Issue 80

River Corridor Closure Project

Recovery Act Weekly Report

For the week ending April 22, 2011

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.

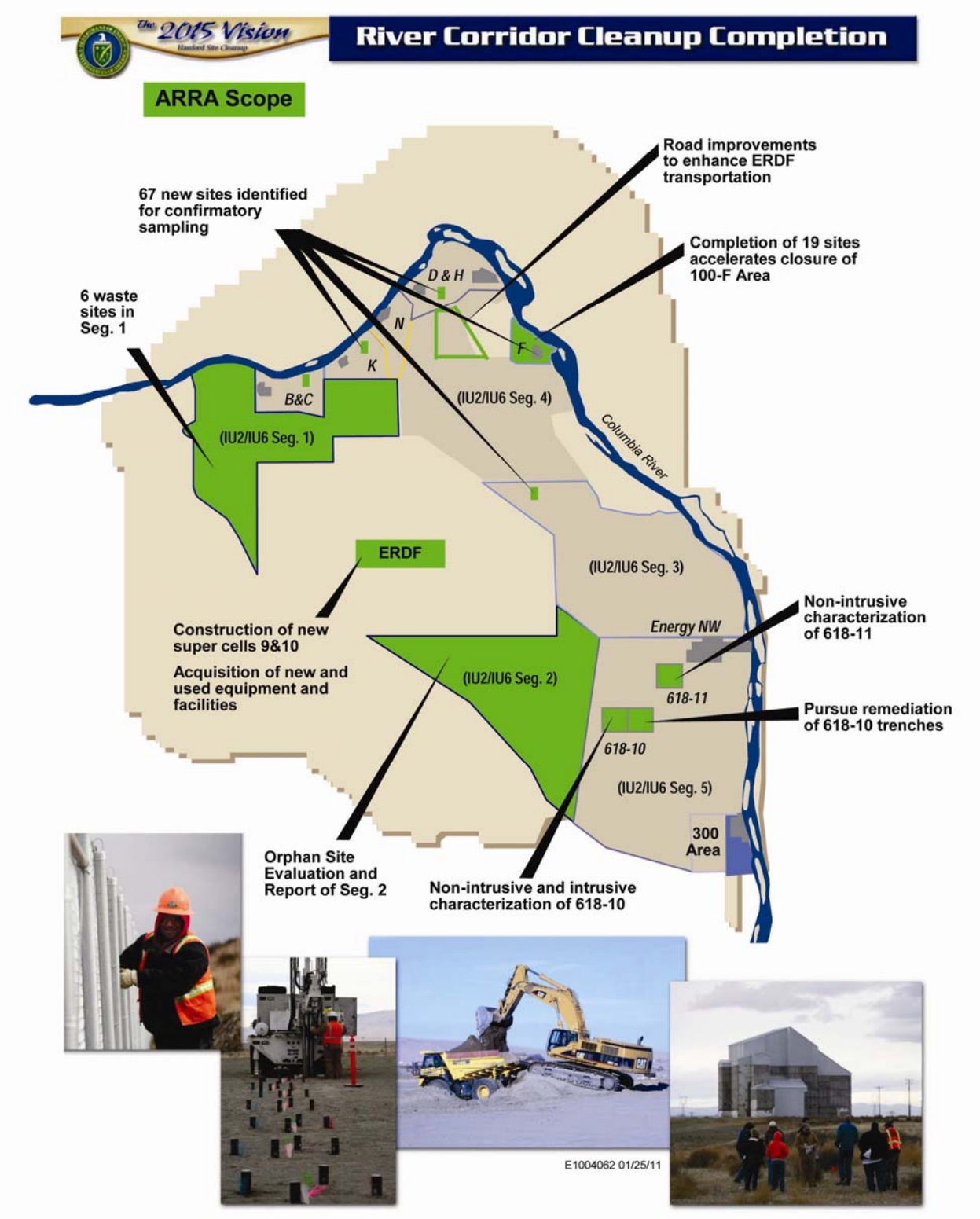
E. Confirmatory Sampling of other new sites

   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 March 20, 2011, WCH and its subcontractors have worked 423,305 hours of ARRA scope with no safety incidents.

