Issue 50

River Corridor Closure Project

Recovery Act Weekly Report

For the week ending August 22, 2010

Contract DE-AC06-05RL14655

Protecting the Columbia River

E0908027

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.

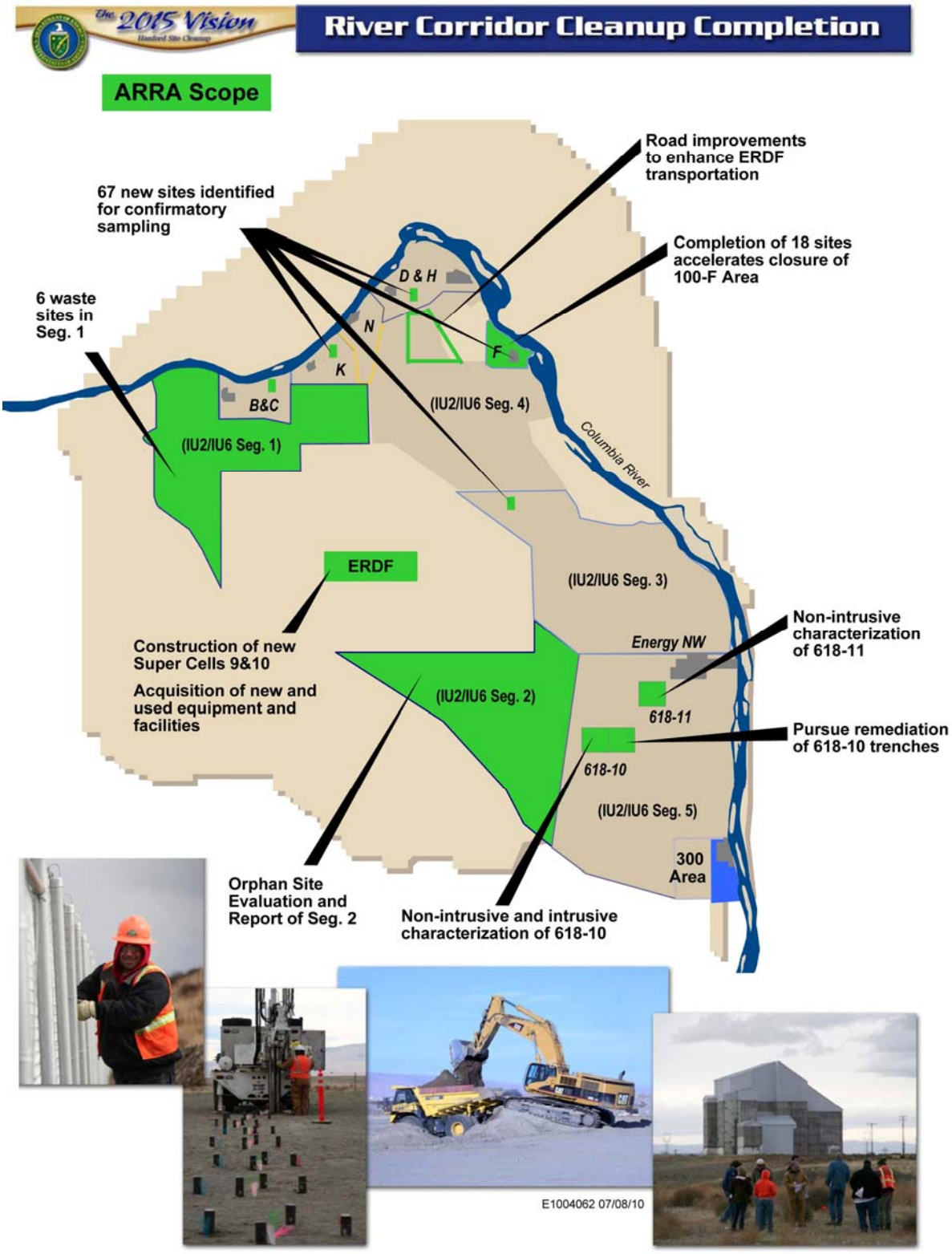
E. Confirmatory Sampling of other new sites

   WCH is proposing to complete the early sampling process of 67 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 July 25, 2010, WCH and its subcontractors have worked 239,115 hours of ARRA scope with no safety incidents.

Hazard Reductions
WCH shared safety information with employees on the topic of "Excavation" at plan-of-the-day meetings. The briefings included four excavations topics: 1) Requirements, 2) Competent Person Qualifications, 3) Field Implementation, and 4) Inspections.

Requirements
OSHA 29 CFR 1926 Subpart P

- An excavation is any man-made cut, cavity, trench, or depression in the Earth's surface formed by earth removal. A trench is defined as a narrow underground excavation that is deeper than it is wide, and no wider than 15 feet.

