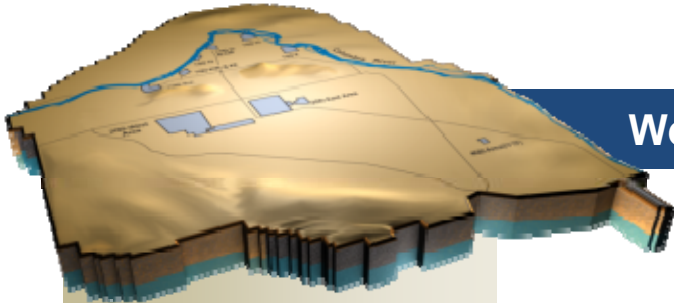


ARRA Weekly Report



Week Ending December 10, 2010

Note: Information for weeks ending Dec. 17-31 will be included in the Jan. 4 report.

December 14, 2010
Contract DE-AC06-08RL14788
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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 174 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 m³ of suspect transuranic (TRU) waste, eliminate 1,800 m³ 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 265 wells that will be used for monitoring, extracting, and remediating groundwater, and decommission 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 accelerating the demolition of 34 facilities to reduce mortgage costs on buildings that are no longer of service and complete the remediation of 24 waste sites.

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

In the 100K Area along the Columbia River, CHPRC is demolishing 15 buildings and sampling and/or remediating 23 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

Three glove boxes were removed last week, bringing the total number of glove boxes removed with Recovery Act funds to 89. These included the last of six glove boxes and laboratory hoods from room 139 of the Analytical Laboratory and the last of five process glove boxes in room 230C of the former RMA process line. Seven glove boxes and hoods were shipped from PFP for disposal, six to the Environmental Restoration Disposal Facility (ERDF) for onsite disposal as LLW and one to the Waste Receiving and Packaging (WRAP) facility for offsite disposal as TRU waste.

A new decontamination agent, Aspigel®, was deployed for the first time on glove boxes HA-19B1 and B2 in an effort to reduce the number of boxes projected to require size reduction and disposal as TRU waste.

Structures, equipment, waste disposition	Total to Date (since April 2009)
Glove boxes/hoods removed	89 glove boxes/hoods
MLLW/LLW shipped	2,194 m ³
TRU shipped	255 m ³
Non-radioactive waste shipped	22 m ³
Process transfer line removed	268 feet
Process vacuum system piping removed	451 feet
Asbestos removed	12,163 feet
Ancillary structures ready for demolition	22 fuel vaults & ancillary buildings prepared for demolition

Laboratory & Processing Areas

The last glove box was removed from room 139 of the Analytical Laboratory and staged for size reduction. Cleanout of the last four hoods in room 144 was completed, and two of the hoods were isolated from building ventilation in preparation for removal. In adjacent room 143, work continued to drain water and chemical lines and to isolate the five hoods in the room from external utilities. In the Plutonium Process Development Laboratory, drain line headers were removed and electrical isolations continued to support D&D of nine glove boxes in room 179.

In the former Radioactive Acid Digestion Test Unit area, glove box 100A was removed and transferred to waste operations for disposal as LLW. Large glove box HC-230C-3, which was previously cut into two sections, was removed from the RMC Line and transferred to waste operations for non-destructive assay. Radiological surveys indicate one section may be able to be disposed of as LLW; the larger of the two sections will likely have to be staged for size reduction and disposal as TRU waste. Also in the RMC Line, preparations were initiated for cleanout and isolation of the HC-3 and HC-4 conveyor glove boxes.

In the RMA Line, one crew completed the first application of Aspigel® to glove boxes HA-19B1 and B2. Aspigel® is being evaluated for use as an alternate decontamination process. A crew also successfully separated the first section of the 70-foot-long conveyor glove box, HA-28, from building ventilation. A second section of the conveyor must also be removed to provide an egress route for removal of glove boxes HA-22 and HA-22I, which are scheduled to be complete by the end of December.



Photo 1

Glove box HC-60 is loaded into a shipping container by the Plutonium Finishing Plant Environmental and Waste Organization. The glove box was one of seven shipped from the Plutonium Finishing Plant last week.

