Issue 65

River Corridor Closure Project

Recovery Act Weekly Report

For the week ending January 7, 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.

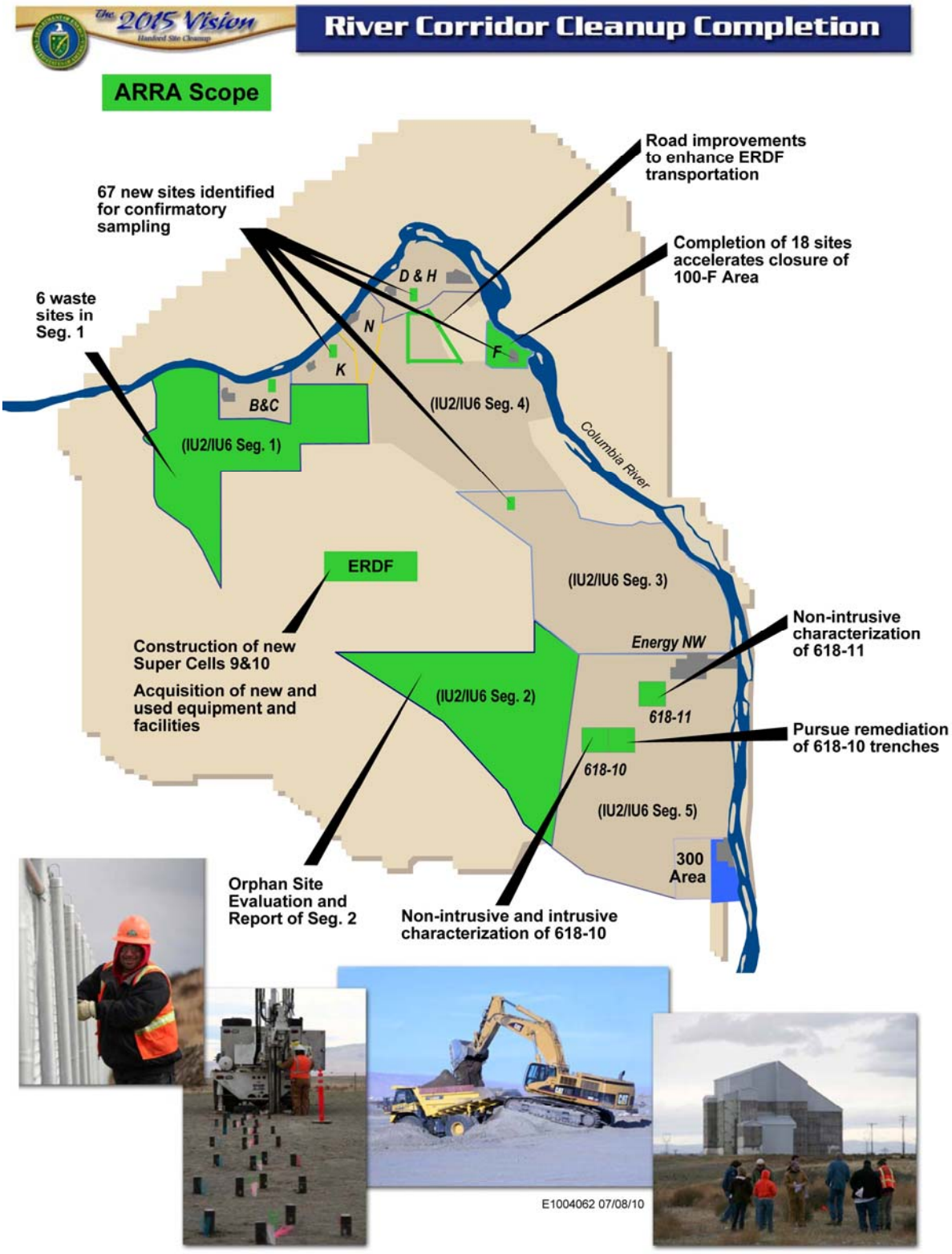
E. Confirmatory Sampling of other new sites

   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 November 21, 2010, WCH and its subcontractors have worked 320,239 hours of ARRA scope with no safety incidents.

Hazard Reductions
Washington Closure Hanford's Safety, Health and Quality organization provided company managers with a "Winter Holiday Refocus" to share with employees during staff meetings. The Refocus highlighted the following topics.

