



*River Corridor Closure Project*

# Recovery Act Weekly Report

For the week ending April 25, 2010

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

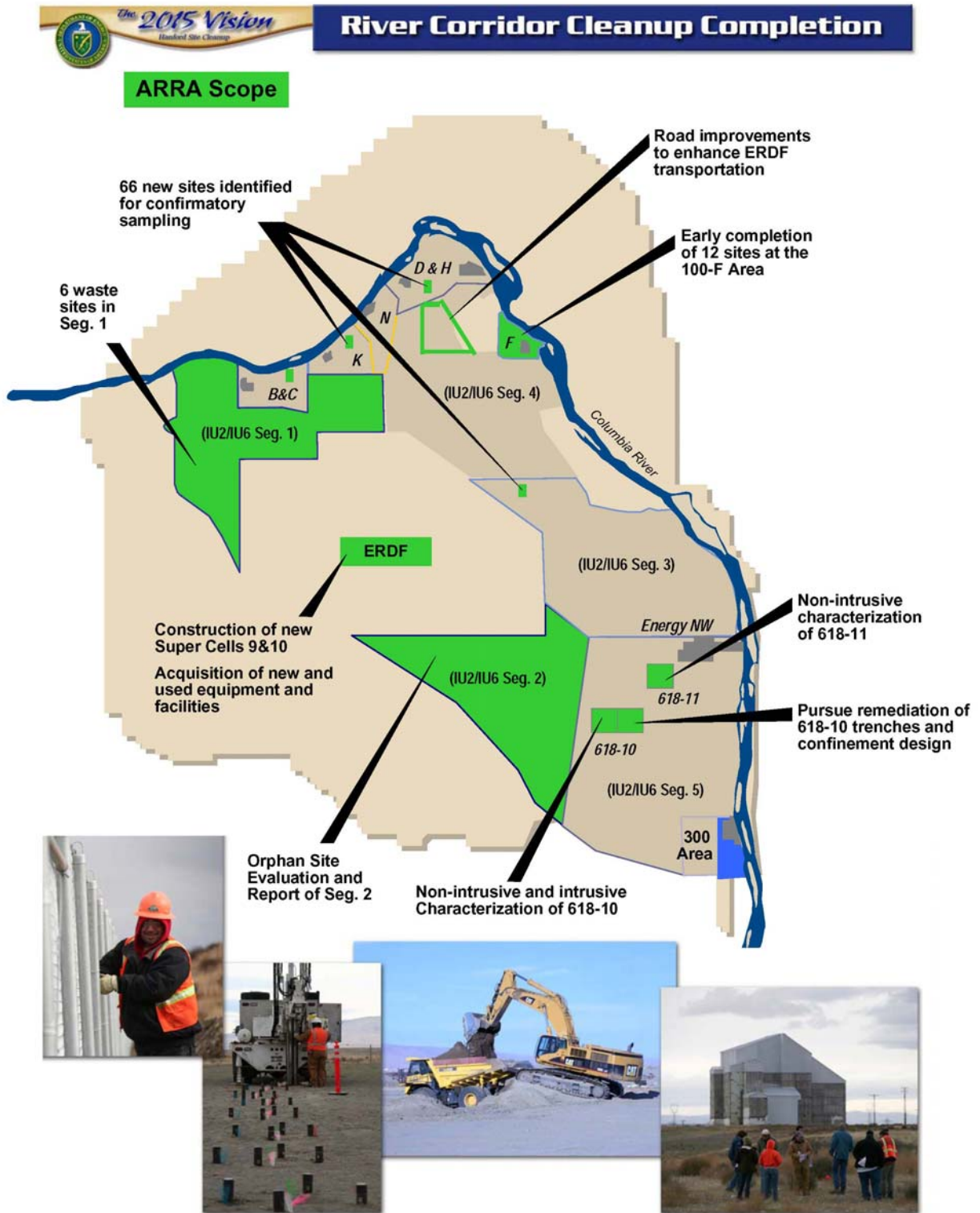
WCH is proposing to complete the early sampling process of 66 potential waste sites using ARRA funds. Confirmatory sampling is performed for sites that require additional information for determining if the site requires remediation.

