



River Corridor Closure Project

Recovery Act Weekly Report

For the week ending January 14, 2011

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

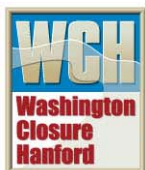
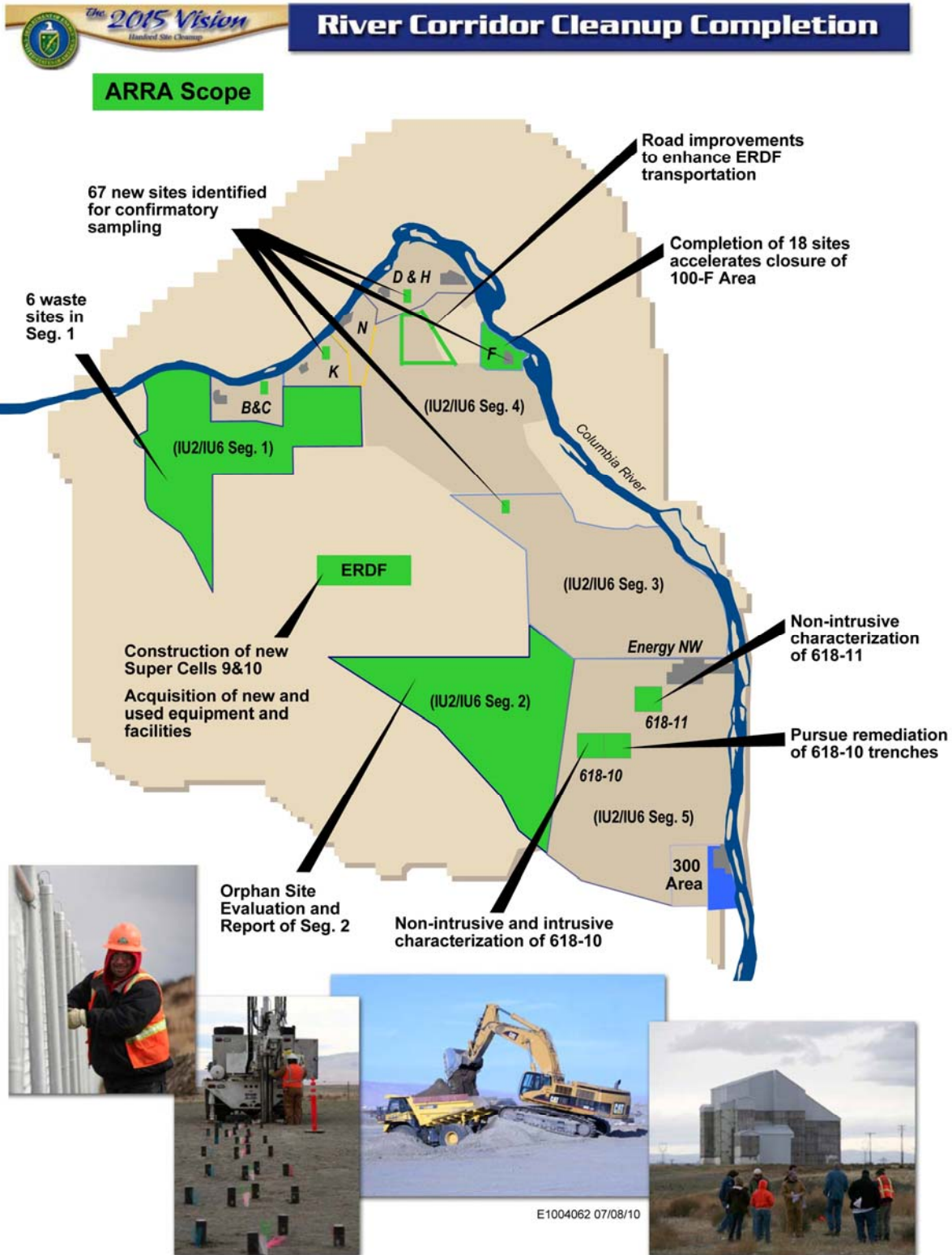
WCH is proposing to complete the early sampling process of 67 potential waste sites using ARRA funds. Confirmatory sampling is performed for sites that require additional information for determining if the site requires remediation.

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 December 20, 2010, WCH and its subcontractors have worked 338,914 hours of ARRA scope with no safety incidents.

