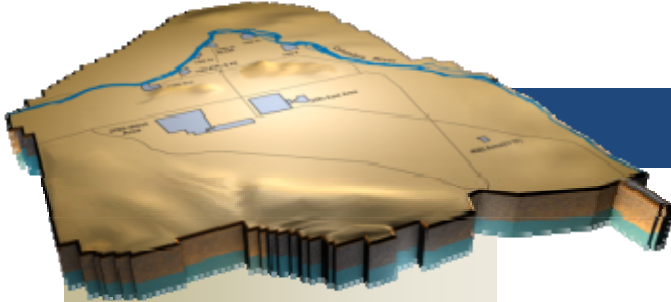


# ARRA Weekly Report



**Week Ending July 30, 2010**

August 3, 2010  
Contract DE-AC06-08RL14788  
Modification M047  
CHPRC1007-04

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## OVERVIEW

CH2M HILL Plateau Remediation Company (CHPRC) is using funds from the American Recovery and Reinvestment Act (Recovery Act) to accelerate cleanup and demolition efforts across the Central Plateau and along the river corridor to help pursue the U.S. Department of Energy (DOE) 2015 vision and shrink the Hanford Site cleanup footprint.

### RL-0011 Nuclear Materials Stabilization & Disposition

CHPRC is accelerating critical decontamination and decommissioning (D&D) work to prepare the Plutonium Finishing Plant (PFP) for demolition three years ahead of the Tri-Party Agreement milestone of September 2016. The work scope includes removing over 180 glove boxes/laboratory hoods and other highly contaminated equipment from the 234-5Z, 242-Z, and 2736-ZB buildings as well as preparing the former special nuclear material storage structures and other ancillary buildings for demolition.

### RL-0013 Solid Waste Stabilization & Disposition

Recovery Act funds are allowing CHPRC to accelerate retrieval of 2,500 m<sup>3</sup> of suspect transuranic (TRU) waste, eliminate 1,800 m<sup>3</sup> of mixed low-level and low-level waste (MLLW and LLW), and accelerate the overall cleanup of legacy waste and fuels on the Hanford Site.

### RL-0030 Soil & Groundwater Remediation, Groundwater/Vadose Zone

In the ongoing effort to protect the Columbia River, CHPRC is using Recovery Act funding to construct two groundwater treatment facilities, install over 300 wells that will be used for monitoring, extracting, and remediating groundwater, and decommission 350 wells that are no longer of service.

### RL-0040 Nuclear Facility D&D – Remainder of Hanford

Across the Central Plateau and along the outer zone of the Hanford Site, CHPRC is accelerating the demolition of facilities to reduce mortgage costs on buildings that are no longer of service and complete the remediation of waste sites.

### RL-0041 Nuclear Facility D&D – River Corridor Closure Project

In the 100K Area along the Columbia River, CHPRC is demolishing 12 buildings and remediating waste sites to clear the area and prepare for the disposition of two reactors, K East and K West.

## ACCOMPLISHMENTS

### RL-0011 Nuclear Materials Stabilization & Disposition

#### RL-0011.R1: Plutonium Finishing Plant D&D

The following table summarizes progress made with Recovery Act funding at PFP since April 2009.

Structures, equipment, waste disposition	Total to Date (since April 2009)
Glove boxes/hoods removed	66 glove boxes/hoods
MLLW/LLW shipped	1,275 m <sup>3</sup>
TRU shipped	155 m <sup>3</sup>
Non-radioactive waste shipped	22 m <sup>3</sup>
Asbestos removed	-9,700 feet
Ancillary structures demolished or removed	<ul style="list-style-type: none"> <li>• 17 fuel vaults &amp; ancillary buildings prepared for demolition:               <ul style="list-style-type: none"> <li>○ 15 fuel vaults disposed</li> <li>○ 2 structures removed for reuse at other locations</li> </ul> </li> </ul>

The final seven fuel storage vaults were shipped out of PFP last week for disposal as LLW at the Environmental Restoration Disposal Facility (ERDF). Four glove boxes/hoods previously removed from the process and lab areas of the 234-5Z building were also shipped to ERDF for disposal. Twenty drums of TRU and TRU mixed waste were shipped to the Waste Receiving and Processing Facility for future disposal at DOE's Waste Isolation Pilot Plant in New Mexico.

#### *Laboratory & Processing Areas*

In the former Analytical Laboratory, work documents are complete to begin preparations for removing hoods 5 through 9 in room 144. The fire suppression system supporting these hoods was deactivated. Work continued on external isolations and removal of equipment from six glove boxes/hoods in room 139 and installation of in-situ size reduction for disposal of five glove boxes/hoods. In the Plutonium Process Support Laboratory, external isolations continued on the glove box/hood in room 180, and an initial round of decontamination was completed on the hood.

In the process areas, non-destructive assay (NDA) measurements were completed on glove boxes HA-28, HA-21I, and HA-20MB. All three glove boxes will be posted with significantly less restrictive criticality safety controls. Hydraulic cylinders that previously controlled the airlock doors between glove boxes HA-28 and HC-4 were removed and the airlock was closed in preparation for initiating chemical decontamination of glove box HA-28.

