Issue 22

River Corridor Closure Project

Recovery Act Weekly Report

For the week ending February 7, 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.

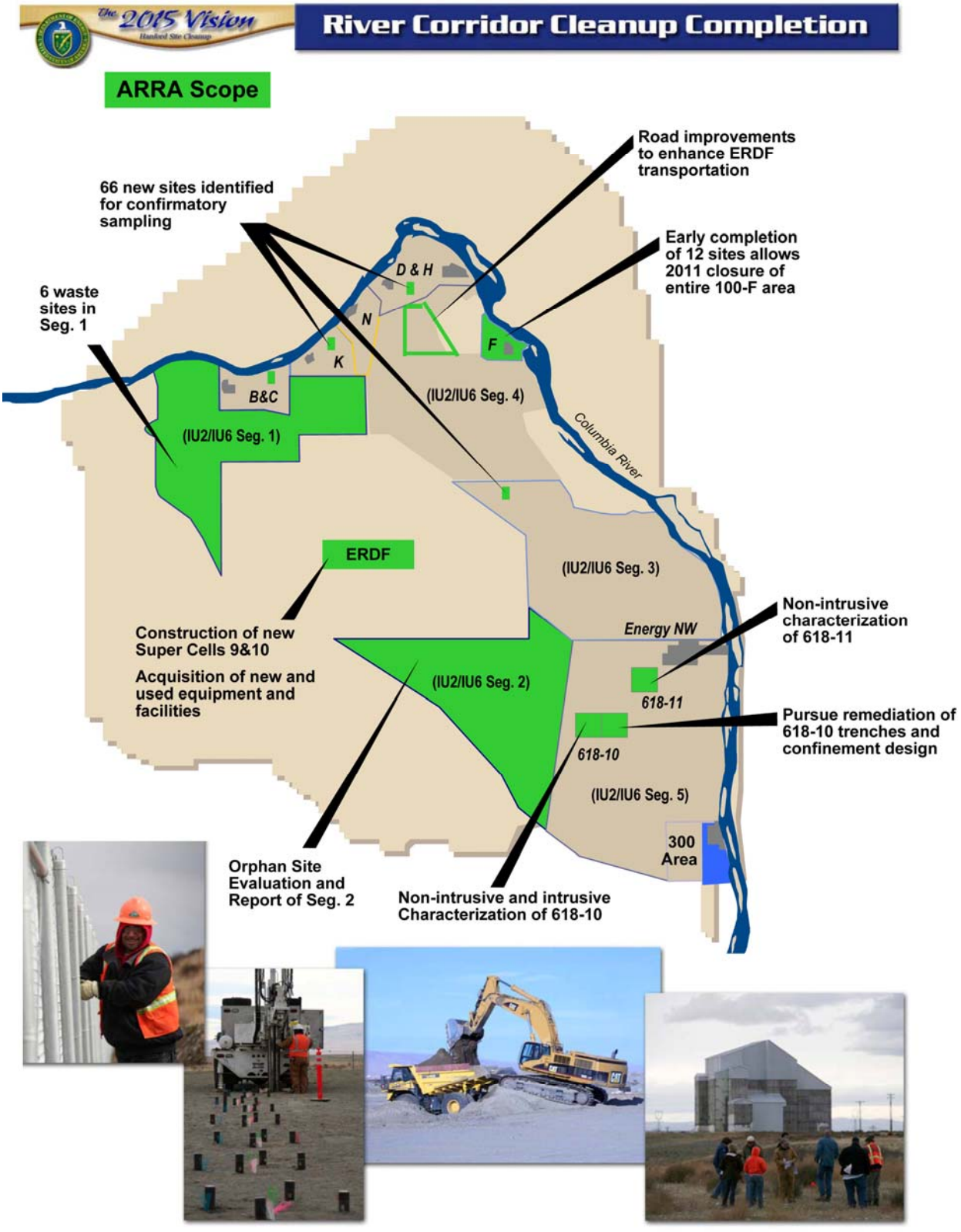
E. Confirmatory Sampling of other new sites

   WCH is proposing to complete the early sampling process of 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 January 24, 2010, WCH and its subcontractors have worked more than 135,000 hours of ARRA scope with no safety incidents.

Hazard Reductions
"Take 5 for Safety" was initiated by the Safety, Health & Quality department to be used at Monday morning plan-of-the-day meetings for all RCCC work locations. It is used to kick off the week with safety information and to share lessons learned with all WCH employees.

One recent "Take 5 for Safety" topic was the proper fit and use of hearing protection devices (HPDs). HPDs work best when tested in the laboratory. However, this is usually not the case in the real working world. Air leaks arise when plugs do not seal properly in the ear canal or muffs do not seal uniformly against the head around the earlobe. When such leaks occur, the worker is obviously not being adequately protected against noise. The causes of poor HPD sealing are:

1. Comfort – In most situations, the better the fit of a HPD, the poorer the comfort. Inserts must be snugly fitted into the canal and earmuff cups must be tightly pressed against the head.