2736-Z/ZB Vault Complex

Glove boxes 642-D and 642-E, previously removed from the 2736-ZB building and staged in 2736-ZC, were transferred to waste operations for disposal as LLW. Additional chemical decontamination was initiated on several areas of higher residual contamination within glove box 642-C. Based on criticality safety analysis of updated non-destructive assay measurements, a criticality event in the four-building PFP vault complex was declared an incredible event, which will permit deactivation of the criticality detection system and the relaxation of some work controls.

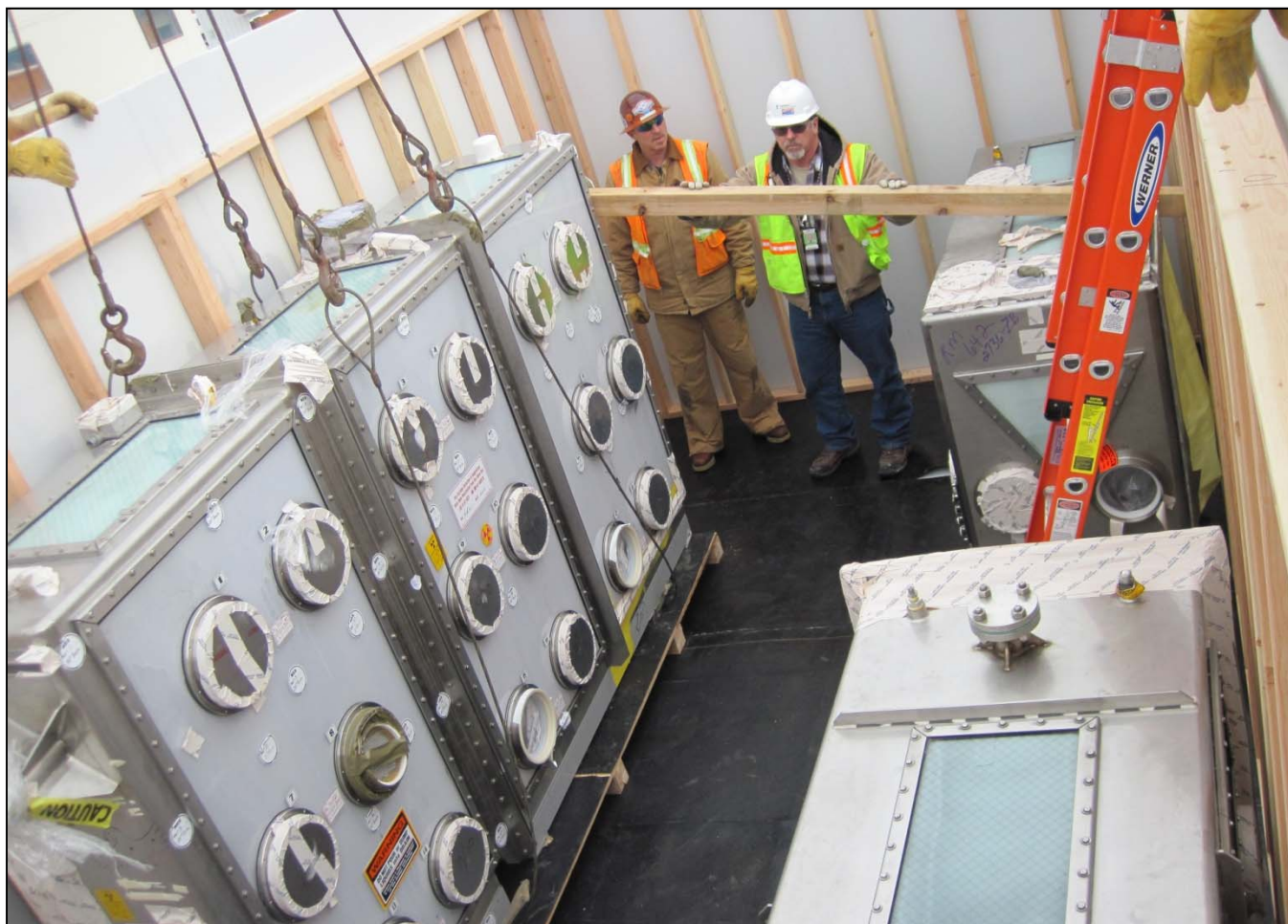


Photo 2

Carpenters install stabilization beams in an IP-2 shipping container to ensure safe shipment of glove box 230C-4 and glove boxes 642-D and- E.