#### *2736-Z/ZB Vault Complex*

The PFP vault complex officially transitioned from the operations and storage Documented Safety Analysis (DSA) to the PFP D&D DSA. Scaffolding was erected and the remaining vacuum sample lines were removed from room 636. Large and heavy pieces of equipment are being removed from within the six glove boxes in room 642.

#### *242-Z Americium Recovery Facility*

The 242-Z D&D team completed a record series of nine consecutive daily entries to the facility to continue cleanup and prepare the control room for the application of additional contamination fixative.

#### *Ancillary and Security Structures*

The final seven fuel storage vaults originally scheduled for disposition in late 2012 were shipped to ERDF for disposal as LLW. Fire suppression systems were deactivated and drained in the entry control facilities formerly used to control access to the PFP Protected Area.

Work to remove the inner Protected Area fences, razor wire, and perimeter alarm systems was temporarily suspended when the subcontractor inadvertently severed an electrical conduit serving the facility's high mast lighting. Corrective actions are in process to enhance project supervision of the work, and the construction contractor is expected to resume work with its own staff next week.

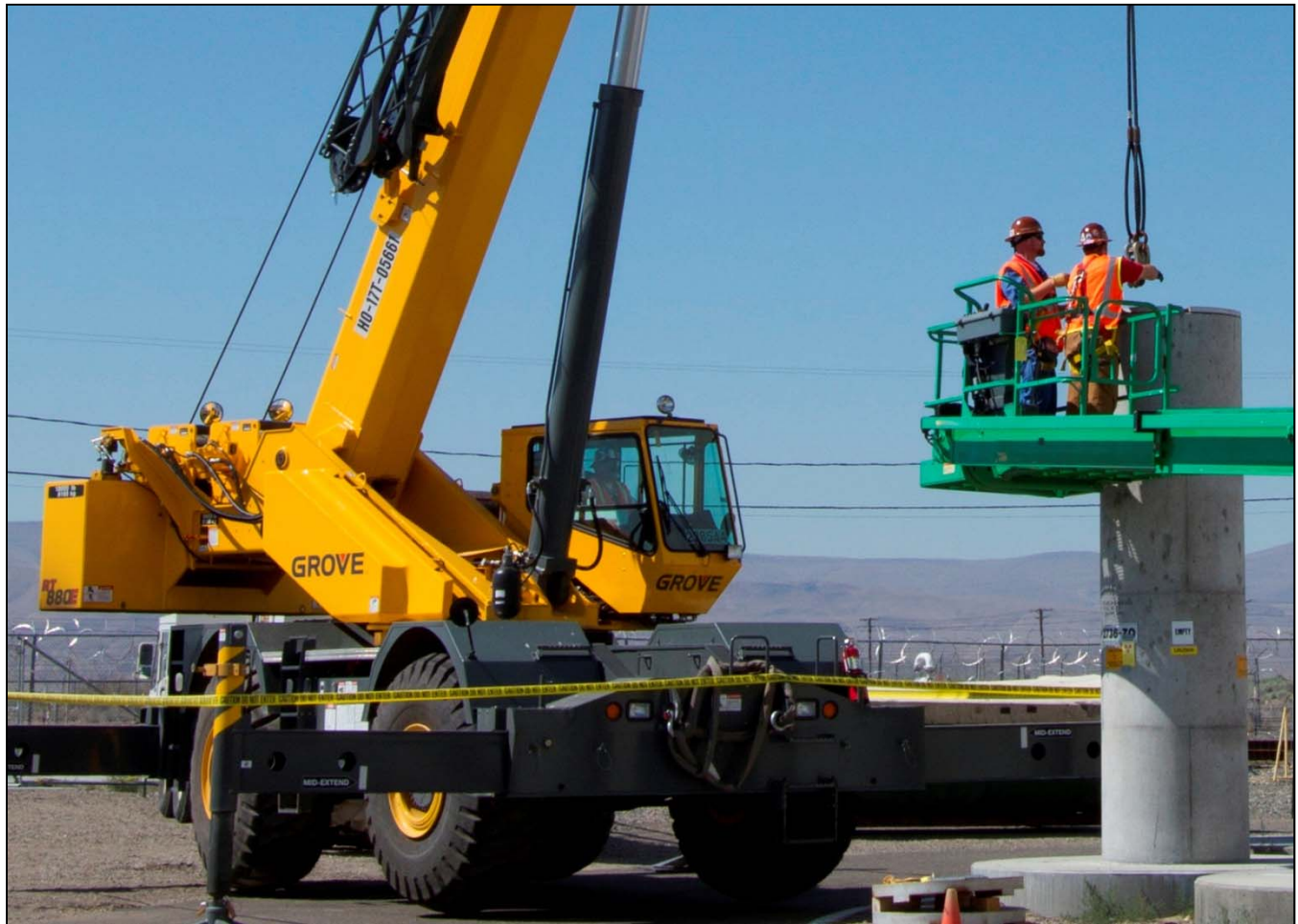


Photo 1

*Riggers prepare one of the last fuel storage vaults for removal from outside of the Plutonium Finishing Plant. CHPRC disposed of 15 fuel storage vaults two years ahead of schedule.*



Photo 2

*Two more fuel storage vaults are secured in place and on their way to the Environmental Restoration Disposal Facility for disposal as low-level waste.*