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 March 28, 2010, WCH and its subcontractors have worked more than 172,460 hours of ARRA scope with no safety incidents.

### Hazard Reductions

The River Corridor Closure Project's "Weekly Roundup Safety Awareness" focused on vehicle safety, specifically backing techniques. One out of every four accidents can be blamed on poor backing techniques, according to the National Safety Council.

Poor backing can result in damage to costly equipment and buildings, and can cause serious injury. Backing accidents are almost always preventable if the driver is properly trained – and prudent. Many parking accidents could be avoided if drivers would practice defensive parking. This requires alertness and foresight.

- Park defensively by choosing your parking spot as prudently as you can, not too close to a corner or driveway, not too close to a road or construction site, and not where your vehicle will block or crowd other vehicles.
- Be acutely aware of that big blind spot when backing. Even rear-view mirrors can't see around the obstruction. Use all your mirrors and move backwards at a crawl.
- The only way for the driver to know for sure is to get out and look. A walk-around inspection allows the driver to learn the exact clearances on side, what steering is needed, and the exact distance to your stopping point.
- Every driver must know exactly what is going on around them at all times; this includes backing up a vehicle and must be done slowly.
- Even after a walk-around inspection, it is often advisable to have someone like a passenger or co-worker watch and signal for change of direction and for slowing and stopping. The spotter should stand near the left quarter panel. The signals to be given by the helper should be hand signals, not shouted directions, and should be uniform for all drivers and spotters.

The driver who practices defensive parking will never take any situation for granted but will observe and judge each parking requirement on its own. Even though a driver may back into a particular parking spot a dozen times, look and evaluate the same spot each time to be sure of clearances and to make certain no new obstacles are in the way.

It takes lots of practice to develop good backing skills, and a tight spot is no place to get this experience. It is amazing how many drivers, even if experienced, will have backing accidents in a new situation.

Knowledge of good backing practices cannot result from any number of years experience in normal forward driving. When backing up, it's not only the gear that's in reverse. Learn exactly how the rear end responds to every little twist of the steering wheel when backing by practice and more practice.