242-Z Americium Recovery Facility

The 242-Z D&D team removed lead shielding from glove box WT-2 and collected dose rate readings to support D&D planning for the adjacent WT-3 glove box. The team also recorded the last of the ventilation measurements required to support planned work within the building.

Infrastructure, process support systems, and equipment removal

Work was initiated on removal of the second segment of highly contaminated process vacuum piping in the 234-5Z building, with 27 feet of pipe removed and size reduced. Another crew continued preparations to begin removal of the third segment of process transfer lines. Insulator crews removed asbestos from 115 feet of piping in the 234-5Z building this week, bringing the total linear footage completed at PFP with Recovery Act funds to 12,163 feet. Approximately 60 cubic meters of waste was shipped from PFP this week, including 39 cubic meters of LLW (six glove boxes) shipped to the ERDF and 21 cubic meters of TRU waste (12 standard waste boxes, including one glove box) shipped to WRAP.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: Mixed low-level waste (MLLW) Treatment

Of the 1,800 m³ of MLLW and LLW planned for shipment under the Recovery Act:

- 1,074 m³ of MLLW and LLW have been shipped to date including:
 - 965 m³ that have been treated and disposed.
 - 109 m³ at offsite treatment facilities awaiting processing. Treatment is scheduled for FY11.

Two shipments went out this week from the Central Waste Complex (CWC) to Perma-Fix Northwest (PFNW). The first shipment was sent on Dec. 7 and the second on Dec. 9. Both shipments contained one drum (0.2 m³) of MLLW non-debris that will be non-thermally treated by stabilization and packaged for disposal in Hanford's Mixed Waste Disposal Units.

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

Of the 2,500 m³ of suspect TRU waste planned for retrieval under the Recovery Act:

- 191 m³ are staged, pending shipment.
- 758 m³ have been shipped to a treatment, storage, or disposal facility.

In Trench 17 of 3A burial ground, workers retrieved Box 16, completed the excavation of the west ramp for access to Box 13, and continued excavating the north side of containers. Workers also excavated, retrieved, and over-packed Box 28 and excavated Box 24, both from Trench 8. Excavation continued on the two remaining boxes in Trench 8. The work package for removing Box 24 in Trench 8 was completed as was the assay of five previously removed Trench 8 containers.

In the 12B burial ground, workers completed the calibration, confirmation, and verification of the passive/active neutron assay system. They also validated and approved the remaining operating procedures for the next generation retrieval (NGR) project.



Photo 3

Box 28 is loaded into a new over-pack container in Trench 8 of the 3A burial ground. The over-pack container protects the box of transuranic waste as it is lifted from the trench.

TRU Project Drum Repackaging

Of the 850 m³ planned to be characterized and repackaged with funding from the Recovery Act:

- 1,950 drums (405.6 m³) have been repackaged.
- 107 TRUPACT-II shipments [1,316 55-gallon drums, 24 standard waste boxes (SWBs), two ten-drum over-packs (TDOPs), 564 85-gallon over-packs and 456 drums over-packed into 130 SWBs (533.2 m³ total)] have been shipped.



Photo 4

Workers verify labeling on a ten-drum over-pack prior to shipment as part of the TRUPACT-II shipment bound for the Waste Isolation Pilot Plant. Since resuming shipments in March 2010 – an accomplishment made possible with Recovery Act funds – CHPRC has completed over 100 shipments from the Hanford Site.



Photo 5

A driver verifies TRUPACT-II shipment paperwork prior to the shipment leaving the Hanford Site.