### *Infrastructure, process support systems, and equipment removal*

Removal of desiccant from deactivated air drying towers in the duct level of the 234-5Z building was initiated. Removal of the first section of process vacuum piping was delayed when the glove bag for the first cut failed a smoke test; repair work was completed. No additional NDA measurements of the support systems were completed; however, a review of previous measurements of the process transfer lines determined that prior measurements are adequate for several of the lines. Measurements are now considered complete for 69 percent of the transfer lines and 67 percent of the process vacuum lines. Concrete saw cutting to support the enlargement of door 638 was completed following qualification of the subcontractor staff to work in beryllium controlled areas; the doorway will be cleaned up and a new larger

door installed next week to maintain fire safety and ventilation control. Work also continued on the installation of a size-reduction station for glove boxes/hoods in room 172. The subcontractor responsible for grouting six pipe chases below the first floor of the 234-5Z building is continuing to qualify workers to work in beryllium controlled areas, while the project is updating associated work documents to include appropriate beryllium controls.

## RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

Of the 1,800 m<sup>3</sup> of MLLW and low-level waste (LLW) planned for shipment under the Recovery Act:

- 991 m<sup>3</sup> of MLLW and LLW have been shipped to date including:
  - 794 m<sup>3</sup> that have been treated and disposed.
  - 197 m<sup>3</sup> at off-site treatment facilities awaiting processing. Treatment is scheduled for FY10.

One shipment was sent out this week on July 29 from the Central Waste Complex (CWC) to Perma-Fix Northwest (PFNW). The shipment contained one box (3.2 m<sup>3</sup>) of MLLW non-debris that will be non-thermally treated by stabilization and packaged for disposal in Hanford's Mixed Waste Disposal Units.



Photo 3

*A waste package is loaded into an over-pack container for shipment. The box will be shipped to Perma-Fix Northwest for non-thermal treatment by stabilization.*

## RL-0013C:R1.2: TRU Waste

Of the 2,500 m<sup>3</sup> of suspect TRU waste planned for retrieval under the Recovery Act:

- 57 m<sup>3</sup> are staged, pending shipment.
- 478 m<sup>3</sup> have been shipped to a treatment, storage, or disposal facility.

The Waste Retrieval Project continued work in the 3A burial grounds by starting the repackaging of Box 82 in Trench 17 and partially filling a new 9 by 5 by 5 foot waste box. Workers excavated between Boxes 1 and 2 in Trench 17 in preparation for removing Box 2. Carpenters completed the assembly of all four walls of the shoring box for Box 2. AREVA completed portable assay campaign No. 38, which consisted of four secondary waste (newly generated) boxes and one waste box that was removed from 4B Trench 11 last year. New electrical power poles and pit run material were delivered for the installation of permanent power for the 3A burial grounds. Tumbleweeds were removed and disposed of from the Trench 17 contamination area (CA) around Boxes 80, 81, and 82. Trench 8 site preparation activities were initiated and a Hazard Review Board (HRB) meeting was held regarding new Trench 8 excavation procedures SW-100-201 and -202 along with revisions to procedure SW-100-163.

In the 12B burial grounds, repairs were completed to the passive/active neutron (PAN) assay system and system calibration was started. A construction completion review and walk-down of the process area was performed to complete the construction phase for the Trench Face Retrieval and Characterization System for next generation retrieval efforts. Remote retrieval development activities at the Simulation Test Site (STS) trench continued with the use of various remote retrieval techniques, equipment, and tools.





Photo 4

Workers begin removing the contents of Box 82 in 3A Trench 17, an underground storage trench in the 200 West Area. The contents will be placed in a new waste container for shipment to the Central Waste Complex or Perma-Fix Northwest depending on whether the waste is classified as transuranic or low-level.

#### *Alpha Caisson Retrieval Project*

The Alpha Caisson Retrieval Project has been closed out. This closeout is based on available funding necessary to support the priority work scopes jointly developed between the Richland Operations office and CHPRC for the remainder of the Recovery Act performance period. The current planning case is to close out the project for the next two years with project restart commencing at the beginning of Fiscal Year 2013. This scheduled restart will support the retrieval of the Retrievably Stored Waste from the four Alpha Caissons by the M-91-41 milestone date of December 31, 2018.

A project closeout plan has been developed and implemented for the orderly and timely closeout of the project to the 30 percent design stage. The project closed out the majority of activities by July 30, 2010, with all project activities being fully closed out by September 30, 2010. This change was included as a part of the Baseline Change Request recently approved for the Recovery Act re-apportionment work scopes. This will be the final report on this project until such time it is restarted.

#### *K-1/K-3 Filter Replacement*

Project management met with the ARES Corporation to confirm that there is enough staff to support the project. The statement of work (SOW) was completed for the Conceptual Design Report (CDR) and the

requisition to initiate the contract for alternative analysis and the CDR were issued. The Project Execution Plan (PEP) is undergoing CHPRC internal review and the Functional Design Criteria is 90 percent complete, which included the SOW for the CDR.

#### *TRU Project Drum Repackaging*

Of the 850 m<sup>3</sup> planned to be characterized and repackaged with funding from the Recovery Act:

- 1,627 drums (338.5 m<sup>3</sup>) have been repackaged.
- 67 TRUPACT-II shipments [1,343 55-gallon drums, 24 standard waste boxes (SWBs), two ten-drum over-packs, 216 85-gallon over-packs and 246 drums over-packed into 65 SWBs (422.8 m<sup>3</sup> total)] have been shipped.



