



Weekly Progress



AMERICAN RECOVERY & REINVESTMENT ACT

Week Ending August 26, 2011



CHPRC-01527

Contract DE-AC06-08RL14788
Modification MO47

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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 critical environmental cleanup across the Central Plateau and the 100K Area along the Columbia River to help pursue the U.S. Department of Energy (DOE) “2015 Vision” to shrink the Hanford Site cleanup footprint.

RL-0011 PLUTONIUM FINISHING PLANT D&D

CHPRC is accelerating critical decontamination and decommissioning work to cleanout and prepare the Plutonium Finishing Plant (PFP) for demolition ahead of the Tri-Party Agreement milestone of September 2016.

RL-0013 SOLID WASTE STABILIZATION & DISPOSITION

CHPRC is accelerating cleanup of Hanford’s legacy waste and fuels, including retrieving, repackaging, and shipping transuranic (TRU) waste and shipping mixed low-level waste (MLLW) and low-level waste (LLW) for treatment and/or disposal.

RL-0030 SOIL & GROUNDWATER REMEDIATION

In the ongoing effort to protect the Columbia River, CHPRC is constructing two groundwater treatment facilities; installing 265 wells for monitoring, extracting, and remediating groundwater; and decommissioning 280 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 remediating 24 waste sites and decommissioning and demolishing (D&D) 34 facilities to reduce mortgage, surveillance, and maintenance costs on buildings that are no longer of service. The scope also includes cleanup along the outermost edges of the Hanford Site at the Arid Lands Ecology (ALE) Reserve and North Slope, preparing the U Plant for a first-of-its-kind canyon demolition, and preparing to disposition radioactive railcars in the 200 North Area.

RL-0041 100K AREA REMEDIATION

CHPRC is demolishing 15 reactor support facilities and sampling and/or remediating 23 waste sites to shrink the cleanup footprint of two reactors, K East and K West, located in the 100K Area along the Columbia River.

For More Information

To find out more about Recovery Act progress at the Hanford Site, visit www.hanford.gov/recovery.

For information about CHPRC, including weekly Recovery Act newsletters and videos, visit www.plateauremediation.hanford.gov or contact chprcc@rl.gov.

SUMMARY

The following chart outlines CHPRC’s progress on its main Recovery Act work goals. Progress on subprojects and other Recovery Act-funded activities are detailed throughout this report and accompanied by a short progress video available on www.youtube.com/hanfordplateau.

PLUTONIUM FINISHING PLANT D&D



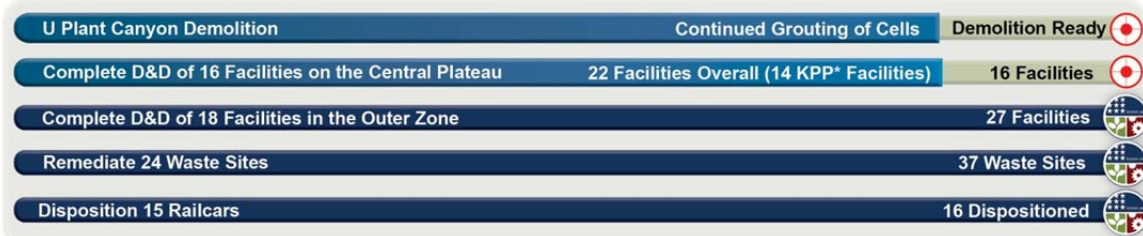
SOLID WASTE STABILIZATION & DISPOSITION



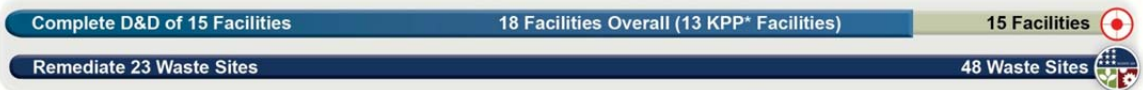
SOIL & GROUNDWATER REMEDIATION



NUCLEAR FACILITY D&D



100K AREA REMEDIATION



*Key Performance Parameters (KPP) are specific items (wells, buildings, etc.) included in the Target. "Overall" indicates the total number completed with Recovery Act funds. "Completed" marks that CH2M HILL has completed a KPP.

ACCOMPLISHMENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

ACTIVITY	PFP WASTE REMOVAL & DISPOSITION	
	<i>Week of August 26, 2011</i>	<i>Completed to Date with Recovery Act Funding</i>
KPP-1, Lab & Process Areas Ready for Demo		
Gloveboxes/hoods removed or dispositioned in place	-	130 gloveboxes/hoods
Add'l gloveboxes ready for removal/size reduction	-	1 gloveboxes/hoods
MLLW/LLW shipped	7 m ³	2,856 m ³
TRU shipped	2	667 m ³
Non-radioactive waste shipped	-	28 m ³
Process transfer line removed	45 feet	581 feet
Process vacuum system piping removed	-	1,210 feet
Asbestos removed	64 feet	15,063 feet
KPP-2 Fuel Vaults, Buildings Ready for Demo		
Fuel vaults and ancillary buildings ready for demo	1 structure	28 structures
Ancillary buildings/structures removed or demolished	-	20 structures

Process and Laboratory Areas

Final area cleanout continued throughout the four 234-5Z laboratory and vault areas, including the Standards Laboratory, Analytical Laboratories, Plutonium Process Support Laboratory (PPSL), and the backside vault rooms. Two additional rooms were declared as achieving the Key Performance Parameter (KPP) completion criteria, Room 148 in the Analytical Laboratories and Room 180 in PPSL. Thirteen of the 47 rooms in these areas have now been declared and posted KPP-complete.

External isolations, process equipment removal, and decontamination continued on the 47 gloveboxes that remain in 10 of the 22 rooms in the former RMA and RMC Line process areas.

In the RMA Line, chemical decontamination with Aspigel® was completed on the four HA-14 gloveboxes that remain in Room 235A-1, and preparations were made to paint the interior of the boxes to fix the residual contamination before they are removed from building ventilation. Chemical decontamination continued on large glovebox HA-23S in Room 235B, and non-destructive assay (NDA) measurements were completed to assist in targeting the next round of decontamination on the remaining hot spots. Work continued in Room 235B on removing overhead piping and ductwork near HA-23S to support rigging that will be needed to separate this 20,000-pound glovebox into two sections. In Room 235A-3, one team began removal of process transfer lines from large glovebox HA-7A, while another team began gross decontamination on several of the HA-8 and HA-9 gloveboxes, where much of the internal process equipment has been removed.

In the RMC Line, process equipment removal is complete on glovebox HC-10 and the first section of the HC-1 conveyor glovebox in Room 228A. The boxes were wiped down, and NDA measurements were taken to support decisions on the extent of additional decontamination needed. Three drive motors were also removed from under HC-11. Process equipment removal was completed from glovebox HC-21C and the section of the HC-2 conveyor in Room 230A, and the boxes were swept and wiped down in preparation for NDA measurements.

Infrastructure, support systems, and equipment removal

Following discovery of some contaminated filters, the process vacuum system removal team modified their work documents and prepared for the resumption of filter removal from deactivated final Filter Room 311, scheduled to restart on Aug. 29. With slightly over 20 percent of the process vacuum system

pipng removed to date, the team is also working to safely lay-up their former work areas, due to a lack of funding and experienced staff to continue piping removal during the first quarter of fiscal year 2012.

The transfer line removal team removed an additional 45 feet of piping, and is nearly complete with this segment of their work. Following removal of a final 9-10 feet, and with approximately 50 percent of their life cycle scope completed, the team will begin lay-up activities for their work areas next week.