Slips, Trips, and Falls
The Project can prevent slips, trips, and falls by:
- Designating snow routes (marking areas where employees are designated to walk)
- Removing snow and ice from designated walkways
- Adding salt, sand, or other materials to improve the walking surface.

Employees can prevent slips, trips, and falls by:
- Wearing proper footwear with good tread/traction
- Slowing down and reducing distractions (texting, talking on phone, etc.)
- Reducing loads that are being carried
- Using handrails, walking with hands out of pockets for balance, and to being ready to catch yourself.

Effective Hazard Analysis
Where do you fit into the process of hazard analysis and how can you continue to keep yourself and others safe while on the job?

Craft and other workers:
- Notify supervisors of anomalies to ensure hazards will be properly identified.
- Perform all necessary pre-job checks and report identified hazards, areas of potential concern, and concerns to your supervisor immediately.
- Review and understand all relevant documentation such as Beryllium and Radiological Work Permits.
- Use your stop work authority if necessary.

Work supervisors and project safety representatives:
- Review previous Industrial Hygiene survey results to help identify current hazards.
- Participate in Job Hazard Analysis, Beryllium Work Permit, and Radiological Work Permit implementation process.

Planners and Industrial Hygienist:
- Review previous radiological and industrial hygiene surveys to help identify current hazards.
- Discuss known radiological, chemical, and metallurgical processes either associated with the work area directly or that sent waste or product material to the location.
- Review drawings, notes, video, photographs, and conduct discussions with team members familiar with the work site to identify hazardous locations or areas where access cannot be given to some members of the team.

Safety (Continued)

Effective Work Control Planning
Where do you fit into the process?

Craft and other workers:
- Make sure you have all the necessary PPE and that your gear is in optimal working condition.
- Perform all necessary pre-job checks and report hazards or concerns to your supervisor immediately.
- Use your stop work authority if necessary.
- Apply CONOPS practices and adhere to all procedures and work documentation.

Work supervisors & project safety representatives:
- Effectively communicate the scope of work and responsibilities to craft workers via plan-of-the day meetings and pre-evolution meetings.
- Ensure work boundaries are established and understood.

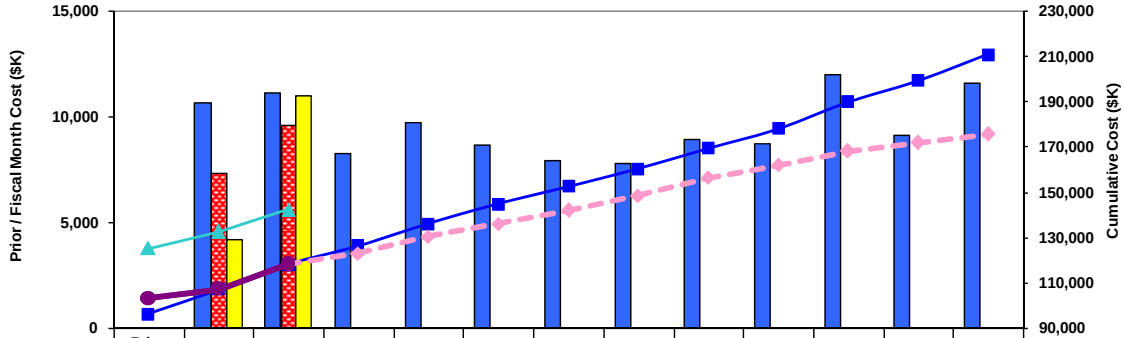
Planners:
- Use the Hills Database to access relevant Lessons Learned for your current work package.
- Use subject matter experts to review draft task instructions to ensure that the hazard controls that form a JHA have been incorporated into the work package instructions consistent with their knowledge of the subject matter.

Safety, Quality, Cost, and Schedule
Keep in mind the following:
- Safety and quality are values.
- Cost and schedule are goals that we aim to reach.
- Cost and schedule are closely tracked and monitored.
- Effective safety and quality provide for effective work planning and scheduling while keeping costs low through reduction or elimination of rework.