Photo 5

*A worker secures bolts on the top of a ten-drum over-pack container to prepare it for shipment.*

**RL-0030 Soil & Groundwater Remediation, Groundwater/Vadose Zone****RL-0030.R1: Central Plateau Soil & Groundwater***Well Drilling & Decommissioning*

The following table showcases additional progress in well drilling and decommissioning.

Operable Unit	Scope (Wells to be drilled with Recovery Act funding)	In progress	Drilled to Total Depth <sup>1</sup>	Completed or Developed <sup>2</sup>
100-BC-5	Support characterization and removal of chromium (6 wells)	2	1	-
100-KR-4	Support characterization of the vadose zone and aquifer (13 wells)	5	4	2
100-HR-3	H Area: Support the optimization of removal of chromium (40 wells)	39	30	29
200-ZP-1	Support the 200 West Groundwater Treatment Facility that will primarily treat carbon tetrachloride contamination in the groundwater (17 wells)	16	12	11
300-FF-5	Support characterization of the aquifer (11 wells)	1	-	-
Site-wide	Decommission wells that are no longer of service <sup>3</sup> (350 wells)			170

<sup>1</sup> Wells are drilled to varying depths to address contaminants at different depths in the soil.

<sup>2</sup> When a well is developed, the well screen and riser pipe are placed in the hole, filter pack material is placed around the screen, and the well has been surged and pumped to establish good communication between the well and the surrounding soil.

<sup>3</sup> Wells that are inactive or no longer of service are filled with grout or other materials, the casing is removed, and a cap or marker is installed.



Photo 6

A crew from the CHPRC subcontractor Carpenter Drilling installs a well in the 100-KR-4 operable unit, near the backside of the K West Reactor.

*200 West Groundwater Treatment Facility*

CHPRC's general contractor for the 200 West Groundwater Treatment Facility, Skanska USA Build Inc., and its subcontractors continued working on the plinths for the Radiological Facility, installing anchor bolts at the center crane footings and setting forms at the Bio-Processing building footings. Subcontractor George A. Grant continued working site preparations for the four transfer buildings with pour activities scheduled for various transfer buildings next week.

Material procurement continued for sleeves and piping as the project moves road crossing activities into the area of the S/SX tank farms. Underground scanning and excavation permitting continued for the accelerated second phase of road crossing construction. Document control and engineering continue to move forward to release Issued for Construction packages to the contractors. To date, 793 drawings and 172 specifications have been processed with only a few left to process. Final completion of the entire package is in final review with the Mission Support Alliance electrical utilities. Follow-up actions to the corporate assessment are in process within the Condition Reporting and Resolution System and approximately 30 percent of follow-on actions have been completed.

The 200 West Area Groundwater Treatment Facility project team completed a 60 percent design review for the Lime System on July 28-29. The 45-member review team substantially reduced the 60 percent design review time of the Lime System by utilizing a two-day "workshop" review process. The team reduced the schedule from a typical three week process to three days with all review comment reports adjudicated by the end of the two days. The review material included two basis of design reports, two calculations, one specification, and 91 drawings. The review team kicked off the workshop with an overall design presentation and a 3-D "fly through" projected simultaneously on multiple screens. The integrated review team included the design team, BioSec (equipment vendor), design authority, safety, operations, environmental, craft, and waste management. The Skanska superintendent attended the session to discuss the constructability of the Lime System foundations with the structural design staff.

*DX Groundwater Treatment Facility*

Electrical, mechanical, and process equipment installations in the DX facilities are nearly complete. The progress is listed below.

Building	Electrical Equipment (% complete)	Mechanical Equipment (% complete)
Process	99%	100%
Transfer (M1)	100%	100%
Transfer (M2)	100%	100%
Chemical Addition	20%	20%
Electrical Power Rack Tie-In		98%
HDPE Piping Installation		100%



Photo 7

Workers place concrete for a protective marker at an extraction well that will support the DX Groundwater Treatment Facility that is under construction in the 100 Area of the Hanford Site.

## RL-0040 Nuclear Facility D&D – Remainder of Hanford

RL-0040.R1.1: U Plant/Other D&D

### *U Canyon*

The contract for grout delivery and conveyance was awarded. Baseline radiological surveys in the canyon are complete. The survey results will be used in demolition planning. Work documents are being prepared for core drilling operations, water feed connections, and electrical supply modifications. The core drilling affords access to the less accessible areas that need to be grouted. Water and electrical work are required to supply the grout batch plant. Work is complete on upgrades to the facility elevator. Sampling of unknown chemicals is being scheduled. Asbestos abatement activities are nearing 40 percent completion. Awarding of a contract for fabrication of a cask to ship the D-10 tank to T Plant is in progress.

### *U Plant Ancillary Facilities*

Demolition is in progress on the 224-U and the 224-UA buildings, the last of the U Plant ancillary facilities planned for demolition with Recovery Act funding. Debris from the 224-U building is being loaded for disposal.



Photo 8

*Demolition progresses on the 224-U UO3 Plant Concentration and Load-Out Building, one of the last U Plant ancillary facilities planned for demolition with Recovery Act funding.*

#### *200 East Core Industrial Area*

Demolition and debris load-out continued at the 272-E Fabrication Shop. Construction of the asbestos abatement containment in the 284-E Powerhouse is progressing as is asbestos removal in the conveyor and crusher house.