Hazard Reductions

Listed below are the Safety and Health Initiatives Program's highlights for November/December. The River Corridor Closure Project uses several tools (such as "Hot Topics," "Safety Awareness," "Dodge the Bullet," and "Rude Awakenings") to share safety information with all employees.

Working Toward an Injury-Free Workplace

Vehicle Safety

- Vehicle Safety Awareness on holiday parking lot safety.

Holiday Refocus

- Shared Post-Thanksgiving Refocus on Quality, Safety, Cost, and Schedule.
- Provided Post-Winter Holiday Refocus highlighting slips and fall awareness, effective work control and planning, effective hazard analysis, and safety and quality as core values.

Lessons Learned

- Retrieval activities outside of approved work control results in internal contaminations.

Safety Initiatives

- Thanked employees for their participation in the ISMS/VPP campaign.
- Announced 100-F team takes part in a safe start.
- Congratulated 300 Area FR on a 90-day safety campaign.
- Provided Safety activity mixed bag of safety crossword.
- Congratulated 118-K for 90 days no injuries.
- Congratulated IU 2&6 FR for 1-year of working safely.

ISMS/VPP Information

- Ordered the ISMS/VPP recognition awards for participating employees.

Incident Severity Reduction

Vehicle Safety

- Provided employees vehicle safety awareness on winter driving safety.
- Provided employees a guide on winter driving and posters detailing the proper parking place for government vehicles and snow removal.
- Provided employees a guide on road trip preparedness.
- Provided a hot topic on winter driving tips.

Electrical Safety Emphasis

- Issued a Hot Topic PowerPoint presentation on electrical gear safety.



Safety (Continued)

Flash Information

- Awareness of low visibility objects while driving.
- An employee received first aid treatment for a slip/trip/fall.
- An employee injured leg during a slip and fall.
- An employee slipped fell on snowy stairs.
- Issued a Dodge the Bullet on a scissor-lift battery failure.
- Iron workers working in a damp environment experienced a low electrical current without employee impact.
- A bulldozer drives over an in-ground vault.

Lessons Learned

- Issued the link to the HILLS Lessons Learned database for Hanford and provided employees the steps for personal access to this database.

Safety Topics

- Provided a Safety Awareness on fall protection pro harness updates.
- Issued a Hot Topic on the new crane and Derrick standards.
- Provided an outline of the changes to the standard and the effective changes to the *Hanford Hoisting and Rigging Site Wide Program*.
- Re-issued a Hot Topic on dosimetry requirements.

Safety Events and Activities

- Launched the winter safety campaign providing cocoa and checking for proper footwear.
- Launched the “Safety Pays” campaign issuing silver coins to directors and project management encouraging these individuals to walk the jobs and provide the coins to employees for safe acts and conditions.

Human Performance Initiative

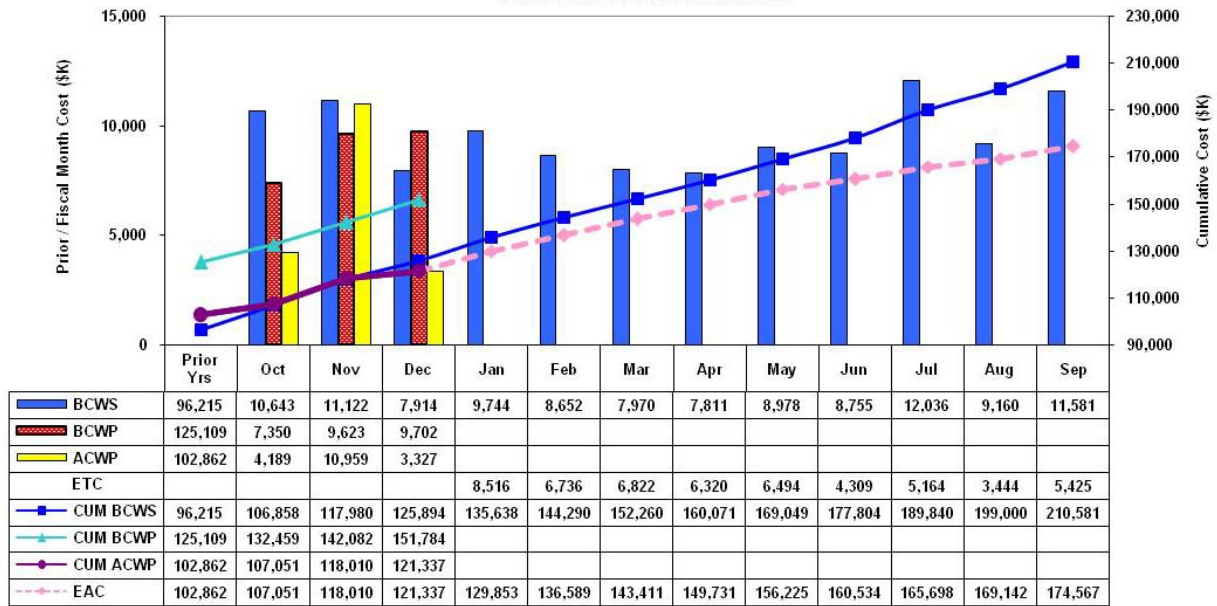
- Provided an awareness activity on Error Precursors. Detailed conditions that could increase human error such as task demands, individual capabilities, work environment, and human nature.
- Provided an awareness article on latent organizational weaknesses, which are undetected deficiencies in organizations, values, or equipment.
- Asked employees to identify an incident where a cultural weakness or an individual error occurred based upon cases provided.