Hazard Reductions
The River Corridor Closure Project's "Weekly Roundup" focuses on safety topics that affect Hanford Site workers. This week's "Safety Awareness" section of the Roundup highlighted the importance of tire safety. Good, safe tires allow drivers to avoid breakdowns and crashes, improve vehicle handling, improve fuel economy, and increase tire life.

Safety Checklist

- Check tire pressure regularly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma. Remove bits of glass and other foreign objects wedged in the tread.
- Make sure your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the tire information placard or owner's manual for the maximum recommended load for the vehicle.
- If you are towing a trailer, remember that some of the weight of the loaded trailer is transferred to the towing vehicle.

Safety Tips

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over curbs, and try not to strike the curb when parking.

Safety in Numbers

You can find the numbers for recommended tire pressure and vehicle load limit on the tire information placard and in the vehicle owner's manual. Tire placards are permanent labels attached to the vehicle door edge, doorpost, glove-box door, or inside of the trunk lid. Once you've located this information, use it to check your tire pressure and to make sure your vehicle is not overloaded—especially when you head out for vacation.

Checking Tire Pressure

Because tires may naturally lose air over time, it is important to check your tire pressure at least once a month. For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

Safety (Continued)

Remember, the tire inflation number that vehicle manufacturers provide reflects the proper pounds per square inch (psi) when a tire is cold. To get an accurate tire pressure reading, it's best to measure tire pressure when the car has been unused for at least three hours. Take the following steps when measuring tire pressure:

- Locate the correct tire pressure on the tire information placard or in the owner's manual.
- Record the tire pressure of all tires.
- If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve with the edge of your tire gauge until you get to the correct pressure.
- If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These "missing" pounds of pressure are what you will need to add.
- At a service station, add the missing pounds of air pressure to each tire that is underinflated.
- Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

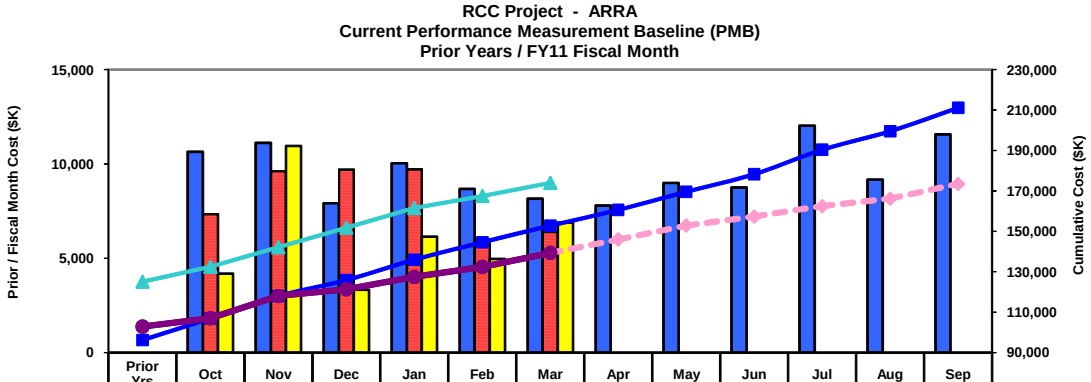
Checking Tire Tread

Tires have built-in tread wear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear even with the outside of the tread, it is time to replace your tires. You can also test your tread with a Lincoln penny. Simply turn the penny so Lincoln's head is pointing down and insert it into the tread. If the tread doesn't cover Lincoln's head, it's time to replace your tires.