Photo 9

*Demolition continues on the 272-E Fabrication shop with removal of structural supports.*

#### *200 West Area Industrial Facilities*

Planning and characterization activities continued in preparation for the demolition of six industrial structures in the 200 West Area. Sampling of the 284-W Powerhouse continued and radiological surveys began for all six structures.

#### *209-E Criticality Mass Laboratory*

Removal of the perimeter fencing continued and all of the exterior fence fabric has been removed. Ground scans are being performed to identify underground utilities prior to the beginning of excavation activities. Damaged portions of a steam line were stabilized to eliminate potential for exposure to asbestos. Gloves are being replaced on the glove boxes in the Mix room. Filters also are being replaced. A mock-up glove box was used to prepare workers for the glove and filter replacement and a walk-down of the work location was performed prior to starting the work. Data from the radiological surveys of piping and miscellaneous equipment in the Critical Assembly Room and Mix Room are being analyzed to support characterization activities and determine additional data needs.



Photo 10

*Workers remove perimeter fencing from the site of the 209-E Criticality Mass Laboratory, a nuclear facility in the 200 East Area that CHPRC plans to demolish.*





*A radiological survey is performed on a glove box in the 209-E Criticality Mass Laboratory. Equipment like glove boxes must be removed from the facility before it can be demolished.*

Photo 11

#### RL-0040.R1.2: Outer Zone D&D/Waste Sites

##### *Arid Lands Ecology Reserve (ALE) D&D*

Demolition of the 6652-C Space Science Laboratory is complete to slab on grade and approximately 75 percent of the slab has been removed. Demolition of 6652-U facility was started. Facility isolation and characterization of the T520-6 Navy MARS Radio Station and 6630 Hodges Well Pump House is complete. Debris site cleanup continued.

*North Slope Debris Removal*

Planning, development of environmental documents, and cultural reviews continued for removal of debris from the North Slope on the Hanford Site.

*D&D of Railcars Located on the 212-R Rail Spur*

Efforts continued to determine the path forward for 16 radiologically and chemically contaminated railcars currently staged near the site of the former 212-R facility in the 200 North Area. An addendum to the *212-N, -P, and -R Facilities Engineering Evaluation/Cost Analysis* for the railcar disposition is out for public comment until later this month. Data quality objectives and a sampling analysis plan are being prepared.

Hanford Site railroad operations were suspended in 1997 and remaining railcars were staged at selected locations. Eleven of the railcars are cask cars (used for transportation of irradiated nuclear fuel). The remaining railcars include two locomotives, two tank cars, and one flat car. One of the locomotives and possibly the flat car are being considered for display at the historic B Reactor. All of the cask cars and locomotives were acquired in the 1940s through 1960s and generally supported the Hanford Site mission by transporting fuel rods between facilities. The flatcar was used to transport miscellaneous equipment over the years and the two tanker cars were used to transport radiologically contaminated liquid wastes.

The proposed removal actions for the railcars include performing visual inspections and radiological surveys of internal surfaces, characterizing and removing hazardous materials, removing free liquid, decontaminating and/or applying fixative to the railcars, removing equipment protrusions and sealing penetrations or openings, separating the railcars from the wheels and loading the cars onto heavy haul trailer using a crane (or other method), and ultimately transporting to ERDF for offloading.



Photo 12

*Two locomotives staged on the 212-R Rail Spur. One of the locomotives is being considered for display at the historic B Reactor while the other may be dismantled and disposed of at the Environmental Restoration Disposal Facility.*



Photo 13

One of the eleven cask cars that is staged on the 212-R Rail Spur in the 200 North Area of the Hanford Site.

### Waste Sites

The following table showcases CHPRC's recent progress in outer zone waste remediation:

Waste Site in Progress	Tons of Contaminated Soil Removed	
	Week Ending July 30, 2010	Total to Date
216-N-6	1,550	2,128
BC Control Area	4,700	161,000

Recent activities regarding the outer zone waste sites also includes (listed by operable unit or site):

- 200-MG-1
  - 216-S -26: ERDF profile sampling was completed. Samples were analyzed and the waste profile is being developed. The scoping walk-downs and culture/ecology reports are complete, and the contract SOW is in procurement for processing.
  - 600-36: Post-excavation sampling result data is being reviewed.
  - 600-38: Samples taken on July 28 are being analyzed.
  - 600-40: Excavation is on hold awaiting process sampling anticipated for next week.
  - 600-222: The Confirmatory Sample No Further Action sample instruction has been issued and sample data review indicates that a small amount of retrieve, treat, and disposal (RTD) activity is required. An Advanced Work Authorization was approved.

- 600-226: Preliminary results indicated RTD will be required. The MG-1 Remedial Action Work Plan (RAWP) needs to be approved prior to the start of excavation.
- 600-228: Surface sampling is complete; direct push testing will commence after resolution of a nesting migratory bird.
- 600-275: Excavation was deferred due to nesting birds in proximity to the waste site.
- 600-281: Preliminary evaluation indicates RTD will be required. A Baseline Change Request is not required and planning efforts are ongoing. The RAWP needs approval prior to the start of this field excavation.
- OCSA (Old Central Shop Area): Surface sampling and development of the subsequent sampling instructions is in progress.
- Planning for RTD activities continued for the 200-W-33 and 600-218 waste sites.
- Closure documentation is being prepared for the 600-37 and 600-262 waste sites.
- 200-CW-3
  - 216-N-4: The initial post-excavation radiological survey is complete. The sample instruction was issued with confirmatory post-excavation sampling planned next week.
- BC Control Area
  - For Zone A, approximately 42 acres have been excavated and surveyed.
  - For Zone B, radiological down-posting surveys are in process.