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

RCC Project - ARRA
Current Performance Measurement Baseline (PMB)
Prior Years / FY11 Fiscal Month



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

Apportionment Number	Apportionment Title		December 2010	Inception To Date	Cost Authority
RL-0041.R1	ERDF Cell Expansion	PMB	799	87,268	139,072
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	2,527	34,069	57,566
Sub Total		PMB	3,326	121,337	196,638
Fee			480	12,193	
Total			3,806	133,530	

* PMB = Performance Measurement Baseline.



ERDF

Super Cells 9 and 10 Construction

WCH subcontractor TradeWind Services conducted the acceptance test for Leachate Storage Tank No. 4 at the Environmental Restoration Disposal Facility (ERDF). The test was conducted with the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA).

The *Final Report Construction Quality Assurance (CQA) Environmental Restoration Disposal Facility Super Cell 9* will be officially submitted to DOE and EPA next week for approval to introduce waste into the super cell. In parallel with the submittal of the report, the project team has started a Project Start-Up Review to ensure operational readiness. Meanwhile, work continues to install the primary liner in Leachate Storage Tank No. 3. Domes will be placed over both tanks when liner construction and testing are complete.

Removal of one of the two original leachate storage tanks was completed in September, and the second will be removed when the replacement tanks are in service. Each of the original tanks measured 80 feet in diameter and had a capacity of 275,000 gallons. Each replacement tank will measure 100 feet in diameter with a 425,000-gallon capacity.

Last month, TradeWind conducted the acceptance test for super cell 9 with DOE Richland Operations Office and the EPA. The acceptance test for super cell 10 is scheduled for later this month.



ERDF (Continued)



An aerial photo from the northeast corner of the Environmental Restoration Disposal Facility shows super cells 9 and 10 after construction was completed. (Photo 1)

Facility and Equipment Upgrades

WCH subcontractor ELRFowler continued with construction of ERDF's new maintenance facilities. ELRFowler is a joint venture between local companies ELR Consulting and Fowler General Construction. ELRFowler completed erection of the steel skeleton for the equipment maintenance facility/operations center, and is installing insulation and interior walls in the container maintenance facility.

ERDF (Continued)



Washington Closure Hanford subcontractor ELRFowler installs insulation in the container maintenance facility. (Photo 2)

ERDF (Continued)



ELRFowler completed erection of the steel skeleton of the equipment maintenance facility/operations center. (Photo 3)

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.

ELRFowler also will construct an upgraded transportation truck maintenance facility. The 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.

Pacific Northwest National Laboratory (PNNL) continues to develop the hardware and software for a new waste container tracking system for ERDF. The system will accurately track waste shipments and equipment, and generate real-time reports.

WCH subcontractor DelHur Industries continues to work on the electrical installation for ERDF's new batch plant. Operational testing is scheduled for later this month. The batch plant will produce "flow fill" concrete used to mix with debris, ensuring no void space during disposal

ERDF (Continued)

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.

Trench work for the installation of septic transmission lines is scheduled to resume next week. ERDF's new septic system was designed by Columbia Engineers and Constructors, a small business based in Richland, Washington.

DelHur Industries completed civil work at the expanded container transfer area. The container transfer area was expanded 600 feet, which will provide additional storage for about 300 waste containers. The expanded container transfer area is expected to be in service next week.

WCH is reviewing a re-issued bid from DelHur to construct weather enclosures for crest pad buildings 1 and 2. The enclosures were designed by Vista Engineering, a local company and subcontractor of DelHur.

