CH2MHILL
Plateau Remediation Company

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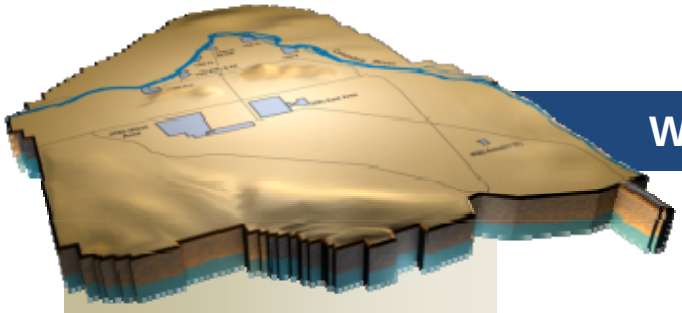
ARRA Weekly Report



Week Ending October 29, 2010

November 2, 2010
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Contents

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 m^3 of suspect transuranic (TRU) waste, eliminate 1,800 m^3 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

More than 15 cubic meters of waste was packaged and shipped from PFP this week, including 23 drums and seven standard waste boxes (SWBs) of TRU waste shipped to the Waste Receiving and Processing Facility and one roll-off box of waste shipped to the Environmental Restoration Disposal Facility (ERDF). One of the SWBs shipped included glove box 137, which was previously cut into two pieces using in-situ size reduction. Glove box 137 was the first to undergo in-situ size reduction at PFP.

Structures, equipment, waste disposition	Total to Date (since April 2009)
Glove boxes/hoods removed	75 glove boxes/hoods
MLLW/LLW shipped	2,094 m^3
TRU shipped	221 m^3
Non-radioactive waste shipped	22 m^3
Process transfer line removed	252 feet
Process vacuum system piping removed	274 feet
Asbestos removed	11,436 feet
Ancillary structures demolished or removed	22 fuel vaults & ancillary buildings prepared for demolition

Photo 1

A shipment of five standard waste boxes bound for the Waste Receiving and Processing Facility leaves the Plutonium Finishing Plant.

Laboratory & Processing Areas

Glove box 144-9 was removed from building ventilation in Room 144 in the analytical laboratories this week, ahead of schedule. Decontamination work continues in Room 139, where crews are working to separate the tightly packed glove boxes and decontaminate between them. In the RMC Line, crews are removing seismic stabilization beams from glove boxes HC-230C-3, C-4, and C-5. All have been removed from building ventilation.

Photo 2

Plutonium Finishing Plant teams are removing and size-reducing iron beams that once surrounded glove box 230C-3 in the RMC process line. The beams surrounded the glove boxes to provide seismic stabilization.

Photo 3

Ironworkers cut through a seismic stabilization beam around glove box 230C-3 to prepare it for removal. The glove box must be removed before glove boxes C-4 and C-5 can be removed.

2736-Z/ZB Vault Complex

Door 491 and its frame were removed this week to allow for the removal of glove box 642-E. The box was removed from Room 642 and placed in Room 636 for non-destructive assay testing.

242-Z Americium Recovery Facility

The 242-Z D&D team took characterization samples from glove boxes 1 and 3. The team is supporting one of the RMA Line D&D teams to prepare for and execute upcoming supplied air entries into the hydrogen fluoride scrubber cell in room 232 of the 234-5Z building. They are also supporting Advanced Dress and Undress training at the HAMMER facility.

Infrastructure, process support systems, and equipment removal

The PFP Tool Crib was relocated, completing the relocation of non-essential personnel from the 234-5Z facility.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

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

- 1,020 m³ of MLLW and LLW have been shipped to date including:
  - 876 m³ that have been treated and disposed.
  - 144 m³ at off-site treatment facilities awaiting processing. Treatment is scheduled for FY11.

One shipment went out this week on Oct. 27 from the Central Waste Complex (CWC) to Perma-Fix Northwest (PFNW). The shipment contained four drums (0.8 m^3) of LLW debris. This waste will be volume-reduced, stabilized, and packaged for disposal in Hanford's Mixed Waste Disposal Units.

Photo 4

Workers at the Central Waste Complex load low-level waste (LLW) containers onto a flatbed trailer in preparation for off-site shipment to Perma-Fix Northwest. The four drums of LLW debris will be shipped along with a non-Recovery Act-funded shipment to increase resource efficiencies.

RL-0013C:R1.2: TRU Waste

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

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

In the 3A burial ground, workers continued excavating the east end of Trench 8 over the remaining boxes. Excavation continued in Trench 17 for the retrieval of Box 12. Two culverts were retrieved and over-packed from Trench 8 and the removal of the last culvert from Trench 8 was planned. Three CONEX containers and 10 new Department of Transportation Type 7A boxes were received to be used for over-packing Trench 8 containers. The assay of Box 33 in Trench 8 was completed.