## RL-0041 Nuclear Facility D&D – River Corridor Closure Project

### RL-0041.R1.1: 100K Area Remediation

#### *Facility D&D*

At the 183KW Sedimentation Basin Complex, demolition and debris load-out continued on the 183.3KW Filter Basin and 183.7KW Pipe Tunnel.

In the 100K East Area, bags of asbestos materials are being removed from the 1706KE/KER substructures. Results have been received on samples from inside certain piping systems and components located within radiologically controlled areas of the 115KE Gas Drier Building and are being used in demolition planning.

The 116KE Reactor Exhaust Stack was demolished and two overhead bridge cranes and the counterweights for the C elevator in the 105KE Reactor Building were removed using explosive demolition techniques. CHPRC and its small business subcontractors, Clauss Construction and Controlled Demolition, Inc., worked together to prepare for this \$420,000 Recovery Act demolition project that was accomplished safely on July 23. Workers spent more than four months preparing for the work. It was determined that explosives would be the safest way to lower the stack as well as the other components due to their height or high elevations.



Photo 14

*Explosive demolition is used to topple the 116KE Reactor Exhaust Stack in a matter of seconds. The use of explosives provided a safer way to lower the 175-foot structure to ground level with limited risks to workers.*



Photo 15

*The remains of the 116KE Reactor Exhaust Stack that CHPRC lowered to ground level using explosives. The debris will be loaded into containers for disposal at the Environmental Restoration Disposal Facility.*

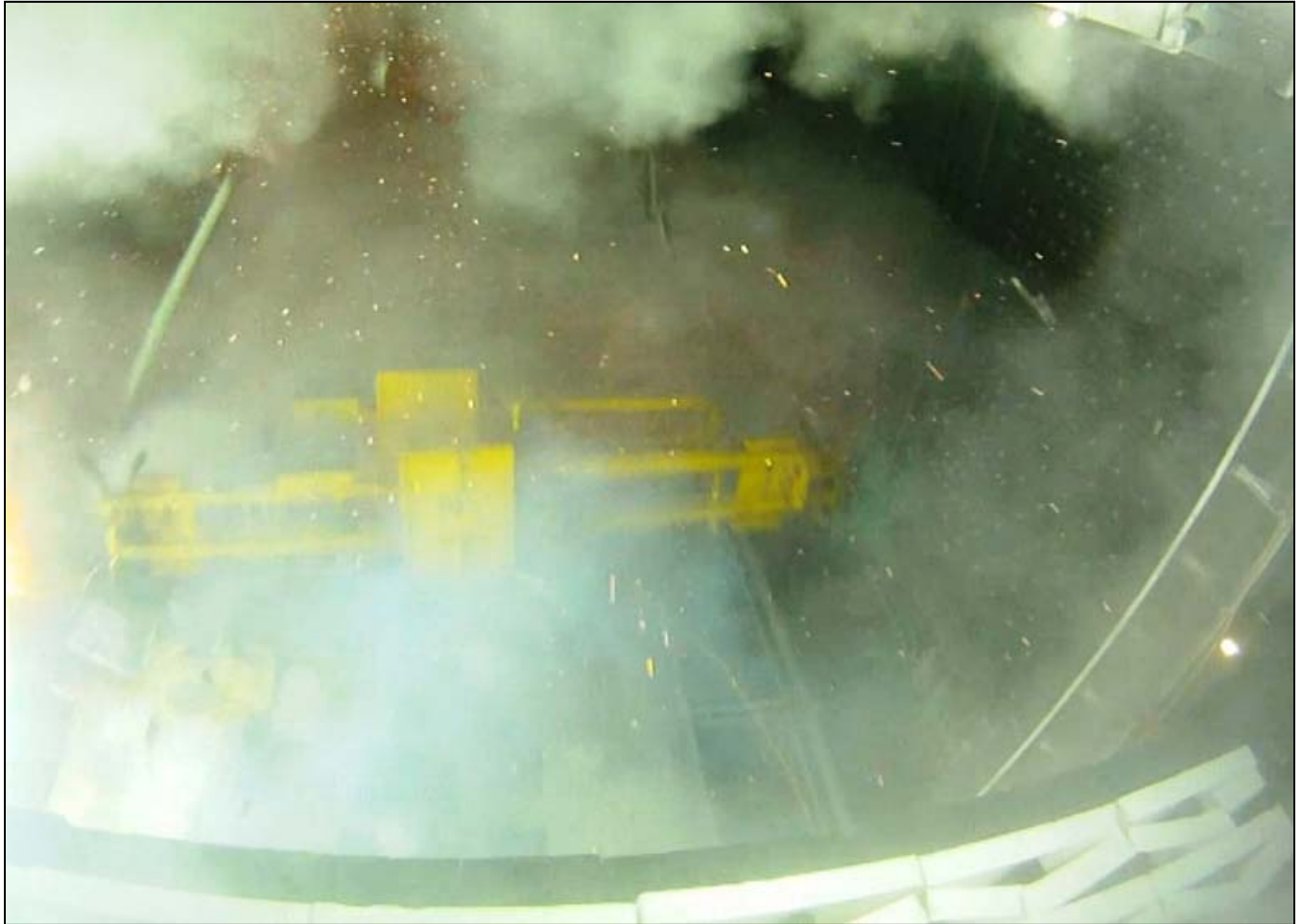


Photo 16

*Two overhead bridge cranes fall to protective padding on the floor of the 105KE Reactor Building. Stacked cranes mats, rough-cut fire-resistant timber, and specialized foam were placed on the floor as a landing area for the cranes as they were lowered using explosive demolition techniques.*

