worked on the construction of Hanford's Integrated Disposal Facility before moving to the Environmental Restoration Disposal Facility (ERDF) three years ago when DelHur began excavation and construction of cells 7 and 8.



Dave Sterley, a quality control engineer for Washington Closure Hanford subcontractor DelHur Industries, oversees work on super cells 9 and 10 at the Environmental Restoration Disposal Facility.

Profile (Continued)

For the past five months, DelHur has been working on the fourth and largest expansion of ERDF since the facility began operations in 1996. Along with Washington Closure Hanford prime subcontractor TradeWind Services, DelHur recently completed excavation of super cell 10 (more than two months ahead of schedule) and is now building the liner and leachate collection systems for super cell 9. The expansion project, which will increase ERDF's capacity by 50%, is funded by the American Recovery and Reinvestment Act.

"My job is to make sure that all work on the project is being conducted according to the plans, specifications, and procedures," said Sterley, who holds a bachelor's degree in geology from the University of Alaska Fairbanks. "We've got a lot of different aspects of the project going on right now, so we're pretty busy."

As part of liner construction in super cell 9, DelHur is manufacturing and placing admix, which is a soil/bentonite material used for the low-permeability compacted soil layer. Work also continues on the installation of the first of two high-density polyethylene geomembrane layers and the leachate collection system.

Sterley said he enjoys working for DelHur, which has excavated and built the liner and leachate collection systems for all but two cells at ERDF. "We've got a lot of good, hard-working people here," he said.

"We like to get in, work hard, and get the job done safely and efficiently," Sterley said.

Perhaps the toughest part of the job is being way from home. Sterley has a trailer in nearby Richland and makes the eight-hour round trip home on the weekends. There, you can usually find him at the Chewelah Golf and Country Club.

"I've got a great family, a good job, and I get to play an occasional round of golf. I can't complain."



618-10 Burial Ground

618-10 Non-Intrusive Characterization/Trench Remediation Project

The project team continues to prepare for intrusive characterization at the 618-10 Burial Ground. Field operations are scheduled to begin in July. Intrusive characterization will provide information about the types and quantities of wastes, and the level of contamination.

During field operations, test pits will be excavated through a series of burial trenches. The trenches were selected based on previous geophysical studies and readings from nonintrusive characterization activities.

The project team continued intrusive characterization mock-ups and emergency safety drills. The emergency action levels have been approved. A review with senior management also was held to prepare for flaring of a propane tank discovered outside the northeast side of the site fence in late March.

The 618-10 Burial Ground operated from 1954 to 1963, receiving low- and high-level radioactive waste from 300 Area laboratories and fuel development facilities. Low-activity wastes were primarily disposed in 23 trenches, while the moderate- and high-activity wastes were disposed in 94 vertical pipe units (VPUs). The VPUs were constructed by welding five bottomless drums together and buried vertically about 10 feet apart.

Available records indicate that the burial ground was used to dispose of cardboard boxes of low-level waste and miscellaneous laboratory debris including bottles, boxes, filters, aluminum cuttings, spent fuel fragments in small juice cans, radiologically-contaminated equipment and laboratory instruments, and high-level liquid waste sealed in drums.

A nonintrusive characterization report is being developed and is scheduled to be issued in mid-August. Nonintrusive characterization field activities were completed May 20. The scope of activities carried out as part of nonintrusive characterization included geophysical delineation, in situ characterization using a multi-detector probe, and soil sampling from below a selection of 10 VPUs.

During in situ characterization, measurements were collected for 100 cone penetrometers in the trench area and 375 cone penetrometers in the VPU area. The data collected during nonintrusive characterization activities are being used to develop and evaluate safe and effective strategies for intrusive characterization and remediation.

Upcoming Activities

- Continue work on procurement packages for trench remediation labor and equipment.
- Continue mock-ups for intrusive characterization.
- Continue development of nonintrusive characterization report.



100-F Area

WCH has issued a notice to proceed to Ojeda Business Ventures for work on contract submittals (e.g., health and safety, quality, scheduling) for the remediation of 18 waste sites at 100-F Area. A preconstruction meeting is scheduled for next week.

Ojeda is a small disadvantaged business based in Richland, Washington, that specializes in construction, renovation, and construction management of federal government projects. Subcontractor mobilization will begin in July. Remediation is scheduled to begin in August and completed by April 2011.

F Reactor operated from 1945 to 1965 as one of Hanford's nine surplus plutonium production reactors for the nation's nuclear weapons program. The reactor was cocooned in 2003. During reactor construction and operations, waste was disposed in unlined pits and trenches throughout the site.

The 100-F Area also was the home of the experimental animal farm (EAF), which from 1945 to 1976 operated adjacent to the reactor site. The EAF used animals for studying the potential effects of ionizing radiation exposure to humans in the occupational setting. Reactor and EAF sites in the 100-F Area contributed to the discharge of contaminated cooling water, other liquids, and solid wastes.

WCH completed the remediation of 53 waste sites at F Area in 2008. However, during the course of cleanup 18 additional waste sites were discovered.

The 18 sites that require remediation 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 sewer pipeline)
- 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)
- 100-F-58 (asbestos-containing surface debris)
- 100-F-60 (pipeline)
- 100-F-61 (stained soil site)
- 100-F-8 (french drains)
- 100-F-62 (animal farm septic lines)
- 100-F-63 (animal farm radioactive effluent lines).



100-F Area (Continued)



An aerial view from the south shows F Reactor in March 1962.

IU 2 & 6 Segment 1

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

Remediation of five IU 2 & 6 Segment 1 waste sites discovered during the 2008 orphan site evaluation was completed in April. The remediation sites are as follows:

- 600-341 (four areas that contained dry cell battery remnants and/or battery debris)
- 600-343 (residual ash from burned material and dumped asphalt in excavation trench)
- 600-344 (stained area)
- 600-345 (stained area with oil filters)
- 600-346 (four small fly ash dump areas with metal debris).

Earlier this year a global positioning environmental radiological survey indicated that an additional site, 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.

Remediation of these waste sites will contribute to DOE-RL's Vision 2015 goal of completing regulatory closure work in IU 2 & 6 Segment 1 by the end of calendar year 2010.

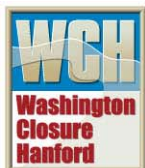


Confirmatory Sampling

WCH has issued the confirmatory sampling work instructions and remove, treat, and dispose memos for 62 of the 66 sites for the 100-D, 100-K, and 100-IU 2/6. In addition, the sampling instruction for 100-F Area that was added to the confirmatory scope also was approved. The remaining four 100-D Area sampling instructions have been sent to DOE and the regulatory agencies for review or comment resolution.

Earlier this month, WCH awarded a subcontract to TerranearPMC to perform the confirmatory sampling. TerranearPMC is a small disadvantaged business based in Irving, Texas, with an office in Richland, Washington. It provides environmental remediation and compliance, radiological waste management, engineering design, and construction management. Subcontractor mobilization will begin later this month, with sampling in the 100-K Area 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 events this week.

Media, Visits, Press Releases

A group of interns from CH2M HILL Plateau Remediation Company visited ERDF on June 24 as part of a Hanford Site tour. The visitors were briefed on the facility by the ERDF operations manager.

Contracting Actions

No significant contracting actions this week.