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
230	9/24/10	Phase 3 Definitization	$233.6	$178.0
241	11/22/10	Reallocate Funds for Equipment	$233.6	$178.0
242	12/1/10	Increase the Cost Authority on RL-0041.R2	$233.6	$196.6
247	12/16/10	Reallocate Funds for Capital Expenditures	$233.6	$196.6
253	1/18/11	Increase 41.R1 Cost Authority and reallocate funds for capital	$233.6	$214.4
266	2/17/10	Reallocate Funds for Capital Expenditures	$233.6	$214.4

River Corridor Closure Project - ARRA



	Prior Yrs	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BCWS	96,215	10,643	11,122	7,914	10,038	8,677	8,164	7,797	8,993	8,759	12,035	9,176	11,574
BCWP	125,109	7,350	9,623	9,702	9,719	6,019	6,394						
ACWP	102,862	4,189	10,959	3,327	6,143	4,971	6,894						
ETC								6,636	6,883	4,482	5,154	3,685	7,308
CUM BCWS	96,215	106,858	117,980	125,894	135,932	144,609	152,773	160,570	169,563	178,322	190,357	199,533	211,107
CUM BCWP	125,109	132,459	142,082	151,784	161,503	167,522	173,916						
CUM ACWP	102,862	107,051	118,010	121,337	127,480	132,451	139,345						
EAC	102,862	107,051	118,010	121,337	127,480	132,451	139,345	145,981	152,864	157,346	162,500	166,185	173,493

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

Apportionment Number	Apportionment Title		March 2011	Inception To Date	Cost Authority
RL-0041.R1	ERDF Cell Expansion	PMB	3,973	97,705	156,847
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	2,921	41,640	57,566
Sub Total		PMB	6,894	139,345	214,413
Fee			460	13,814	
Total			7,354	153,159	

*** PMB = Performance Measurement Baseline.**

ERDF

Super Cells 9 and 10 Construction
Washington Closure Hanford (WCH) is awaiting approval of the final Construction Quality Assurance (CQA) Report for Super Cell 10 and Leachate Storage Tank No. 3. The report was submitted earlier this month to the U.S. Department of Energy, Richland Operations Office and the U.S. Environmental Protection Agency.

Super cell 9 was placed into service in mid-February. WCH and subcontractors TradeWind Services and DelHur Industries completed construction of both super cells with "zero" recordable injuries, months ahead of schedule, and more than $16 million under budget.

This is an aerial photo from the north side of the Environmental Restoration Disposal Facility taken in April. (Photo 1)

Facility and Equipment Upgrades
WCH subcontractor ELRFowler continues to make progress with construction of ERDF's new maintenance facilities. The project team erected the steel frame for the west addition of the transportation maintenance facility and is installing the roof and siding. Construction of the interior walls was completed in the equipment maintenance facility (EMF) portion of the

ERDF (Continued)

EMF/operations center, and finish work continues at the container maintenance facility (CMF). The outdoor concrete slab on the south side of the CMF also was poured.

The container maintenance facility will include a large container repair line, a maintenance shop, and a weld area. The 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. The new operations center will help alleviate severe overcrowding of personnel and also accommodate new employees hired to handle the increasing waste volumes.

The expanded transportation 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 project began pouring the concrete footers on the east side of the building.

ELRFowler poured the concrete slab outside the front of ERDF's container maintenance facility. (Photo 2)

ERDF (Continued)

An ELRFowler employee edges the recently poured concrete slab at ERDF's container maintenance facility. (Photo 3)

Pacific Northwest National Laboratory (PNNL) continues to produce radio-frequency identification tags for a new waste container tracking system at ERDF. WCH has received the wireless communications equipment. The system will accurately track waste shipments and equipment, and generate real-time reports.

WCH subcontractor DelHur Industries has completed electrical tie-in at ERDF's new batch plant. Safety guards are being installed and an operations test is scheduled for early next month. The batch plant will produce concrete used to mix with debris, ensuring no void space during disposal operations.

ERDF (Continued)

The final report for ERDF's new septic system has been submitted to the Washington State Department of Health. The septic system was designed by Columbia Engineers and Constructors, a small business based in Richland, Washington.