Site-wide procedure, DOE-0344, Rev. 1

- Definitions of excavation, competent person, and spotter
- Requirements for Job Hazard Analysis, walk-downs, pre-job meetings, and inspections
- Requirements for barriers, signage, and fall protection
- Notifications and documentation.

Competent Person Qualifications

- Occupational Safety and Health Administration and the U.S. Department of Energy site-wide excavation procedure
- WCH excavation training or equivalent
- Approved by S&H manager.

Roles and Responsibilities

- Provides day-to-day oversight and program implementation
- Capable of identifying hazards and changed conditions
- Has authorization to take prompt corrective actions to eliminate hazards and invoke stop work, if necessary
- Conduct daily inspections and maintain inspection logs.

Field Implementation
Excavation Properties

- Class "C" soil – 1.5 to 1 slope
- Excavation permit required for all excavations 12 inches or more
- Barriers, signage, and/or fall protection must be utilized
- Approach distances are defined in Occupational Safety and Health Administration and DOE-0344.

WCH and Subcontractors

- WCH will issue all excavation permits
- All equipment must be in a safe configuration when not in use for extended periods
- Must maintain sloping requirements at all times for personnel, vehicles, and equipment.

Safety (Continued)

Subcontractors
- Verification, removal, or protection of all underground utilities
- Enforce site access requirements, controls, and regulations
- Daily Inspections and documentation.

Inspections
Inspections must:
- Be performed daily, after every rainstorm, and after changed conditions
- Include all excavations/trenches, the adjacent areas, and protective systems
- Be made by a competent person
- Verify that all sloping and shoring conforms with DOE-0344.

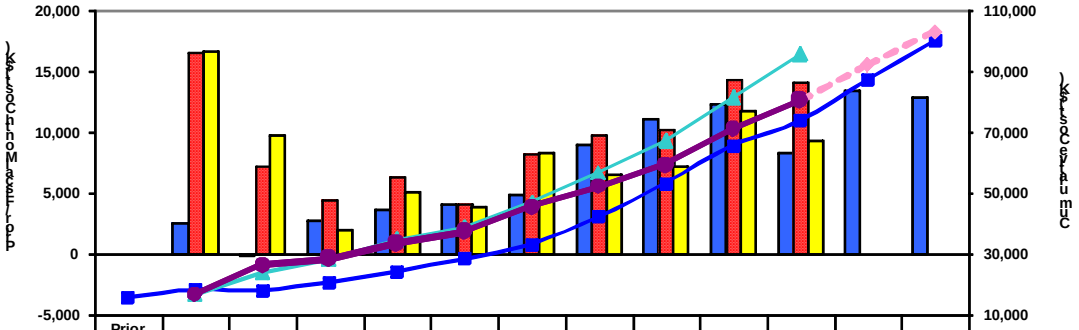
Subcontractors
- Must provide all inspection documentation to Subcontractor Technical Representative in accordance with Exhibit G.

Excavation checklists are available to assist in the inspections (e.g., PAS-1-2.1, MSA, and/or STS).

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
217	8/4/10	Funding re-obligation	$233.6	$178.0

RCC Project - ARRA
Current Performance Measurement Baseline (PMB)
Prior Years / FY10 Fiscal Month



	Prior Yrs	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BCWS	15,634	2,468	-217	2,707	3,594	4,057	4,808	8,963	11,018	12,326	8,313	13,393	12,788
BCWP	0	16,515	7,180	4,492	6,344	4,077	8,253	9,803	10,258	14,305	14,138		
ACWP	0	16,626	9,705	1,970	5,044	3,862	8,324	6,460	7,202	11,739	9,313		
ETC												11,589	11,002
CUM BCWS	15,634	18,102	17,885	20,592	24,186	28,243	33,051	42,014	53,032	65,358	73,671	87,064	99,852
CUM BCWP	0	16,515	23,695	28,187	34,531	38,608	46,861	56,664	66,922	81,227	95,365		
CUM ACWP	0	16,626	26,331	28,301	33,345	37,207	45,531	51,991	59,193	70,932	80,245		
EAC	0	16,626	26,331	28,301	33,345	37,207	45,531	51,991	59,193	70,932	80,245	91,834	102,836

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

Apportionment Number	Apportionment Title		July 2010	Inception To Date	Cost Authority
RL-0041.R1.2	ERDF Cell Expansion	PMB	7,169	58,474	139,072
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	2,144	21,771	38,907
Sub Total		PMB	9,313	80,245	177,979
Fee			2,496	8,780	
Total			11,809	89,025	

*** PMB is the Performance Measurement Baseline.**

ERDF

Super Cells 9 and 10 Construction
WCH continues to construct the liner and leachate collection systems for super cells 9 and 10. The liner system consists of a 3-foot layer of admix, two layers of high-density polyethylene (HDPE), a 1-foot layer of gravel with a 12-inch perforated drainage pipe, a geocomposite layer, and two geotextile layers. Admix is a 3-foot low-permeability compacted soil layer of the liner system that is manufactured by mixing excavated soil with imported bentonite.