The review of the draft preliminary design documents for disposition of the 105KE Reactor continued. Two of three sets of documents have been reviewed and comments provided to the design team. Mock-ups of core retrieval equipment are being constructed and used to confirm the planned approach and equipment capability. Samples from the core borings are being analyzed. Additional reactor characterization through borescope evaluation, radiological survey, and collection of graphite samples continues to be pursued. Asbestos abatement in the 105KE Reactor Building continued.

Interior duct fabrication and installation for the 105KW Fuel Storage Basin facility heating, ventilation, and cooling system (HVAC) upgrade continued. Scaffold erection for duct installation is ongoing as is shop fabrication and preparatory work for duct runs. Installation of duct insulation continued. To date, about 590 feet of duct and 150 feet of insulation have been installed.

#### *Infrastructure Utilities Upgrade Project*

Rock and soil piles from construction of the import water line are being removed and consolidated for future transport to a previously used borrow pit.



Fire water and potable water line installation continued in the vicinity of the 105KW Reactor and the Cold Vacuum Drying Facility; about 2,700 feet of trench has been excavated and 2,100 feet of 8-inch fire water pipe, 430 feet of 12-inch fire water pipe, and 165 feet of 6-inch fire water pipe have been installed to date. Excavations are being backfilled with controlled density fill and gravel.

Construction continued on the fire water and potable water lines being installed for the remainder of the 100K Area; about 5,390 feet of 12-inch fire water pipe, 2,340 feet of 4-inch potable water pipe, and 730 feet of 6-inch fire water pipe have been installed. This portion of the infrastructure upgrades is about 95 percent complete.

Construction of the Water Treatment Facility continued with installation of building wall insulation, forming and placing of equipment pads, and process piping installation. The diesel fire pump was received and accepted. The tank roof and railings were installed on the water storage tank.



Photo 17

*The roof of the Water Treatment Facility water storage tank is installed. The 750,000-gallon, dual-use tank will provide fire and potable water to the 100K Area and allow existing infrastructure to be removed to facilitate future remediation and demolition efforts.*

Material procurement for the 13.8kV electrical line re-route continued. A second change design was completed and approved and is being provided to the construction contractor.

Component installation continued on the five skid frames for the A9 Substation refurbishment. Trenching and installation of a new conduit duct bank from the new Switchgear Building to two skids is progressing and cable pulling and testing continued.



Photo 18

Workers test the 230 kV circuit breakers on the newly installed mobile substation skids in the A9 Switchyard of the 100K Area. Installation of the circuit breakers is part of a Recovery Act-funded effort to replace or reroute infrastructure in the 100K Area in support of future remediation and demolition efforts.

### Waste Sites

The following table showcases CHPRC's progress in waste site remediation in the 100K Area:

Waste Site in Progress	Tons of Contaminated Soil Removed	
	Week Ending July 30, 2010	Total to Date
100-K-47 (Process Sewer)	-	17,393
100-K-53 (Glycol Heat Recovery Underground Pipelines)	-	350
100-K-56 (Reactor Cooling Water Pipelines)	-	11,843
100-K-63 (10-KW Floodplain)	2,391	5,514
100-K-68 (Pump Gallery and Catch Tank)	-	9,475
100-K-71 (Collection Box)	-	7,569
100-K-102 (French Drains and Mercury Stained Soil near 183KW Sedimentation Basin)	-	10,222
116-KE-3 (Storage Basin French Drain)	-	4,328
120-KW-1 (183-KW Filter Water Facility Dry Well)	2,990	18,174
<b>Below-grade structure/soil removal</b>		
183.1 KW (K West Headhouse)	-	21,240

Closure documentation (Remedial Action Report) is being developed, reviewed, and/or approved by DOE or the regulator for the following waste sites:

- 100-K-37 (Sulfuric Acid Tank)
- 100-K-38 (Caustic Soda Tank)
- 116-KE-6A (Condensate Collection Tank)
- 116-KE-6B (Evaporator Tank)
- 116-KE-6C (Waste Accumulation Tank)
- 116-KE-6D (Ion Exchange Column)
- 118-KE-2 (Control Rod Storage Cave)
- 130-KE-1 (Emergency Diesel Oil Storage Tank)



Photo 19

CHPRC is removing several thousand tons of contaminated soil from waste sites in the 100K Area. The waste sites, like the 120-KW-1 site shown here, were contaminated during operation of the K Reactors.

## UPCOMING EVENTS

### RL-0011 Nuclear Materials Stabilization & Disposition

RL-0011.R1: Plutonium Finishing Plant D&D

- Initiate removal of the process vacuum system piping from the 234-5Z and 291-Z buildings.
- Transfer three additional access control buildings to the CHPRC D&D Project for demolition.