2. Use – Because of poor comfort, poor motivation, poor training, or user problems, earplugs may be improperly inserted and earmuffs may be improperly adjusted.

3. Fit – HPDs must be properly fitted when they are used. A device that is too large is uncomfortable. One that is too small provides poor protection. Expandable foam plugs are usually the best since they expand to fit the size and shape of the ear canal.

4. Compatibility – Not all HPDs are suited for all ear canal and head shapes. Certain head contours cannot be fitted by any available muffs. Some ear canals have shapes that can only be fit with certain inserts or canal caps. Earmuffs only work well when their cushions properly seal on the head. In work areas that require respiratory protection, earmuffs may not be possible. Eyeglasses, sideburns, or long or bushy hair underneath cushions will prevent this and will reduce noise protection by varying amounts.

5. Readjustment – Earmuffs can come loose or be jarred out of position. Under typical use, wearers will eat, talk, move about, and may be bumped or jostled, resulting in jaw motion and possible perspiration. These activities can cause muff cushions to break their seal with the head and cause certain inserts to work loose. Properly inserted expandable foam and flanged earplugs maintain their position in the ear canal over long periods of time.

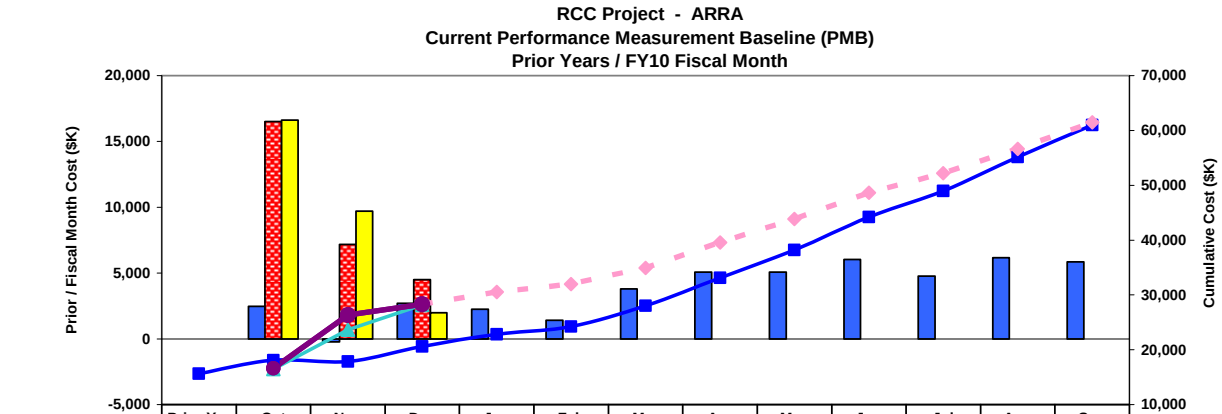
6. Deterioration – Even when properly used, hearing protectors wear out. Flanges on earmuffs can break off. Earplugs may crack if cleaned with volatile cleaners. Earmuff cushions also harden and crack or can become permanently deformed and headbands may lose their tension. It is important to inspect HPDs before every use. Never use defective equipment.

7. Abuse – Employees often modify HPDs to improve comfort at the expense of protection. These techniques include springing earmuff headbands to reduce the tension, cutting flanges off remolded inserts, drilling holes through plugs or muffs, etc. Modification of PPE is prohibited and will expose the employees to hazardous noise.

Cost/Contract Status

Contract Mod #	Date	Scope	Obligated ($M) (Inception to Date)	Not to Exceed ($M) (Inception to Date)
099	4/9/09	ERDF Cell Expansion & Upgrades; 618-10 NIC	$203.0	$28.0
105	4/30/09	ERDF Cell Expansion & Upgrades; 618-10 NIC	$203.0	$44.5
126	7/23/09	H.37 Clause - Reporting Requirements	N/A	N/A
139	9/3/09	ERDF Cell Expansion & Upgrades; 618-10 NIC	$253.6	$44.5
142	9/30/09	ERDF Cell Expansion & Upgrades; 618-10 NIC; Road Upgrades; Remediation of Orphan Sites	$253.6	$123.8

Contract Modification #142 is the definition of the Phase 1 scope of work and was incorporated into the Integrated Project Baseline (IPB) (Performance Measurement Baseline) beginning with October 2009 reporting.