WCH subcontractor TradeWind Services began to place the rock used for the gravel drainage layer in super cell 9. More than 40,000 cubic yards of gravel, enough for two super cells, has been manufactured at an onsite screening plant. Each super cell is about 17 acres (including the base and the side slopes).

WCH also has installed more than 80% of both the primary HDPE and geocomposite layers. The secondary HDPE liner is complete. More than 80% of admix has been placed in super cell 10. In July, the project team completed the placement of admix in super cell 9.

Workers install the geocomposite layer on the north slope of super cell 9 at the Environmental Restoration Disposal Facility.

ERDF (Continued)

Workers spread gravel in super cell 9 at the Environmental Restoration Disposal Facility. The gravel is used for the gravel drainage layer of the liner system.

The project team installed the secondary riser pipes from the sump to the crest pad building in super cell 10. Work also continues on ERDF's new leachate holding tank. The concrete foundation has been constructed for the holding tank, which measures 100 feet in diameter with a capacity of 425,000 gallons. Each of ERDF's two existing holding tanks is 80 feet in diameter with a capacity of 275,000 gallons. Work also continues on the crest pad buildings for super cells 9 and 10, and the leachate transmission pipe from super cells 9 and 10 to the new leachate holding tank.

ERDF (Continued)

The secondary riser pipes from the sump to the crest pad building are installed in super cell 10 at the Environmental Restoration Disposal Facility.

ERDF (Continued)

The concrete foundation was poured for the new leachate holding tank at the Environmental Restoration Disposal Facility.

ERDF (Continued)

Facility and Equipment Upgrades
WCH continues to review ELRFowler's 90% design of ERDF's new maintenance facilities and operations center. ELRFowler is a joint venture between local companies ELR Consulting and Fowler General Construction. 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 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.

Pacific Northwest National Laboratory (PNNL) continues work on a new waste container tracking system for ERDF. The system will accurately track waste shipments and equipment, and generate real-time reports. PNNL has begun electrical and reader software development, and will begin mechanical and firmware development by the end of August.

Vendors are preparing bids for construction of ERDF's new septic system. Bids are due August 24. The septic system was designed by Columbia Engineers and Constructors, a small business based in Richland, Washington.

Delivery of two Genie articulating boom man lifts from Powers Equipment Company is scheduled for August 25. The man lifts will be used for elevated work such as installing rigging, washing out hazardous waste containers, applying fixatives, and adjusting lights. Powers Equipment Company is based in Pasco, Washington.

Mission Support Alliance (MSA) subcontractor Fowler General Construction has started prep work on Route 1 – one of three Hanford Site roads to be repaired. Routes 2 and 4 also will be repaired. The roads are used to transport waste material for disposal at ERDF.

WCH subcontractor George A. Grant continues with construction of a new lighting system at ERDF's transportation yard. A total of 15 light posts have been erected and the electrical is being installed. The transportation yard is used for truck-and-trailer combinations and other equipment. The truck-and-trailer combinations are used to transport non-regulated soil for disposal at ERDF. The project is scheduled to be completed later this month.

Fowler General Construction has started civil work for construction of ERDF's onsite fueling station. The fueling station was designed by Sage Tech and WHPacific. 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 is preparing a purchase order for a new batch plant at ERDF. The batch plant will manufacture concrete used to mix with debris, ensuring no void space during disposal operations. In support of the batch plant, WCH purchased two concrete mixer trucks and a pump truck from Peters and Keatts Equipment Inc. Peters and Keatts is based in Lewiston, Idaho.

ERDF (Continued)

WCH continues to evaluate bids for construction of weather enclosures for the crest pad buildings for cells 1 and 2.

Upcoming Activities

- Continue construction of the liner and leachate collection system for super cells 9 and 10.
- Continue work on the crest pad buildings for super cells 9 and 10.
- Review the 90% design of the maintenance facilities and operations center.

618-10 Burial Ground

618-10 Non-Intrusive Characterization/Trench Remediation Project
WCH continues field operations in support of intrusive characterization at the 618-10 Burial Ground. Field operations involve digging test pits through a subset of disposal trenches to verify the condition and types of wastes that were disposed.

Sampling was conducted for the leaking drum that unearthed last week in trench 618-10-1. The drum was confirmed to contain depleted uranium chips in oil. The project team also has uncovered a shipping cask, bollards, bottles, metal pieces, and other debris. The team has plans for retrieving up to 20 drums during intrusive characterization. WCH estimates there might be up to 2,000 drums containing uranium chips, uranium oxide, and other high-activity or highly radioactive materials.