Upcoming activities

- Continue construction of the container maintenance facility.
- Continue construction of the equipment maintenance facility/operations center.
- Continue work on liner system for Leachate Storage Tank No. 3.



618-10 Burial Ground

618-10 Trench Remediation Project

WCH subcontractor White Shield/Apollo continues to install utilities and prepare the 618-10 Burial Ground for remediation. The project team is installing water, electricity, roads, office trailers, and a waste container transfer area. Infrastructure work is scheduled to be completed in February, with full-scale remediation of the burial ground trenches to begin in March.

Mobilization of heavy equipment for remediation also has begun, and the second wave of hiring for craft personnel in support of remediation is under way.



Washington Closure Hanford subcontractor White Shield/Apollo installs piping to water tanks at the 618-10 Burial Ground. The water will be used for fire suppression and dust control. (Photo 4)

618-10 Burial Ground (Continued)



Workers install electrical at the container staging area of the 618-10 Burial Ground. (Photo 5)

618-10 Burial Ground (Continued)

Intrusive characterization field operations at the burial ground were completed in early September. Test pits were dug through a subset of disposal trenches and 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, which contained liquid radioactive waste, 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 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.

WCH is using the information obtained during nonintrusive and intrusive characterization to provide information needed to develop remediation strategies in support of future burial ground cleanup.

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 VPUs. The VPUs were constructed by welding five bottomless drums together and buried vertically about 10 feet apart.

Upcoming Activities

- Continue with construction site upgrades.
- Continue mobilization of heavy equipment to site.
- Continue with mobilization for mockups.
- Continue hiring process for craft personnel to support remediation.

Video

[Click here to view video of infrastructure work at the 618-10 Burial Ground.](#)



100-F Area

WCH and subcontractor Ojeda Business Ventures continued remediation activities of 19 waste sites at 100-F Area. Field work began in September and will conclude this spring. Last week the project team completed loadout from 100-F-44:9 (process sewer pipeline), and completed excavation and loadout from 100-F-63 (experimental animal farm radioactive effluent lines).

Excavation and loadout also continues from 100-F-47 (electrical substation foundation), and began excavation and stockpiling at 100-F-49 (old maintenance garage lube pit foundation, pipelines, and drywells). Asphalt removal also is under way at 100-F-26:7 (sodium dichromate and sodium silicate pipelines).

In December, stained concrete was encountered at 100-F-57. Sample results were received in January, confirming the presence of hexavalent chromium in an area of the concrete slab and underlying soil at 100-F-57. A test pit sampling campaign has been developed after consultation with the EPA to characterize the nature and extent of hexavalent chromium present at 100-F-57. This sampling campaign will begin next week.



Stained concrete was discovered at 100-F-57 last month during remediation activities at 100-F Area. Sampling confirmed the presence of hexavalent chromium in the area. (Photo 6)

100-F Area (Continued)



Washington Closure Hanford subcontractor Ojeda Business Ventures began removing overburden at 100-F-26:7, a site that contains sodium dichromate and sodium silicate pipelines. (Photo 7)

100-F Area (Continued)



Ojeda Business Ventures performs excavation and stockpiling at 100-F:49. The site consists of an old maintenance garage lube pit foundation, pipelines, and drywells. (Photo 8)

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.

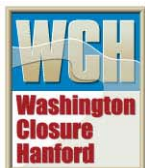
100-F Area (Continued)

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. The 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 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)
- 600-351 (stained oil areas).

Upcoming Activities

- Begin test pit campaign at 100-F-57.
- Continue excavation and loadout from 100-F-47.
- Begin excavation and stockpiling at 100-F-61.
- Continue excavation and stockpiling at 100-F-49.
- Continue overburden removal at 100-F-26:7.



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 confirmatory sampling of 40 sites in November. Sampling was performed by WCH subcontractor TerranearPMC (TPMC) in accordance with the regulator approved work instructions that were completed earlier this year. TPMC is a small disadvantaged business with an office in Richland, Washington.

Remove, treat, and dispose reports and closeout documentation are being prepared for the sites that were sampled at 100-D, 100-K, and 100-F Areas. The documents will be submitted to DOE and the regulatory agencies for review and approval. Sites where the sample results show contamination below the cleanup standards are being recommended for closeout with no further action.



General

Media, Visits, Press Releases

No significant activities this week.

Contracting Actions

- The 618-10 water tanks contract was awarded to Peters & Keatts.