Suspect TRU Waste Shipments

Of 637 m³ of low-gram, large box TRU mixed waste planned for repackaging under the Recovery Act:

- 243.4 m³ have been shipped to date (40 m³ were shipped using Base funding).
- 152.1 m³ have been repackaged.

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

RL-0030.R1: Central Plateau Soil & Groundwater

Well Drilling & Decommissioning

The following table showcases CHPRC's recent progress in well drilling and decommissioning.

Operable Unit	Scope (Wells to be drilled with Recovery Act funding)	In progress	Drilled to Total Depth ¹	Completed or Developed ²
100-BC-5	Support characterization and removal of chromium (6 wells)	4	3	2
100-KR-4	Support characterization of the vadose zone and aquifer (13 wells)	10	8	6
100-HR-3	H Area: Support the optimization of removal of chromium (40 wells)	40	40	37
100-HR-3	H Area: Remedial Investigation/Feasibility Study Hanford Formation (15 wells)	9	8	4
100-FR-3	Support for Remedial Investigation/Feasibility Study characterization (3 wells)	3	2	2
200-ZP-1	Support the 200 West Groundwater Treatment Facility that will primarily treat carbon tetrachloride contamination in the groundwater (17 wells)	17	16	15
300-FF-5	Support characterization of the aquifer (11 wells)	7	6	4
Site-wide	Decommission wells that are no longer of service ³			176

¹ Wells are drilled to varying depths to address contaminants at different depths in the soil.² 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.³ 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.*200W Groundwater Treatment Facility*

The project poured approximately 800 cubic yards of concrete, bringing the project-to-date total to approximately 6,600 cubic yards placed of the estimated 9,000 cubic yards of concrete. For the facility's main process buildings, subcontractor Skanska USA Build Inc. and its subcontractors completed chlorination testing for the sanitary water line and installed sheet metal panels (to all but the open south end) for the Radiological Building, resumed structural steel erection on swing shift for the Bio-Process Building, and began installation of the structural steel access stairways for air stripper towers located on the Bio Pad.

Activities for the transfer buildings under construction by subcontractor George A. Grant Construction included (listed by building):

- Extraction #1: A fiberglass tank has been set. The north wall is complete. Mechanical build-out piping fabrication was initiated.
- Extraction #2: Two fiberglass tanks were installed.
- Injection #1: Structural steel is complete. The tank pad is curing and the tank was delivered.
- Injection #2: The second of two slabs on-grade pours were completed. A tank was delivered.

Long lead equipment for the facility is starting to arrive, including:

- Two pump skids
- Final shipment of Supersacks for carbon media
- MBR units #1 and #2
- Two IX Exchange Trains
- 11 tanks.



Photo 6

A fiberglass tank is hoisted for placement in an extraction building for the 200 West Groundwater Treatment Facility.

DX Groundwater Treatment Facility

Construction and acceptance testing of the DX facility is nearly complete. Activities for the process building included installation of replacement control modules, installation of spray shields at the acid and caustic tank valves and flanges, insulation of caustic tank lines, electrical and water purveyor inspection of the outside safety showers, and modifications to the manway access point on the acid feed tank. The caustic solution (50 percent Sodium Hydroxide) was offloaded on Dec. 2 . The caustic solution is used for adjusting the pH of the effluent prior to injection into the aquifer.



Photo 7

The exterior of the DX Groundwater Treatment Facility. The structures adjacent to the main facility are the acid and caustic storage and metering systems.



Photo 8

An interior view of the main process building for the DX Groundwater Treatment Facility from the floor level showing equipment installed and nearly ready for operations.

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

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

U Canyon

During the past week several activities in support of upcoming grout endeavors have been initiated. Core drilling started through the 3-foot walls of the 271-U building. Work also started on material staging areas and the haul road needed for batch plant operation. The work on the area prepared for receiving the 100K sedimentation material is complete. Walk-downs are in progress to identify conduits that need to be removed for bulkhead installation. Excavations were performed to gain access to the water header so that a tie-in can be made for the batch plant. Grout conveyance equipment continues to arrive on site. The shipping cask for transfer of the D-10 tank in Cell 30 of U Plant will arrive on site next week.