Because the drums might contain potentially flammable material, they will be opened inside a metal enclosure called a drum-punch facility that is operated and monitored remotely for safety. The enclosure includes a HEPA filtered ventilation system and a sand hopper that can be activated immediately to smother any reaction that may occur inside a drum. Upon completion of the cross-trenching process, the cross trench will be covered with the clean backfill.

Trenching activities in support of intrusive characterization continued at the 618-10 Burial Ground.

618-10 Burial Ground (Continued)

An employee of Washington Closure Hanford subcontractor Envirocon operates a track-hoe during trenching activities at the 618-10 Burial Ground.

618-10 Burial Ground (Continued)

A shipping cask was discovered during cross-trenching of the 618-10-1 trench at the 618-10 Burial Ground.

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.

In early July, WCH awarded a subcontract worth nearly $3.7 million to install water, electricity, roads, office trailers, and waste container transfer areas for remediation at the 618-10 Burial Ground. White Shield/Apollo is a small, disadvantaged joint venture between White Shield Inc.

618-10 Burial Ground (Continued)

of Pasco, Washington, and Apollo Inc. of Kennewick, Washington. White Shield/Apollo will begin work at the burial ground this fall and is scheduled to complete infrastructure work by February 2011.

Work continues to develop the non-intrusive characterization report. The scope of activities carried out as part of non-intrusive 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. Data collected during non-intrusive characterization activities are being used to develop and evaluate safe and effective strategies for intrusive characterization (if required) and/or remediation.

Upcoming Activities

- Continue intrusive characterization field operations.
- Continue with processing submittals for site upgrades (water lines, civil site expansion, trailer locations).
- Continue development of non-intrusive characterization report.

Video

Click here to view the video showing trenching activities at the 618-10 Burial Ground.

100-F Area

WCH continues to prepare for remediation of the 18 remaining waste sites at 100-F Area. Civil surveys for excavation were conducted and subcontractor mobilization is under way.

The project team also continues to review submittals from subcontractor Ojeda Business Ventures. Earlier this summer, WCH awarded a subcontract worth $3.8 million to Ojeda to remediate the waste sites. Ojeda is a small disadvantaged business based in Richland, Washington, that specializes in construction, renovation, and construction management of federal government projects. Remediation of the waste sites is scheduled to begin in September.

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 cleanup of 53 waste sites at F Area in 2008, loading out more than 408,000 tons of waste. 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).

Upcoming Activities

- Begin mobilization activities.

100-F Area (Continued)

- Begin subcontractor civil surveying.
- Continue reviewing subcontractor submittals.

IU 2 & 6 Segment 1

Remaining work instructions for waste site-specific verification closeout sample plans have been reviewed and approved by the U.S. Department of Energy, Richland Operations Office (RL) and the U.S. Environmental Protection Agency. Verification closeout samples for sites 600-341 and 600-344 have been collected for laboratory analysis.

Additional remediation of the southeast quadrant of waste site 600-345 was performed in early August in order to remove the remaining TPH contaminated soil. Closeout samples were 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 northwestern portion of the Hanford Site, away from the nine surplus plutonium production reactor areas. Segment 1 sites were unique because they were primarily used for housing and support areas.

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

Confirmatory Sampling

Confirmatory sampling of 41 sites near the Columbia River continues at 100-D Area. Sampling is performed for waste sites that require additional information for determining the need for site remediation.

The campaign is scheduled to take place over the next four months and will be performed in the 100-D, 100-F, 100-K, and 100-IU areas. Terranear PMC (TPMC) is performing sampling in accordance with the regulator approved work instructions that were completed earlier this year.

The project team sampled the following sites this week:

- 100-D-81 (eight surface locations that contain stained soil, burn areas, and other scattered debris)
- 100-D-90 (soil underlying location of two drained electrical transformers)
- 100-D-88 (miscellaneous pipeline segments, such as boiler fuel delivery systems, elevator shafts, air conditioning systems, equipment drains)
- 100-D-84 (36 sanitary sewer pipe segments)
- 100-D-94 (valve pit)

Confirmatory sampling is performed at site 100-D-88.

Confirmatory Sampling (Continued)

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.

TPMC 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.

General

Mentoring/Training
No significant mentoring/training events this week.

Media, Visits, Press Releases
- Jaime Shimek, a legislative assistant for U.S. Senator Patty Murray (D-Washington), visited ERDF while touring the Hanford Site. She was briefed on ERDF's operations and procedures by the facility's operations manager.

- Members from the Tri-City Chamber of Commerce also visited ERDF.

Contracting Actions
- Batch plant Schedule of Work and Requisition in development.
- Bids received for design/build of the left-hand turn lane onto North Landfill Road.
- Construction Quality Assurance Services for excavation of super cell 9 are 100% complete.
- Request for proposal issued for 618-10 heavy equipment.