TradeWind Services continues to construct weather enclosures for the crest pads associated with cells 1 and 2. The steel structures have been constructed, the siding and roofing has been installed for both enclosures, and the interior walls are being installed. The enclosures were designed by Vista Engineering, a local company.

Upcoming Activities

- Continue construction of the container maintenance facility.
- Continue construction of the equipment maintenance facility/operations center.
- Continue construction of the transportation maintenance facility.
- Continue construction of the crest pad buildings associated with cells 1 and 2.

618-10 Burial Ground

Trench Remediation Project
WCH began trench excavation on the northeast side of the 618-10 Burial Ground. Before excavation, the north surge trench was completed. Surge trenches are excavated in clean soil adjacent to the burial ground. They provide a below-ground area to hold material excavated during the trench excavation process.

Before trench excavation began, the project team prepared the site by removing the old perimeter fence fabric and posts and set boundary posts, ropes, and signage. Three 22,000-gallon capacity water tanks for dust suppression also were installed.

Washington Closure Hanford began trench excavation at the 618-10 Burial Ground. (Photo 4)

618-10 Burial Ground (Continued)

Excavation of the 618-10 Burial Ground is scheduled to be completed in April 2012. (Photo 5)

618-10 Burial Ground (Continued)

An aerial view shows the 618-10 Burial Ground before the beginning of trench excavation. (Photo 6)

618-10 Burial Ground (Continued)

Washington Closure Hanford subcontractor Lampson International moves the first of three water tanks into place at the 618-10 Burial Ground. The tanks are used for dust suppression. (Photo 7)

618-10 Burial Ground (Continued)

Each of the water tanks used for dust suppression at the 618-10 Burial Ground has a capacity of 22,000 gallons. (Photo 8)

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 12 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.

In early September, WCH completed intrusive characterization field operations at the burial ground. Test pits were dug through a subset of disposal trenches, unearthing a limited number of drums to verify the condition and types of wastes that were disposed.

Several drums containing radioactive waste, a shipping cask, and miscellaneous waste were discovered during the intrusive trench characterization activities. The drums contained depleted uranium and uranium oxide. In addition, “concreted” 55-gallon drums also were discovered. Based on the records research and the finds during intrusive characterization, the number of drums the burial ground may contain is estimated to be as many as 4,000. That includes an estimated 800 concreted drums that were used to dispose of highly radioactive waste nested inside a pipe surrounded by concrete. The pipe contains the waste and the concrete provides

618-10 Burial Ground (Continued)

radiation shielding for its contents. Workers also found a cask with unknown contents, bollards, bottles, metal pieces, and other miscellaneous debris.

Nonintrusive characterization field activities were completed in May. 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.

Upcoming Activities

- Continue trench excavation activities.

Video

Click here to view the water tanks being installed at the 618-10 Burial Ground.

618-11 Burial Ground

WCH conducted a project startup review meeting for nonintrusive characterization of the 618-11 Burial Ground. The purpose of nonintrusive characterization is to characterize the burial ground's contents without opening or exposing them to workers or the surface environment. The data collected will be used to help plan remediation strategies.

The project team also tested characterization equipment and finished analyzing the data gathered during geophysical delineation of the vertical pipe units (VPUs). Geophysical delineation is used to help locate each of the burial ground's VPUs and caissons. The delineation is determined using reconnaissance-level magnetic field survey, detailed-level magnetic and time-domain electromagnetic induction (TDEMI) survey, and ground-penetrating radar (GPR) survey.

Upon completion of the startup review activities, WCH subcontractor North Wind Inc. will begin to install cone penetrometers around the VPUs. Cone penetrometers (narrow steel tubes) will be installed about 6 to 8 inches from the exterior of each VPU and to an approximate depth of 6 feet below the VPU. A gamma-logging probe will then be inserted into the cone penetrometers to identify the location of radioactive materials within the VPUs.

The 618-11 Burial Ground operated from March 1962 to December 1967 and contains three slope-sided trenches, five large caissons, and 50 VPUs. It received low- to high-activity waste from 300 Area laboratories and fuel development facilities.