- Continue removing the inner protected area fence line, razor wire, and perimeter alarm systems.
- Complete Surface Contaminated Object surveys of glove box HC-230C-3, apply contamination fixative within the box, and remove it from building ventilation.
- Provide in-situ size reduction capability within the former Analytical Laboratory for five hoods.
- Continue external isolations and equipment removal from six glove boxes/hoods in room 139.
- Initiate cleanout of five hoods in room 144 and complete the disposition of chemical waste items from four other hoods in the room.
- Continue isolation and cleanout of three glove boxes/hoods in rooms 180 and 188.
- Initiate chemical decontamination of glove boxes in room 235B and glove box HA-46.
- Enlarge two doorways and remove the final glove box from room 636 of the 2736-ZB building.
- Complete the removal of large, heavy equipment from six glove boxes in room 642 and removal of equipment from room 641 in the 2736-ZB building.
- Complete the application of contamination fixative in the 242-ZA control room, resolve ventilation issues in the control room, and initiate isolation and cleanout of glove box WT-2.

## RL-0013 Solid Waste Stabilization & Disposition

### RL-0013C:R1.1: MLLW Treatment

- No planned shipments for next week.

### RL-0013C:R1.2: TRU Waste

- TRU Retrieval
  - 3A burial grounds:
    - Complete repackaging of Trench 17 Box 82 and remove the base of the waste box.
    - Finalize planning and issue work packages for removing Trench 17 Boxes 2 and 81.
    - Resume excavation around Trench 17 Box 81 to expose the base of the box.
    - Complete assembly of the Trench 17 Box 2 shoring base and excavate the base of the box to install the metal support plates; prepare and remove the box.
    - Excavate overburden between Trench 17 Boxes 12 and 22.
    - Incorporate comments from HRB meeting held on July 30.
    - Order over-pack containers for Trench 8 non-assay containers.
  - 4B/4C burial grounds:
    - Over-pack two previously retrieved waste containers and prepare them for shipment.
    - Continue operating procedure and work package development start-up activities for the Mobile Radioactive Decontamination Unit.
    - Complete down-posting of the 4B Trench 7 CAs.
    - Review subsurface geophysical survey results, complete excavator interrogation execution mock-up in the STS Trench and shrink the exclusion boundary for the 4B Trench 11 off-normal event site.
  - 12B burial grounds:
    - Continue mock-up removal activities in the STS Trench.
    - Complete set-up, alignment, and acceptance testing of the VJ Technologies' real-time radiography assay system and drum warming unit.
    - Complete calibration, confirmation, and verification of the PAN assay unit.
    - Complete the acceptance test procedure and/or OTP for the drum venting systems.
    - Complete construction activities.
- K-1/K-3 Filter Replacement
  - Issue limited notice to proceed on the alternative analysis and CDR by August 2.

- Issue PEP for engineering services by August 31.
- TRU Repack
  - Five planned TRUPACT-II shipments.

## **RL-0030 Soil & Groundwater Remediation, Groundwater/Vadose Zone**

### **RL-0030.R1: Central Plateau Soil & Groundwater**

- Continue construction of the 200 West and DX Groundwater Treatment Facilities.
- Continue decommissioning wells across the site.
- Continue drilling at 100-BC-5, 100-HR-3, 100-KR-4, 200-ZP-1, and 300-FF-5.
- Continue planning for well installations at the 100-HR-3 operable unit.

## **RL-0040 Nuclear Facility D&D – Remainder of Hanford**

### **RL-0040.R1.1: U Plant/Other D&D**

- Continue demolition of the U Plant ancillary facilities.
- Continue asbestos abatement in the U Canyon galleries.
- Continue demolition preparations for the 284-E Powerhouse.
- Continue demolition planning and characterization of the 200 West Area industrial facilities.
- Continue demolition of the 272-E Fabrication Shop.
- Continue planning and preparations for demolition of the 209-E Criticality Mass Laboratory.

### **RL-0040.R1.2: Outer Zone D&D/Waste Sites**

- Continue removal of debris sites throughout the ALE Reserve.
- Continue demolition of the upper ALE facilities, including the 6652-C building slab.
- Begin demolition of the 6652-U Rattlesnake Mountain Upper Pump House.
- Continue cold and dark isolation activities and characterization of structure 6630, the Hodges Well Pump House and Tank, and the T520-6 Day Wireless Facility.
- Continue planning and cultural reviews for removing debris from the North Slope.
- Continue planning for and document preparation for disposition of the railcars.
- Continue remediation in the BC Control Area, 200-MG-1, and 200-CW-3 areas.

## **RL-0041 Nuclear Facility D&D – River Corridor Closure Project**

### **RL-0041.R1.1: 100K Area Remediation**

- Continue demolition of the 183KW Sedimentation Basin structures.
- Begin load-out of debris from the demolition of the 116KE and 105KE building components.
- Continue demolition preparation activities for the 115KE, 117KE, and 1706KE/KER structures.
- Continue debris removal from the 105KW Fuel Storage Basin.
- Continue activities for upgrading the 105KW heating, ventilation, and cooling system.
- Continue preliminary design and characterization activities for disposition of the 105KE Reactor.
- Continue remediating soil from waste sites.