	Prior Yrs	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BCWS	15,634	2,468	-217	2,707	2,248	1,409	3,789	5,079	5,079	6,031	4,762	6,168	5,850
BCWP	0	16,515	7,180	4,492									
ACWP	0	16,626	9,705	1,970									
ETC					2,256	1,451	2,935	4,645	4,271	4,810	3,544	4,439	4,835
CUM BCWS	15,634	18,102	17,885	20,592	22,840	24,249	28,038	33,117	38,196	44,227	48,989	55,157	61,007
CUM BCWP	0	16,515	23,695	28,187									
CUM ACWP	0	16,626	26,331	28,301									
EAC	0	16,626	26,331	28,301	30,557	32,008	34,943	39,588	43,859	48,669	52,213	56,652	61,487

ARRA Actuals (includes PMB and Proposal 2)

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

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

ERDF

Super Cells 9 and 10 Construction
TradeWind Services is scheduled to begin work on super cell 10 next week. The veteran-owned small business, based in Richland, Washington, was awarded a subcontract worth up to $30 million to excavate super cell 10 and construct the liner and leachate collection systems for super cells 9 and 10.

DelHur Industries, a company based in Port Angeles, Washington, is TradeWind Services' prime subcontractor. DelHur built the first, second, and fourth pair of cells at ERDF, and most recently excavated nearly 1.8 million cubic yards of soil for super cell 9.

Work to remove top soil and vegetation is scheduled to begin February 10, and work to remove the next 4-to-6-foot layer of eolian soil is expected to follow.

An aerial photo shows the conclusion of excavation activities at super cell 9, right, and the site of super cell 10 at the Environmental Restoration Disposal Facility.

ERDF (Continued)

Facility and Equipment Upgrades

Sage Tec, which was awarded the contract for the design of the new fueling station, met with the WCH environmental team to address design issues. Sage Tech, which is based in Richland, Washington, will team with WHPacific on the project. WHPacific is based in Anchorage, Alaska, with a regional office in Richland.

WCH received additional information it requested from companies that returned prequalification questionnaires for the expansion of the truck maintenance facility, and the construction of the new equipment and container maintenance facilities. WCH is evaluating the information and plans to send out a request for proposals (RFP) next week.

The contract to design the new septic system was awarded to Columbia Engineers and Constructors. The new system will be capable of servicing both the existing and proposed facilities.

Pacific Northwest National Laboratory (PNNL) scientists and engineers continue to work on a demonstration of a new container tracking system to be used at ERDF. PNNL is working to adapt a system it originally designed to track Army containers. The system would allow for ERDF operations personnel to identify how many full and empty containers are available at the generator sites as well as ERDF.

The wireless communication system at the new scale and reader board on the back road to the facility is complete. Waste shipments will be entered real-time into the Waste Management Information System (WMIS). The back road, which will be paved this spring, will accommodate traffic from other Hanford contractors along with WCH.

Miscellaneous debris has been removed from the 7-acre area to be used for a new transportation yard at the facility.

An RFP has been issued for the purchase of a new front-end loader.

Upcoming Activities

- Continue to develop RFP for design of truck maintenance facility, container maintenance facility, and equipment maintenance facility.

Profile

Brandon Nixon isn't one to sit around and wait for something exciting to happen. He likes to get out and go. Last year, he competed in a half-Ironman, a grueling event where competitors start with a 1.2-mile swim, bike 59 miles, then finish with a 13.1-mile run. And this year, he's training to run his first marathon.

Nixon enjoys a fast-paced profession, too. That's why he considers himself a perfect fit at the Environmental Restoration Disposal Facility (ERDF), where he's been working for the past 18 months as a project controls engineer.

ERDF is constantly changing. The excavation of the facility's first super cell was recently completed, and work soon will begin to dig another. A new refueling station, two new maintenance facilities, and the expansion of the existing truck maintenance facility are in the works. On top of that, ERDF receives about 400 waste containers per day.

Brandon Nixon, a project controls engineer, supports the $100 million expansion at the Environmental Restoration Disposal Facility.

Profile (Continued)

The work Nixon is doing helps support a $100 million expansion and upgrade of ERDF, which is being funded by the American Recovery and Reinvestment Act.

“There is always something interesting going on around here, so that keeps me on my toes,” said Nixon, who graduated from the University of Idaho in 2008 with a degree in finance and production and operations management.

Nixon works with schedules, tracks costs – everything to keep projects on track, on time, and within budget. “I’m responsible for all the facility and equipment upgrades,” he said.

Rick Caulfield, a project manager at ERDF, said he has been impressed with Nixon’s initiative.

“Brandon is always willing to learn. He wants to know everything he can, and not just about project controls, but the entire project,” Caulfield said. “He’s like a sponge.”

Not long ago, Nixon had never even heard of the Hanford Area. The Coeur d’Alene native had been to the Tri-Cities only one time, and that was years ago for a tennis tournament. He was turned on to Washington Closure at a university career fair during his senior year at Idaho.