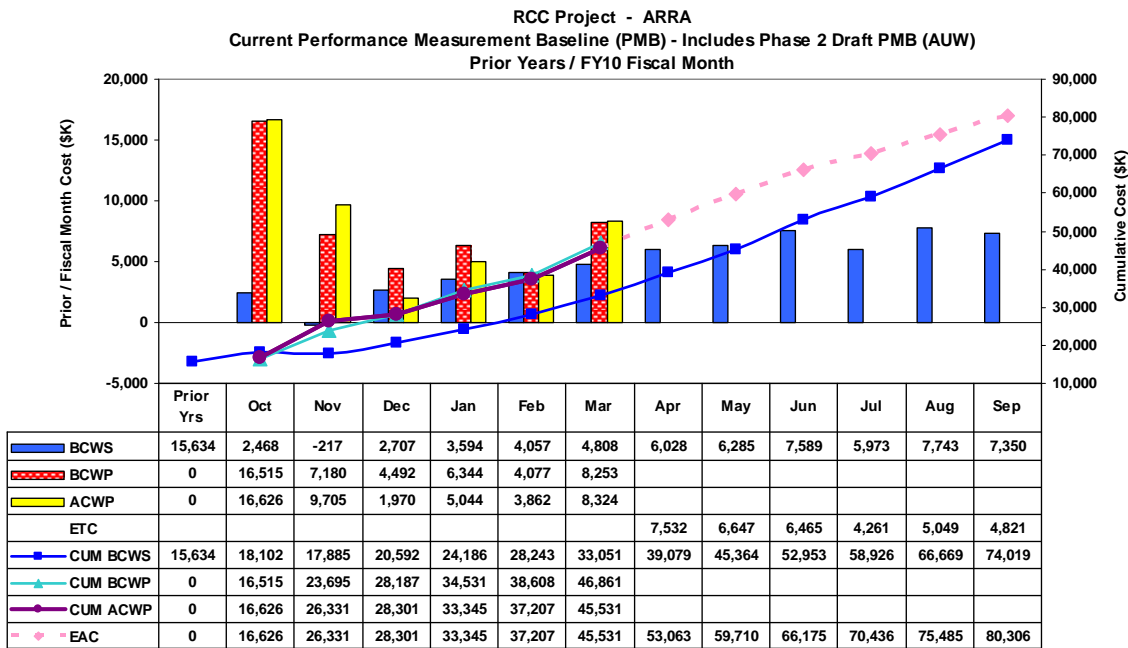




# Cost/Contract Status

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

Contract Modification #174 de-obligated \$5.4M from the 618-10 NIC scope. A re-obligation contract modification of equal value is in process for ERDF Cell Expansion & Upgrades. Contract Modification #185 definitized Phase 2 and provided Cost Authority of \$177,979,280.



ARRA Actuals (includes PMB and Proposal 2)

Apportionment Number	Apportionment Title	PMB or Balance *	Mar 2010	Inception To Date	NTE Amount
RL-0041.R1.2	ERDF Cell Expansion	PMB	4,608	29,814	
		Balance	951	3,388	44,000
RL-0041.R2	River Corridor Soil & Groundwater (618-10)	PMB	2,186	10,235	
		Balance	578	2,093	5,000
<b>Sub Total</b>		PMB	6,794	40,049	
		Balance	1,529	5,481	49,000
Fee			204	2,454	
<b>Total</b>			<b>8,527</b>	<b>47,984</b>	

\* PMB is the Phase 1 Performance Measurement Baseline. Balance is Proposal 2 Not to Exceed draft PM (AUW)



## ERDF

### Super Cells 9 and 10 Construction

TradeWind Services and its prime subcontractor, DelHur Industries, continue to dig super cell 10 at a rapid pace. They have removed 1,271,374 cubic yards of soil to date since beginning operations on February 10. An estimated 1.675 million cubic yards of soil will be removed from super cell 10.

A series of hydraulic conductivity tests was successfully completed on a test pad constructed with the soil/bentonite admixture to be used in the liner and leachate collection system for super cells 9 and 10. The liner system collects and removes liquid, or leachate, as it drains through the waste materials. It consists of the admix layer, a leachate collection layer, a leak detection layer, and two high-density polyethylene (HDPE) liners covered with a 3-foot protective soil layer. The project team will begin to manufacture the admix next week.

Work also began to install conduit and piping in the crest pad buildings for super cell 9. Concrete will be placed next week.



*An aerial photo taken earlier this month shows the Environmental Restoration Disposal Facility.*

## ERDF (Continued)

### Facility and Equipment Upgrades

ELRFowler has begun design work of ERDF's new operations and maintenance facilities. ELR Fowler, which is a joint venture between ELR Consulting and Fowler General Construction, also continues to work on contract submittals (e.g., health and safety, quality, scheduling).

Upgrades to the transportation truck maintenance facility include two additional truck bays, a large concrete pad, an exterior awning that will cover two smaller concrete pads, and a conference room. Upgrades to the container maintenance facility include a large container repair line, a maintenance shop, a weld area, a lunch area, and an exterior awning over a concrete pad. Upgrades to the equipment maintenance facility include two service lines, an operational storage facility, a large concrete pad, and an exterior awning over a smaller concrete pad.

WCH has received Sage Tech/WH Pacific's final design of the new fueling station. WCH will begin to review the final design and prepare to issue a request for proposal (RFP) for construction of the fueling station.

Columbia Engineers and Constructors continues work on the 90% design of ERDF's new septic system. The 90% design is due to WCH on April 29.

Pacific Northwest National Laboratory (PNNL) scientists and engineers are performing a proof-of-concept demonstration of a new container tracking system to be used at ERDF. As part of the demonstration, Radio Frequency Identification and global positioning system tags were attached to waste containers to show how accurately the system can track waste shipments and container location, and generate maintenance reports.