2736-Z/ZB Vault Complex

PFP and CHPRC D&D Project staff made significant progress this week in readying the PFP Vault Complex and adjacent buildings for demolition. The last of the three ancillary buildings, 2721-Z building, was declared fully ready for demolition; the 2736-Z/ZA/ZB vault storage buildings were certified cold and dark; and temporary construction fencing was installed around the perimeter of the complex for site control. Demolition preparation activities are now under way on the three vault structures, with CHPRC D&D planning to demolish all six structures and complete waste load-out by the end of December.



Photo 1

The 2721-Z building at the Plutonium Finishing Plant (PFP) was declared fully ready for demolition. This is the last of the three ancillary buildings to be readied for demolition along with the vault complex at PFP with Recovery Act funds.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: Mixed Low-Level Waste (MLLW)/Low-Level Waste (LLW) Treatment

ACTIVITY	SOLID WASTE STABILIZATION & DISPOSITION
Ship 1,800 m ³ of MLLW/LLW for treatment and disposal	<i>Total Completed with Recovery Act funds</i>
	<ul style="list-style-type: none"> • 1,992 m³ shipped <ul style="list-style-type: none"> ○ 1,628 m³ treated and disposed ○ 364 m³ at offsite treatment facilities awaiting processing. Treatment is scheduled for FY11

One shipment (1.9 m³) of MLLW non-debris from the Central Waste Complex (CWC) was sent to Perma-Fix East (PFE) along with another shipment (0.2 m³) containing a “drop-out” drum from the TRU repackaging activities at Perma-Fix Northeast (PFNW). Both shipments were sent to PFE to undergo thermal treatment and the waste residues will be returned to the Hanford Site for disposal in the mixed waste disposal units (MWDU).

Three additional shipments were made from CWC to PFNW for processing. Two of the shipments (0.416 m³) included LLW debris being sent for volume reduction and radiological stabilization. The third shipment (11.2 m³) included MLLW debris to undergo treatment by macro-encapsulation. The three shipments were transported together with other non-Recovery Act funded shipments from Hanford Site waste generators. The processed waste from these three shipments will also be returned to the Hanford Site for disposal in the MWDUs.



Photo 2

Workers load containers of low-level waste (LLW) onto a flatbed trailer for transportation to Perma-Fix Northwest for processing. The LLW will be volume-reduced and radiologically stabilized to meet disposal criteria at the Hanford Site's mixed waste disposal units.



Photo 3

Workers load containers of mixed low-level waste (MLLW) onto a flatbed for transportation to Perma-Fix Northwest for treatment by macro-encapsulation. The treated MLLW will be returned to the Hanford Site for disposal in the mixed waste disposal units.

RL-0013C:R1.2: Transuranic (TRU) Waste

ACTIVITY	SOLID WASTE STABILIZATION & DISPOSITION <i>Total Completed with Recovery Act funding</i>
Retrieve 2,500 m ³ of suspect TRU waste	<ul style="list-style-type: none"> • 263 m³ are staged, pending shipment • 2,193 m³ shipped to a treatment, storage, or disposal facility
Retrieve 50 m ³ of suspect remote-handled TRU waste	<ul style="list-style-type: none"> • 3 m³ are staged, pending shipment. • 84 m³ shipped to a treatment, storage, or disposal facility

At the 4B burial ground, workers shipped three metal boxes (25.5 m³) from Trench 11 to CWC and three containers (3.2 m³) to the Environmental Restoration and Disposal Facility (ERDF). A portable assay of retrieved drums from Trench 7 was performed in the 4B Process Area pad and 159 drums were removed from Trench 7 Modules 3, 5, 7, and 9 (33.1 m³). Drum venting was performed utilizing the Mobile Drum Venting System (MVDS) in the 4C Process Area pad and the fork pocket fabrication was completed for 4B Trench 11 Box 101 forklift transfer to CWC.

At the 12B burial ground, the last two drums were removed from Trench 27, 12 drums were assayed in the Gamma Assay System, and 55 drums were x-rayed in the Real-Time Radiography System.