Similar to the 618-10 Burial Ground, 618-11 is one of WCH's most hazardous and complex cleanup projects. The site is located in the 300 Area, adjacent to Energy Northwest's commercial nuclear power plant (Columbia Generating Station) and near the Columbia River.

The VPUs at the 618-11 Burial Ground are similar to those at 618-10. They typically were constructed by welding five 55-gallon bottomless drums end to end. The caissons were constructed of corrugated metal pipe (8-foot diameter, 10-foot long). The top of the caisson was 15 feet below grade and connected to the surface by an offset pipe (3-foot diameter) with a dome-type cap. The trenches are 900 feet long by 500 feet wide and 25 feet deep.

Low- to-moderate-activity waste typically was disposed in the trenches, and moderate- to high-activity waste was disposed in the VPUs and caissons. Some high-activity waste was placed inside concreted-sealed drums and disposed in the trenches.

Upcoming Activities

- Complete characterization project startup review activities.
- Deliver characterization equipment to the site.
- Begin characterization system training.
- Begin cone penetrometer installation activities.

100-F Area

WCH and subcontractor Ojeda Business Ventures continued with the remediation of 19 waste sites at 100-F Area.

The project team is demolishing concrete at 100-F-57 and loading out concrete and underlying soil. The site consists of stained concrete and soil containing hexavalent chromium. Grab samples also were collected from 100-F-57, 100-F-49, and 100-F-26:7.

Site 100-F-26:7 contained sodium dichromate pipelines. Before removing the pipelines, the approximately 200 gallons of sodium dichromate was safely and efficiently secured, preventing potential leaking and groundwater contamination.

Site 100-F-49 contained an old maintenance garage lube pit foundation, pipelines, and drywells. Earlier this month, a storage tank containing sludge was removed and loaded out, along with the remaining waste at the site.

Washington Closure Hanford subcontractor Ojeda Business Ventures continues to break concrete at 100-F-57. The site contains hexavalent chromium. (Photo 9)

100-F Area (Continued)

Concrete demolition and loadout of concrete and soil continues at 100-F-57. (Photo 10)

The following sites have had the soil excavated and loaded out:

- 100-F-26:4 (process sewer pipeline section)
- 100-F-44:8 (fuel oil pipelines)
- 100-F-44:9 (process sewer pipeline)
- 100-F-45 (river bank pipeline)
- 100-F-47 (electrical substation foundation)
- 100-F-48 (coal-pit debris)
- 100-F-49 (maintenance garage lube pit foundation)
- 100-F-51 (fish laboratory footprint, pipelines)
- 100-F-55 (contaminated ash layer)
- 100-F-58 (asbestos-containing surface debris)
- 100-F-8 (drains)
- 100-F-62 (animal farm septic lines)
- 100-F-63 (animal farm radioactive effluent lines).

100-F Area (Continued)

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, 19 additional waste sites were discovered.

Upcoming Activities

- Continue demolishing concrete and loading out concrete and underlying soil at 100-F-57.
- Collect closeout samples from 100-F-44:9
- Collect closeout samples from 100-F-47.

IU 2 & 6 Segment 1

WCH completed revegetation of the five IU 2&6 waste sites on November 30. Segment 1 encompasses about 23 square miles of the northwestern portion of the Hanford Site, away from the nine surplus plutonium production reactor areas. The waste sites were unique because they were primarily used for housing and support areas.

The remediation sites were:

- 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.

Confirmatory Sampling

WCH completed sampling of ARRA confirmatory sites. Sampling was performed at 41 sites in accordance with the regulator approved work instructions that were completed earlier this year. Based on the sampling results, documentation is being prepared to recommend whether the sites require remediation. This documentation is then submitted to the DOE and the regulatory agencies for review and approval. The recommendations have been approved for more than 75% of the sites; the remaining documents are in the review and approval process.

General

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

Contracting Actions
No significant contracting actions this week.