“I’ve always been interested in construction and project management, so WCH sounded great,” Nixon said. “Once I got here, I found the people to be very friendly and willing to share what they knew. I think I made a great choice.”

618-10 Burial Ground

618-10 Non-Intrusive Characterization/Trench Remediation Project
Nonintrusive characterization activities resumed at the burial ground. Activities were temporarily suspended January 18, when a Radiological Control Technician (RCT) detected contamination on a survey probe that was inserted into a cone penetrometer. The survey probe is used to determine if contamination is present before inserting instrumentation into the cone penetrometer.

As a result, the task methodology was revisited with an in-process ALARA (as low as reasonably achievable) review conducted by the project team. A cold mock-up of the revised work instructions, a revised Job Hazard Analysis, and a senior management review of the revised work process also were performed. The findings and recommendations were incorporated into a revision of procedures, and a successful dry run was conducted before characterization activities resumed.

Cone penetrometers are narrow steel cylinders that were installed around buried, vertical pipes containing radioactive materials. The vertical pipe units (VPUs) are five bottomless, 55-gallon drums welded together to form a pipe. From 1954 to 1963, highly radioactive waste generated from Hanford's 300 Area was dumped into the VPUs.

WCH is obtaining in situ radiological characterization data of the VPUs and trenches using a multi-detector probe (MDP), which is inserted into the cone penetrometers to measure radiation sources. The information gathered will help identify the type and location of radioactive materials within the VPUs and trenches. As the MDPs are withdrawn from the cone penetrometers, measurements are taken each foot with a 3-minute count time.

The 618-10 Burial Ground is the most complex burial grounds WCH has tackled to date. Information on the burial ground is limited, so work is proceeding extremely cautiously. Available records indicate the buried wastes included radiologically contaminated laboratory instruments, bottles, boxes, filters, aluminum cuttings, irradiated fuel element samples, metallurgical samples, electrical equipment lighting fixtures, barrels, laboratory equipment and hoods, and high-dose-rate wastes in shielded drums.

Upcoming Activities
- Initiate trench radiological characterization activities.
- Continue soil sampling project startup review activities.
- Continue confinement design criteria development activities.

618-10 Burial Ground (Continued)

North Wind Inc. employee prepares a multi-detector probe for use at the 618-10 Burial Ground.

618-10 Burial Ground (Continued)

A North Wind Inc. employee retrieves a multi-detector probe during radiological characterization activities at the 618-10 Burial Ground.

Video

Radiological characterization activities at the 618-10 Burial Ground.

100-F Area

The internal design is complete and work continues on the air monitoring plan for the remediation of the remaining F Area waste sites. An RFP is expected to be issued in late February.

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

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

IU 2 & 6 Segment 1

A project startup review (PSR) was completed and an approval meeting was conducted. The PSR process is used to ensure that the project is ready to be safely implemented.

Five of the six waste sites discovered at IU 2 & 6 Segment 1 during the 2008 orphan site evaluation require remediation. Last week, a global positioning environmental radiological survey (GPERS) indicated that the 600-342 required no additional remediation. The site is proceeding with closeout. The sites are relatively small and contain mostly surface debris that must be removed and transported to an approved disposal facility.

Confirmatory Sampling

The team is still in the process of drafting sampling instructions for waste sites at the 100-D, 100-K, and 100-IU 2/6 Areas. This includes conducting historical research and consulting regulatory documents, developing a list of contaminants of potential concern to be sampled, and determining potential sample locations for review by DOE and Hanford Site regulators.

Planning for 100-D Area pipeline waste sites also continues. These sites consist of many pipe segments that are frequently not related to one another. Therefore, pipeline sites are usually broken into smaller, more manageable subsites based on usage, location, and relationship to other waste sites. DOE and Ecology have agreed to the subsite groupings; and the drafted sampling instructions will be sent to them for review.

The team has also begun development of the Remove, Treat, and Dispose (RTD) memos for sites that have been determined to require waste site remediation. The memos provide a basis for developing the remediation design.

Work also continues on developing procurement documentation. WCH will issue an RFP later this month for a company to provide excavation and sampling support for all 66 sites. Sites that pass the confirmatory sampling process will be closed out and no further action will be required under the existing interim record of decision. Those that fail will be recommended for cleanup to meet regulatory standards.

Sampling of the sites is expected to begin in late spring.

General

Mentoring/Training
No significant events this week.

Media, Visits, Press Releases
No significant events this week.

Contracting Actions
- Awarded ERDF septic system facility improvements contract.
- Awarded ERDF fuel station facility improvements contract.
- Issued Request for Proposal for ERDF maintenance facilities improvements.
- Issued contract change notice for remediation of Inter-Areas Segment 1 waste sites.