TRU Repackaging & Shipments

ACTIVITY	SOLID WASTE STABILIZATION & DISPOSITION <i>Total Completed with Recovery Act funding</i>
Repackage 850 m ³ of WIPP certifiable TRU waste Disposition 2,000 m ³ of contacted-handled TRU waste	<ul style="list-style-type: none"> • 1,154 m³ have been repackaged • 2,314 m³ have been disposed

In conjunction with the Central Characterization Program, five TRUPACT-II shipments left the Hanford Site bound for the Waste Isolation Pilot Plant (WIPP), for a total of 214 shipments completed since shipments resumed in March 2010.

The final WIPP shipment under the current TRU Shipping Campaign will leave the Hanford Site Aug. 31.

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

RL-0030.R1: Central Plateau Soil & Groundwater

ACTIVITY	<i>Complete to Date with Recovery Act funds</i>
Install 265 wells and/or boreholes along the river and in the Central Plateau	303
Decommission 280 old wells and boreholes that are no longer of service	280
Construct the 200 West Groundwater Treatment Facility	94% complete

200 West Groundwater Treatment Facility

Recent construction of the process and transfer facilities included (listed by facility):

- *Process buildings*
 - Radiological Building: Construction Acceptance Testing (CAT) continues for all disciplines. Construction punchlist items continue.
 - Bio-Process Building: In process work continues for all disciplines. Installation of flooring in the administration area is complete. The second shift maintains focus on (critical path) installation of chemical piping in the chemical area.
 - Bio Pad: Installation and CAT continued by all disciplines. Government furnished vapor granular activated carbon was placed on completed concrete penetrating sealed pad.
- *Transfer buildings*
 - Extraction Building #1: Construction punchlist items continued. Acceptance Test Procedure continued.
 - Extraction Building #2: Construction punchlist items continued. CAT is complete.
 - Injection Building #1: Construction punchlist items continued. CAT is complete.
 - Injection Building #2: Construction punchlist items continued. CAT short list tracking is in progress.



Photo 4

High-density polyethylene piping from extraction and injection wells en route to the 200 West Groundwater Treatment Facility.

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

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

CENTRAL PLATEAU FACILITIES DEMOLISHED WITH RECOVERY ACT FUNDS

- 211U Cold Chemical Makeup Tank Farm
- 211UA Cold Chemical Makeup Tank Farm Addition
- 203UX Gas Storage Facility
- 2701M Office Bldg
- 272E Fabrication, Mockup Shop Bldg
- 2716E Power Maintenance Storage Bldg
- 2722W Welding Laboratory Bldg
- 224UA UO3 Calcination/Load-out Facility
- 2710W Coal Handlers Shed*
- 2701EC 209E Guard Station*
- 2902E Water Storage Tank*
- 2734EA Gas Cylinder Storage Bldg
- 275E Carpenter Shop Bldg
- MO104 Mobile Office
- MO405 Mobile Office
- MO840 Mobile Office
- X8 Motor Car Shed
- 224U UO3 Plant Concentration/Load-out Bldg
- 284WB Package Boiler Plant
- 209EA 90 Day Storage Pad*
- 2902W Water Storage Tank*
- 284E Power House & Steam Plant

TOTAL: 170,926 square feet

PLANNED FOR D&D/IN PROGRESS

- 209E Critical Mass Laboratory
- 284W Power House & Steam Plant
- 2718E 209E Fissile Material Storage*

*Not part of the Key Performance Parameter

U Canyon

CHPRC and subcontractors AGECE and Central Pre-Mix poured another 1,482 cubic yards of grout into U Canyon void spaces. In total, grouting has now reached 81.2 percent, with 18,176 cubic yards poured of a planned total of 22,381.



Photo 5

Grout operations have filled 81.2 percent of U Canyon void spaces with grout, placing 18,176 cubic yards of a planned total of 22,381 cubic yards.