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



	Prior Yrs	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BCWS	96,215	10,643	11,122	8,211	9,698	8,609	7,929	7,768	8,924	8,715	11,985	9,120	11,582
BCWP	125,109	7,350	9,623										
ACWP	102,862	4,189	10,959										
ETC				4,804	7,409	5,696	5,740	6,536	7,996	5,608	6,056	3,760	3,654
CUM BCWS	96,215	106,858	117,980	126,191	135,889	144,498	152,427	160,195	169,119	177,834	189,819	198,939	210,521
CUM BCWP	125,109	132,459	142,082										
CUM ACWP	102,862	107,051	118,010										
EAC	102,862	107,051	118,010	122,814	130,223	135,919	141,659	148,195	156,191	161,799	167,855	171,615	175,269

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

Apportionment Number	Apportionment Title		November 2010	Inception To Date	Cost Authority
RL-0041.R1	ERDF Cell Expansion	PMB	8,902	86,469	139,072
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	2,057	31,541	57,566
Sub Total		PMB	10,959	118,010	196,638
Fee			586	11,714	
Total			11,545	129,724	

*** PMB = Performance Measurement Baseline.**

ERDF

Super Cells 9 and 10 Construction
Washington Closure Hanford (WCH) subcontractor TradeWind Services conducted the acceptance test for super cell 9 with the U.S. Department of Energy, Richland Operations Office (DOE-RL) and the U.S. Environmental Protection Agency (EPA). WCH reviewed the test report and delivered it to DOE-RL and EPA for review.

Construction continues on ERDF's two new leachate storage tanks – Tank Nos. 3 and 4. Installation of the liner system in Tank No. 4 was completed and testing is scheduled for next week. Installation of the primary liner continues in Tank No. 3. When liner construction and testing are completed, domes will be placed over both tanks.

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.

Washington Closure Hanford subcontractor TradeWind Services continues to construct two new leachate storage tanks at the Environmental Restoration Disposal Facility. (Photo 1)

ERDF (Continued)

Facility and Equipment Upgrades
WCH subcontractor Fowler General Construction continued with construction of ERDF's new maintenance facilities. The project team completed construction of the siding and roof at the container maintenance facility and began installation of the insulation and inside framework. The project team also is constructing the structural steel at the equipment maintenance/operations center.

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, a joint venture between local companies ELR Consulting and Fowler General Construction, 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.

ERDF (Continued)

Washington Closure Hanford subcontractor Fowler General Construction begins to erect the steel structure of ERDF's equipment maintenance facility/operations center. (Photo 2)

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 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.

ERDF (Continued)

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

Civil work was completed on the expansion of the container transfer area at the Environmental Restoration Disposal Facility. (Photo 3)

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.
- Perform acceptance test for super cell 10.

ERDF (Continued)

Video

Click here to view a time-lapse video of construction of the container maintenance facility at ERDF

618-10 Burial Ground

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

Mobilization activities for mockups scheduled for February also continued, and the hiring process for craft personnel in support of remediation is underway.

A Washington Closure Hanford subcontractor works to install electrical at the 618-10 Burial Ground. Remediation activities at the burial ground are scheduled to begin in March. (Photo 4)

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

618-10 Burial Ground (Continued)

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

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. The project team completed excavation and loadout from the following sites:

- 100-F-48 (coal pit debris)
- 100-F-51 (fish laboratory pipelines)
- 100-F-44:8 (fuel oil pipelines)
- 100-F-26:4 (process sewer line)
- 100-F-51 (fish laboratory pipelines).

The project team also continued loadout from 100-F-44:9, and continued excavation and loadout from 100-F-63 (experimental animal farm radioactive effluent lines) and 100-F-47 (electrical substation foundation).

100-F Area (Continued)

Washington Closure Hanford subcontractor Ojeda Business Ventures demolishes concrete at 100-F-44:9. The site, adjacent to F Reactor, contains process sewer line. (Photo 5)

100-F Area (Continued)

A radiological control technician takes a reading from the hammer used to demolish concrete at 100-F-44:9. Excavation and loadout activities at the site were completed. (Photo 6)

100-F Area (Continued)

Ojeda Business Ventures conducts excavation activities at 100-F-63, which contains radioactive effluent lines from the 100-F Area experimental animal farm. (Photo 7)

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

- Continue excavation and loadout from 100-F-47.
- Continue loadout from 100-F-44:9.
- Complete excavation and loadout from 100-F-63.
- Begin excavation and stockpiling at 100-F-61.
- Begin excavation and stockpiling at 100-F49.
- Begin overburden removal at 100-F-26:7.
- Complete development sample strategy to characterize hexavalent chromium at 100-F-57.

IU 2 & 6 Segment 1

WCH completed revegetation of the five IU 2&6 waste sites on November 30, 2010. 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
- Water truck purchase awarded for use at 618-10.