WCH is modifying the design of for the lighting system to be installed at the upgraded transportation yard, used for truck-and-pups and other equipment. The lights are expected to be installed this spring.

A new front-end loader delivered by Indian Eyes is now in operation. Powers Equipment Company is expected to deliver a heavy-duty forklift in mid-May. Both companies are small local businesses. WCH is also preparing a purchase order for a new 40-ton payhauler.





## ERDF (Continued)



*A new front-end loader was placed in operation at the Environmental Restoration Disposal Facility.*

Hanford subcontractor Mission Support Alliance (MSA) continues preparations to make further repairs on three Hanford Site roads. The roads are used to transport waste material to ERDF.

### **Upcoming Activities**

- Continue removal of soil from super cell 10.
- Prepare for manufacture of admix used in construction of liner and leachate collection system.
- Evaluate PNNL's demonstration of a new container tracking system.

### **Video**

[\*\*8-Hour Time Lapse Video of Excavation Progress at the Environmental Restoration Disposal Facility\*\*](#)



## 618-10 Burial Ground

### 618-10 Non-Intrusive Characterization/Trench Remediation Project

Nonintrusive characterization activities continue at the 618-10 Burial Ground. Measurements have been collected for 80 cone penetrometers in the trench area and 275 in the vertical pipe unit (VPU) area.

The 618-10 Burial Ground operated from 1954 to 1963 and received low- and high-level radioactive waste from 300 Area laboratories and fuel development facilities. The burial ground consists of five groups of trenches and 94 VPUs. The VPUs were constructed by welding five bottomless drums together and buried vertically about 10 feet apart. WCH is obtaining radiological characterization data of the VPUs and trenches using a multi-detector probe (MDP), designed for measuring a wide range of radiation sources. The MDP is inserted into the cone penetrometers to measure radiation sources.



*Nonintrusive characterization continues at the 618-10 Burial Ground. A multi-detector probe (MDP) is used to measure radiation sources near the vertical pipe units.*

## 618-10 Burial Ground (Continued)

Meanwhile, preparations continue for soil sampling. Collecting and analyzing soil samples will allow the team to assess the vertical distribution of contaminants in the soils adjacent to and below the VPUs.

The project team conducted the project startup review (PSR) used to ensure that the soil sampling project is ready to be safely implemented. Early in the PSR process, a review checklist of items to be verified before project startup is developed. Typical checklist items fall into the categories of site, buildings, equipment and materials, personnel, regulatory paperwork, and authorization basis and other safety documents. An emergency drill in support of soil sampling activities also was conducted.

A critical portion of the preparations was focused on developing a detailed procedure with proper hazard controls to allow the work to be performed safely. In support of this effort, four separate full-scale field mockups were conducted using actual equipment such as the push rig and glove bag. Each mockup built off the lessons learned from the previous evolution. The last mockup included participation of outside personnel with expertise from the Plutonium Finishing Plant. As a result of these efforts, the final glove bag design was modified and numerous refinements were made to the procedure.

The project team completed the PSR checklist verification and documentation, completed the PSR readiness process, and conducted a detailed review with the senior management team. Following resolution of three pre-start items, the planned soil sampling activities will commence. A final dry run of the soil sampling procedure is scheduled for early next week, and soil sampling is expected to begin by mid-week.

To collect the samples, a cone penetrometer is driven adjacent to and approximately 2 feet below a selected VPU. A plastic sleeve is used to contain the sample, which is transferred to a glove bag for sample collection to a sample bottle. Sample handling and processing is performed inside a table-mounted glove bag.

Project start-up activities continue for intrusive characterization. Procurement packages for trench remediation labor and equipment are being developed, and work continues to construct roads, firebreaks, and work areas for drum processing.



## 618-10 Burial Ground (Continued)



Road construction continues at the 618-10 Burial Ground. Crews are also constructing a drum processing area and a firebreak.

Intrusive characterization will provide information on the actual form, level of contamination, and the condition of various waste types. Remediation of the burial ground will include excavation, handling, packaging, and sampling of buried radioactive and chemical materials in a variety of forms including drums, debris, and soil.