200 West Area Industrial Facilities

Asbestos abatement continued on the 284-W Power House building's second floor in a mass containment inside the structure. Abatement of the first, third, fourth and fifth floors is complete.

209-E Criticality Mass Laboratory

CHPRC crews continued size reducing and removing slab tanks from the 209-E facility. Upon removal of all 11 tanks, the 209-E facility will be downgraded to a Less Than Hazard Category 3 (non-nuclear) facility and demolished.

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

OUTER ZONE FACILITIES DEMOLISHED WITH RECOVERY ACT FUNDS

212N Storage Building
212P Electrical Storage & Transformer Shop
212R Storage Building

6652M Fallout Laboratory
6652R Acid Storage Shed
6652C Space Science Laboratory



614 Monitor Station	6652CSHED Storage Building
646 Radioecology Field Laboratory	6652D Pump House
6652G ALE Field Storage Building	6652T Fire Protection Lower Pump House
6652H ALE Laboratory 1	6652U Rattlesnake Mountain Upper Pump House
6652I ALE Headquarters	623A Plant Radio Relay Bldg
6652J ALE Laboratory II	T520-6 Navy MARS Radio Station
6652S Sentry Shed*	6631 Radio Telescope Pedestal*
6634 ENW Tower and Building*	6630 Hodges Well Pumphouse*
6635 Crown Castle/Cingular Tower and Building*	6636 Columbia Communication Tower and Building*
6637 Tri City Amateur Radio Tower and Building*	6633 Franklin County Communication Building*
6632 Verizon Telephone Enclosure*	TOTAL: 62,748 square feet

*Not part of the Key Performance Parameter

North Slope Debris Removal

CHPRC crews have completed cleanup of debris sites in Areas 10-18 of the Hanford Reach National Monument, completing North Slope debris cleanup ahead of the Sept. 30, 2011 deadline. Decommissioning of two wells remains.

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

All railcars have been removed from the 212-N site, with demobilization under way.

Waste Sites

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

- **200-MG-1**
 - 216-S-19: Excavation is finished and verification samples were collected with results expected this week.
 - 216-S-26: A backfill concurrence form has been approved and signed and backfill has begun. Backfill will conclude next week.
 - 600-281: Backfill is complete.
 - 600-49: Closure documents are complete and the reclassification form has been signed.
 - 600-228: A backfill concurrence form has been approved and signed with backfill planned for next week.
- **BC Control Area**
 - Excavation of Zone A and removal of the stockpile to ERDF is complete. A cumulative total of ~ 483,000 tons of soil has been deposited at ERDF. A Draft A On-Scene Coordinator Report has been delivered for review and comment.

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

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

100K AREA FACILITIES DEMOLISHED WITH RECOVERY ACT FUNDS

- 183KW Chlorine Vault
- 183.1KW Headhouse
- 183.2KW Sedimentation Basin
- 183.3KW Filter Basin
- 183.7KW Pipe Tunnel
- 110KE Gas Storage Facility
- 110KW Gas Storage Facility
- 1605KE Guard House
- 1605KW Guard House
- 116KE Reactor Exhaust Stack
- 118KE Horizontal Control Rod Storage
- MO048 Construction Lunch Trailer
- MO969 Ops/HPT Change Trailer
- 115KE Gas Recirculation
- 185K Potable Water Treatment Plant
- 117KE Exhaust Air Filter Bldg
- 1717K Maintenance Shop
- 1717AKE Electrical Storage Shed

TOTAL: 441,284 square feet

PLANNED FOR D&D/IN PROGRESS

- 183.1KE Headhouse
- 183.3KE Filter Basin
- 183.4KE Clearwell
- 181KW River Pump House
- 190KW Main Pump House
- 1720K Administrative Bldg.
- 190KE Main Pump House
- 181KE River Pump House
- 183.4KW Clearwell