In the 4B burial ground, the operating procedure and fill/remove water work package for the Mobile Radioactive Decontamination Unit (MDU) was approved. The Hazard Review board meeting was conducted for the *4B Trench 11 Interrogator Excavation of Event Site Work Package 2X-10-04470*, excavation activities related to the work package were completed, and a damaged drum was excavated.

In the 12B burial ground, the acceptance test for the Drum Venting System 3 was completed. The radiological survey Ecology block cave was installed along with the Ecology block shielding walls on the north side for the Gamma Assay System. Source shipments in support of the calibration, confirmation, and verification of the passive/active neutron (PAN) assay system resumed.

Photo 5

A culvert (4 foot by 8 foot) is lifted into a new Department of Transportation Type 7A waste box. The culvert was removed from Trench 17 in the 3A burial ground.

Photo 6

A view of the interior of the Drum Venting System 3 with two venting stations with engineered drum lid restraints shown right. Drums enter from the left on conveyors through the roll-up doors.

TRU Project Drum Repackaging

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

- 1,944 drums (404.4 m³) have been repackaged.
- 96 TRUPACT-II shipments [1,343 55-gallon drums, 24 standard waste boxes (SWBs), two ten-drum over-packs, 456 85-gallon over-packs and 414 drums over-packed into 118 SWBs (507.67 m³ total)] have been shipped.

Suspect TRU Waste Shipments

Of the 637 m³ of suspect TRU waste planned for shipment under the Recovery Act:

- 119.4 m³ have been shipped to date (40 m^3 were shipped using Base funding).
- 109.2 m^3 have been repackaged into WIPP-certifiable packages.

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)	3	2	2
100-KR-4	Support characterization of the vadose zone and aquifer (13 wells)	8	6	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)	3	-	-
100-FR-3	Support for Remedial Investigation/Feasibility Study characterization (3 wells)	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	15	15
300-FF-5	Support characterization of the aquifer (11 wells)	6	4	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.

200 West Groundwater Treatment Facility

Approximately 200 cubic yards of concrete were placed bringing the project-to-date total to approximately 3,400 cubic yards placed. The general contractor, Skanska USA Build Inc., and its subcontractors' construction of the main process buildings included siding activities for the Radiological Building and installation of under slab conduits and grounding as well as forming of pliths/gradebeam and footings for the Bio-Processing Building.

For the four transfer buildings under construction by subcontractor George A. Grant, construction activities included (listed by building):

- Extraction #1: Form work on both tank and pump equipment pads.
- Extraction #2: Installation of C-channels, wall girts, and frame door openings and initiation of siding activities.
- Injection #1: Construction of the structural steel.
- Injection #2: Curing of the sump slab.

Concrete is curing for the building footings for the S/SX extraction building under construction by subcontractor Ojeda Business Ventures LLC.

All nine of the Phase II road crossings are complete. Altogether, only one Phase I road crossings remains to be completed and is on hold pending well drilling activities.

Photo 7

General contractor Skanska USA Build Inc. installs siding on the Radiological Building that will be one of two main process buildings for the 200 West Groundwater Treatment Facility.

DX Groundwater Treatment Facility

Acceptance testing continued. Progress included completed testing of all 33 extraction well pumps and an emergency preparedness drill for the Engineering, Projects, and Construction Project staff prior to delivery of chemicals on site. Electrical and mechanical equipment installation is approximately 90 and 95 percent complete, respectively, for the Chemical Addition building.

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

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

U Canyon

Lead blankets were placed around Cell 30 in anticipation of opening the cell to do preparatory work on the D-10 tank next week. An extension tool has been fabricated to remove and/or cut equipment shafts extending from the open portals of the tank. Contracts are awarded for both the haul road and core drill activities. Asbestos abatement activities continue in the operating gallery as resources are available. A modification to the power supply to accommodate gallery grouting is working. DOE Richland Operations Office review and approval of the documented safety analysis (DSA) is ongoing.

U Plant Ancillary Facilities

Final cleanup from the demolition and debris load-out of the 224-U and 224-UA buildings was initiated.

Photo 8

The site of the former 224-U and 224-UA U Plant ancillary buildings following demolition and debris removal.

200 East Core Industrial Area

Final demobilization is in progress at the site of the former 272-E Fabrication Shop. With the 272-E building removed, demolition efforts are focused on the 284-E Powerhouse complex, one of the last 200 East industrial facilities CHPRC plans to demolish with Recovery Act funding. Concurrently, CHPRC D&D crews are performing asbestos abatement within the Powerhouse, demolishing the Powerhouse crusher house and conveyor system, and planning for the explosive demolition of the Powerhouse stacks.

Photo 9

The site of the former 272-E Fabrication Shop after demolition and debris removal. The approximately 20,700-square-foot building was constructed in 1943 and was used to fabricate and test components for the specialized process equipment used in many of the facilities at Hanford.