U Plant Ancillary Facilities

Final survey and equipment contamination continued at the site of the former 224-U/UA buildings.

200 East Core Industrial Area

Asbestos abatement continued at the 284-E Powerhouse, one of the last and largest buildings in the 200 East Area CHPRC plans to demolish with Recovery Act funding.

200 West Area Industrial Facilities

CHPRC began demolition of the 284-WB Package Boiler Plant this week. Workers continue to pump diesel fuel from the facility's diesel tank in preparation for demolition.



Photo 9

Demolition of the 284-WB Package Boiler Plant begins in the 200 West Area of the Hanford Site.



Photo 10

A field work supervisor discusses upcoming demolition of the 284-WB Package Boiler Plant diesel tank.

209-E Criticality Mass Laboratory

Non-destructive assay was performed on the tanks, hoods, pipes, and process equipment. Visual inspection of the tanks continue to be performed to ensure that they are dry. Readiness activities are complete. Work began for the removal of the HO-00 glove box and equipment. A standard waste box was loaded with TRU/potential TRU waste from the Criticality Assembly and Mix Rooms. Asbestos abatement began in the Criticality Assembly and Mix Rooms.

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

Arid Lands Ecology Reserve (ALE) D&D

CHPRC's Recovery Act-funded cleanup is complete on the Arid Lands Ecology (ALE) Reserve, an accomplishment that will reduce the cleanup footprint on the Hanford Site by 115 square miles. Over the past year, CHPRC demolished 24 excess structures and removed 362 debris sites across the approximately 120-square-mile reserve. One active structure remains at the former Nike missile site, which the Pacific Northwest Site Office uses to conduct seismic research, and is not part of the cleanup footprint.

North Slope Debris Removal

Personnel with CHPRC subcontractor Sealaska Environmental Services continued cleanup of debris sites.

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

Documents continued through the review and approval processes. Mobilization for and the visual inspection of the railcars continues as well as the transportation planning for shipments to ERDF.

Waste Sites

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

Waste Site in Progress	Tons of Contaminated Soil Removed	
	<i>Week Ending Dec. 10, 2010</i>	<i>Total to Date</i>
600-286/287-PL	1,839	14,895
200-W-147-PL	1,119	3,022
BC Control Area	8,000	281,000

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

- *200-MG-1*
 - 600-40: Verification sampling was performed; results are being reviewed
 - 600-222: Excavation was completed, removing 57 tons of debris, and verification samples were taken.
 - 216-S-19: Lab results of surface sampling were received and analyzed revealing some elevated levels of contamination above the remedial action level. No action will be taken until direct push testing samples are taken and analyzed.
 - 600-38: Clean fill was stockpiled for backfill.
 - 299-W-147-PL: Excavation is ongoing.
- *200-CW-3*
 - 216-N-4: The remaining site verification package (RSVP) is being prepared. Backfill is being hauled for 216-N-4 and N-6 with approximately 18,000 tons stockpiled.
 - 216-N-6: The RSVP is being prepared. Radiological Operations completed site down-posting.
 - 600-286-PL: Remediation is complete and review of analytical results will be complete next week.
 - 600-287-PL: Work commenced on Dec. 3, 2010.
- *BC Control Area*
 - For Zone A, approximately 105 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

Demolition of the 105KE Reactor discharge chute is complete, leaving only the needed structural support for the reactor building's north wall. Remediation of soil in the area continues.



Photo 11

A radiological control technician surveys exposed soil at the site of the 105KE discharge chute.

Infrastructure Utilities Upgrade Project

Piping modifications and programming of the microfiltration system are complete for the Water Treatment Facility. The preliminary Customer Acceptance Testing (CAT) of the microfiltration system is also complete. A final CAT will be conducted before the plant goes into sustained operations. De-energization of the A-9 substation to complete close-out of punch list items was completed. Drilling of the first two wells to improve substation grounding reached 81 feet of a planned depth of 185 feet. Additional grounding cable was installed between the main grid and the two grounding wells to enable tie-in of the wells once completed.