Facility D&D

CHPRC D&D crews began demolition of the 1720-K Main Administrative Office Building at the entrance to the 100K Area, the final building scheduled for demolition in fiscal year 2011 and the 26th building demolished or at ground level in the area with Recovery Act funds. Demolition continued on the 183.1-KE Headhouse chemical storage tanks, the 190-KE Main Pump House, and the east side of the 183.3-KE Filter Basins. Demolition of the west side of the Filter Basins, the 1717-K Maintenance Shop, and the 1717-AKE Electrical Storage Shed is complete, with loadout ongoing. Demolition of the 181-KW and 181-KE River Pumphouses is also complete, with rock from approved sources scheduled to be placed this week as part of the re-contouring of the 100K shoreline at both sites. CHPRC also completed loading and disposal of the size-reduced 181-KE and 181-KW pumps, delivering them to ERDF.



Photo 6

CHPRC D&D crews begin demolishing the 1720-K Main Administrative Office Building at the entrance to the 100K Area, the final building scheduled for demolition in fiscal year 2011.



An operator lifts debris from the demolition of the 1720-K Main Administrative Office Building at the entrance to the 100K Area.

Photo 7



Photo 8

The site of the former 1720-K Main Administrative Office Building – and the 100K Area’s main entrance – after two days of demolition and loadout.



Photo 9

CHPRC crews load the size-reduced pumps from the 181-KE and 181-KW River Pumphouses for disposal at the Environmental Restoration and Disposal Facility.

Waste Sites

RL-41 waste sites have been transferred to Base funding. Confirmatory sampling was conducted on waste site 100-K-63, remediated previously with Recovery Act funds, in anticipation of its closure.



Photo 10

Confirmatory sampling was conducted on waste site 100-K-63, remediated previously with Recovery Act funds, in anticipation of its closure.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

- Complete demo-ready actions for 2736-Z, ZA, and ZB buildings, and initiate demolition of the PFP vault complex and two ancillary buildings.
- Complete final area cleanout in the Standards, Analytical, and Plutonium Process Support Laboratories and the 234-5Z vault rooms.
- D&D the remaining gloveboxes in the RMA/RMC Line process areas.
- Remove 112 contaminated HEPA filters from deactivated filter room 311 in 234-5Z building.
- Complete temporary lay up of work areas where process vacuum piping and process transfer lines were previously being removed.
- Continue removing asbestos insulation from throughout 234-5Z building as resources are available.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

- Three MLLW shipments (29.4 m³) planned from the Waste Retrieval Project to PFNW.

RL-0013C:R1.2: TRU Waste

- TRU Retrieval
 - 4B/4C burial ground
 - Perform ground-penetrating radar scan in Trench 11 of the 4B burial ground to validate the completion of container removal.
 - Continue excavation and removal of drums from Modules 3, 5, 7-9 in Trench 7 of the 4B burial ground.
 - Continue to assay removed drums from Trench 7 of the 4B burial ground.
 - Vent TRU drums at the 4C Process Area in the MDVS and load the drums into SWBs in preparation for shipment.
 - Ship containers from Trench 11 of the 4B burial ground to PFNW and CWC.
 - 12B burial ground
 - Continue processing, shipping and close-out activities.
- TRU Repackaging and Shipments
 - Three planned shipments.
- Suspect TRU Waste Shipments
 - No planned shipments

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

RL-0030.R1: Central Plateau Soil & Groundwater

- Continue construction of the 200 West Groundwater Treatment Facility.

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

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

- Continue pouring grout into U Canyon cells.
- Continue size-reduction of slab tanks inside the 209-E Criticality Mass Laboratory.
- Continue asbestos abatement inside the 284-W Power House.

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

- Continue planning for and remediating 200-MG-1 waste sites.

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

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

- Continue demolition of 190-KE Main Pump House.
- Continue demolition and loadout of the 183.3-KE Filter Basins.
- Place rock from approved sources at the sites of the demolished 181-KE and 181-KW River Pumphouses.