### Upcoming Activities

- Continue trench radiological characterization activities.
- Continue work on the project start-up for intrusive characterization.
- Continue roadwork, fence relocation, and construction of drum processing areas and firebreaks.

## 100-F Area

WCH is evaluating proposals from four small, disadvantaged businesses for the remediation of the 12 waste sites at F Area. A list of clarification questions also will be drafted.

The \$4-5 million project will involve the excavation of radioactive and hazardous soil and debris and the packaging of this material into shipping containers. Miscellaneous waste such as drums, bottles, tanks, or vessels may require repackaging and special handling prior to shipping. Oversized debris may require size reduction to facilitate waste loading.

The remediation 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 fuel pipeline section; 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; and 100-F-58 asbestos containing surface debris.

A walkdown with the Hanford Site electric utility operator was conducted. The purpose of the walkdown was to review the upcoming relocation of an electric power pole that lies within the foot print of waste site 100-F-26:7, as well as the bat habitat replacement effort. F Area is the home to the largest known colony of bats in Eastern Washington. About 2,000 bats live in a concrete structure once used to hold Columbia River water before it was used at the reactor.

The project team also continues work on the air monitoring plan and an engineering report for the septic holding tank to be installed at the site.





## 100-F Area (Continued)



*A walkdown was conducted with Hanford Site electric utility operator personnel at F Area.*

## IU 2 & 6 Segment 1

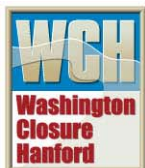
Remediation is complete at three of the six waste sites discovered at IU 2 & 6 Segment 1 during the 2008 orphan site evaluation. IU 2 & 6 Segment 1 encompasses about 23 square miles of the northeastern portion of the Hanford Site, away from the nine surplus plutonium production reactor areas. Remediation of sites 600-343, 600-345, and 600-346 is complete. The three fully excavated sites are relatively small and contained mostly surface debris. Site 600-343 consisted of residual ash from burned material and dumped asphalt in an excavated trench, site 600-345 was a stained area with oil filters, site 600-346 consisted of four small fly ash dump areas with metal debris.

Some remediation work also was completed at site 600-341, which consists of four areas. Site 600-341 consists of four areas that contain dry cell battery remnants and/or battery debris.

Planning to complete excavation and loadout activities continues at the two remaining 600-341 locations and waste site 600-344, pending completion of the cultural resource review process. Completion of remediation of 600-341 and 600-344 will proceed after the historical and cultural review.

Earlier this year a global positioning environmental radiological survey indicated that site 600-342 did not require additional remediation. Work to complete closeout documentation for this waste site continues.

Work instructions (waste site specific verification closeout sample plans) are being prepared to determine the number and location of waste site closeout samples including field quality control samples, sampling methodologies, analyte list, and analytical methods. Once the work instructions are reviewed and approved by DOE, Richland Operations Office and the U.S. Environmental Protection Agency, verification closeout samples will be collected for laboratory analysis.



## Confirmatory Sampling

The team continues to develop sampling instructions for waste sites at the 100-D and 100-IU 2/6 Areas; along with a new site in the 100-F Area. Their efforts include 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. To date, more than 50% of the confirmatory work instructions have been issued, which includes DOE and regulator approval. All of the work instructions for the 100-K Area have been approved.

The team is also developing Remove, Treat, and Dispose (RTD) memos for 22 sites that have been determined to require waste site remediation. The memos provide a basis for developing the design for waste site cleanup. All of the RTD memos have been issued.

The Request for Proposal (RFP) for the Confirmatory Sampling contractor was issued on April 20, 2010. The scope of the RFP is to support implementation of the confirmatory work instructions (e.g., excavation and sampling). The contract is scheduled to be awarded in May 2010, with field work beginning in July 2010. 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.



## General

### **Mentoring/Training**

No significant mentoring/training events this week.

### **Media, Visits, Press Releases**

No significant media events this week.

### **Contracting Actions**

No significant contracting actions this week.