Waste Sites

CHPRC continued excavating soil from the 100-K-42 waste site and removing the subgrade structures of the 115-KE and 117-KE buildings, all located in the 100K Area of the Hanford Site.



Photo 12

Removal of subgrade structures of the 115KE building continues. CHPRC has removed 241 tons of soil from the site in December.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

- Complete grouting of the first phase of drain line trenches in the 234-5Z building.
- Complete decontamination and remove glove box 642-C, followed by the remaining two glove boxes from room 642 of the 2736-ZB vault support building.
- Complete decontamination of HA-19B1 and B2 with Aspigel® and determine its effectiveness as an alternate decontamination process.
- Remove the second section of the HA-28 conveyor glove box to enable removal of glove boxes HA-22 and HA-21I.
- Initiate size-reduction operations in room 172.
- Expand the contract with PFNW to include treatment and packaging of TRU waste from PFP.
- Initiate chemical decontamination of glove box HA-46 in the RMA Line.
- D&D the final four glove boxes in room 144 and five glove boxes in room 143 of the Analytical Laboratory.

- D&D nine glove boxes in room 179 of the Plutonium Process Support Laboratory.
- Continue removing process vacuum and process transfer piping from throughout the 234-5Z building.
- Begin isolation and cleanout of glove boxes in the 242-Z building.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

- Planned shipment of two drums (0.4 m³) of LLW debris from CWC to PFNW.
- Planned shipment of 14 drums (3.2 m³) of MLLW debris from CWC to PFNW.
- Planned shipment of three boxes (5.4 m³) of LLW debris from CWC to PFNW.

RL-0013C:R1.2: TRU Waste

- TRU Retrieval
 - 3A burial ground:
 - Complete excavation and retrieval of Trench 17 metal Box 17.
 - Complete excavation and retrieval of Trench 8 Boxes 23 and 24.
 - Complete excavation, reinforcement, retrieval, and shoring box for Trench 17 fiberglass-reinforced plywood Box 13.
 - Complete excavation of the north side of Trench 17 Boxes 13-22.
 - Complete removal and shipping work planning for Trench 17 Boxes 17 and 13.
 - 4B/4C burial ground:
 - Reinstall mobile drum venting system (mDVS) preventative maintenance work packages and review/approve operating procedure; the mDVS supports drum removal by the NGR processes.
 - Excavate three feet of overburden from 4B Trench 11 and conduct the second sub-surface geophysical survey.
 - Down-post 4B Trench 11.
 - 12B burial ground:
 - Issue the status and re-start plan for the Trench Face Process System.
 - Declare readiness for the Trench Face Retrieval and Characterization System.
- TRU Repack
 - Six planned TRUPACT-II shipments.
- Suspect TRU Waste Shipments
 - No planned shipments this week.

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

RL-0030.R1: Central Plateau Soil & Groundwater

- Continue construction of the 200 West Groundwater Treatment Facility
- Complete acceptance testing for the DX Groundwater Treatment Facility.
- Continue decommissioning wells across the site.
- Continue drilling at 100-BC-5, 100-HR-3, 100-KR-4, 100-FR-3, 200-ZP-1, and 300-FF-5.

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

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

- Continue drilling and preparation for grouting of the U Canyon cells.
- Arrival of the shipping cask for transfer of the D-10 tank in Cell 30.

- Complete final surveys and equipment decontamination at 224-U/UA buildings sites.
- Continue asbestos abatement and demolition preparations for the 284-E Powerhouse.

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

- Continue Comprehensive Environmental Response, Compensation, and Liability Act of 1980 document review and compilation of characterization information for the railcars in the 200 North Area. Complete visual inspections.
- Continue debris site cleanup on the North Slope.
- Continue remediation of the BC Control Area and backfill preparations for 216-N-4 and -6.

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

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

- Continue demolition on the west side of the 105KE Reactor building.
- Begin asbestos abatement in the 165KE building.
- Continue Infrastructure Utilities Upgrade Project activities.
- Perform Customer Acceptance Testing of the water treatment facility.
- Continue remediating contaminated soil from waste sites.