200 West Area Industrial Facilities

Planning, characterization, and radiological surveys are ongoing for the six industrial structures planned for demolition. Asbestos abatement is in progress on the exterior of 284-WB Package Boiler Plant.

209-E Criticality Mass Laboratory

Ongoing activities include review of the implementation validation review process, internal inspection of facility tanks, and radiological characterization activities in support of TRU versus non-TRU determinations. Work planning and hazards analysis is being performed for characterizing and removing the glove box and tank.

Photo 10

Workers use a borescope to inspect tanks within glove boxes in the Mix Room of the 209-E Criticality Mass Laboratory.

Photo 11

Workers view the borescope display during tank inspection activities in the 209-E Criticality Mass Laboratory.

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

Arid Lands Ecology Reserve (ALE) D&D
Demolition of the 6633 Franklin County Communications Building continued. Cold and dark isolation and waste characterization continued on the 6632 Verizon Communications Building. The 6633 and 6632 buildings are the last two scheduled for demolition with Recovery Act funding on the ALE Reserve. Debris pile cleanup continued on lower ALE and is nearly complete. Crews and equipment are demobilizing from the work site.

North Slope Debris Removal
Personnel with Sealaska Environmental Services, a subcontractor to CHPRC, are preparing to begin debris site cleanup on the North Slope. Ecological and cultural reviews are in progress for other areas on the North Slope. Debris cleanup continued in Hanford Reach National Monument Areas 15 and 18.

D&D of Railcars Located on the 212-R Rail Spur
The Action Memorandum and the Removal Action Work Plan documents for disposition of the railcars are being routed through regulatory review. Resources are being secured and the work package for visual inspection of the railcars is being finalized.

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 Oct. 29, 2010	*Total to Date*
600-222	150	150
600-286-PL	62	7,687
600-287-PL	1,893	7,327
BC Control Area	5,700	250,000

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

- *200-MG-1*
  - 216-S-26: Additional information was issued to potential vendors for evaluation; vendor selection is ongoing.
  - 600-36: The Remediation Action Report (RAR) is being prepared.
  - 600-222: Field work commenced; additional excavation based on preliminary field measurements is scheduled for the week of Nov. 1, 2010.
  - 600-226: Field work is ongoing.
  - 600-OCL: Retrieve, treat, and disposal activities will commence after completion of 600-286/287-PL activity.
- *200-CW-3*
  - 216-N-4: The RAR is being prepared.
  - 216-N-6: The RAR is being prepared.
  - 600-286-PL: Remediation is complete.
  - 600-287-PL: Remediation is in process with ongoing shipments to ERDF.
- *BC Control Area*
  - For Zone A, approximately 84 acres have been excavated and surveyed. Two pieces of mobile survey equipment were deployed to survey the remediated portion of Zone A to verify attainment of cleanup goals. The technology is similar to that which was deployed via helicopter to survey the BC Control Area in September 2009 prior to excavation. Now, the technology is being deployed on land-based vehicles to traverse Zone A, where CHPRC has been excavating contaminated soil. The equipment will be in operation at the waste site for a two-week period, surveying approximately 70 acres of land. The equipment will help streamline the surveying and closure process by removing the need for workers to spend months in the field carrying equipment typically used to verify cleanup efforts.
  - For Zone B, radiological down-posting surveys are in process.

Photo 12

Remediation crews navigate a mobile survey vehicle across an excavated area of Zone A at the BC Control Area. CHPRC is deploying this and another piece of land-based mobile survey technology at the waste site to collect data that will be used to determine if remediation efforts have been sufficient.

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

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

Facility D&D

Demolition and debris load-out continued on the west side of the 105KE Reactor building. Demolition continued on the 105KE discharge chute and the remaining basin floor at the base of the discharge chute. CHPRC is removing the chute and remaining basin floor to access and remove the contaminated soils underneath.

Photo 13

Debris from demolition on the southwest corner of the 105KE Reactor building prior to being loaded into containers for shipment.

A multi-day design review meeting is being planned and scheduled for November for the preliminary design for disposition of the 105KE Reactor.

At the 105KW Fuel Storage Basin, punch list items are being completed for the facility heating, ventilation, and cooling (HVAC) system upgrades. Bollards are being installed near external components.

Photo 14

Bollards are readied for final installation to protect recently installed equipment near the 105KW Reactor building.

Infrastructure Utilities Upgrade Project

Installation of the fire water and potable water lines in the 100K Area is complete up to the tie-in points. Punch list items are being worked and preparations are being made for connecting the new fire water and potable water lines to the facilities in the 100K Area.

Electrical installation continued at the water treatment building. Items that need to be finished in order to obtain the Building Occupancy Permit are being completed for the water treatment building.

Punch list items are being worked for the A9 Substation Refurbishment.

Waste Sites

CHPRC continued excavating soil from the 100-K-42, 116-KE, 117-KE, 116-KE-1, and 100-K-57 waste sites in the 100K Area.

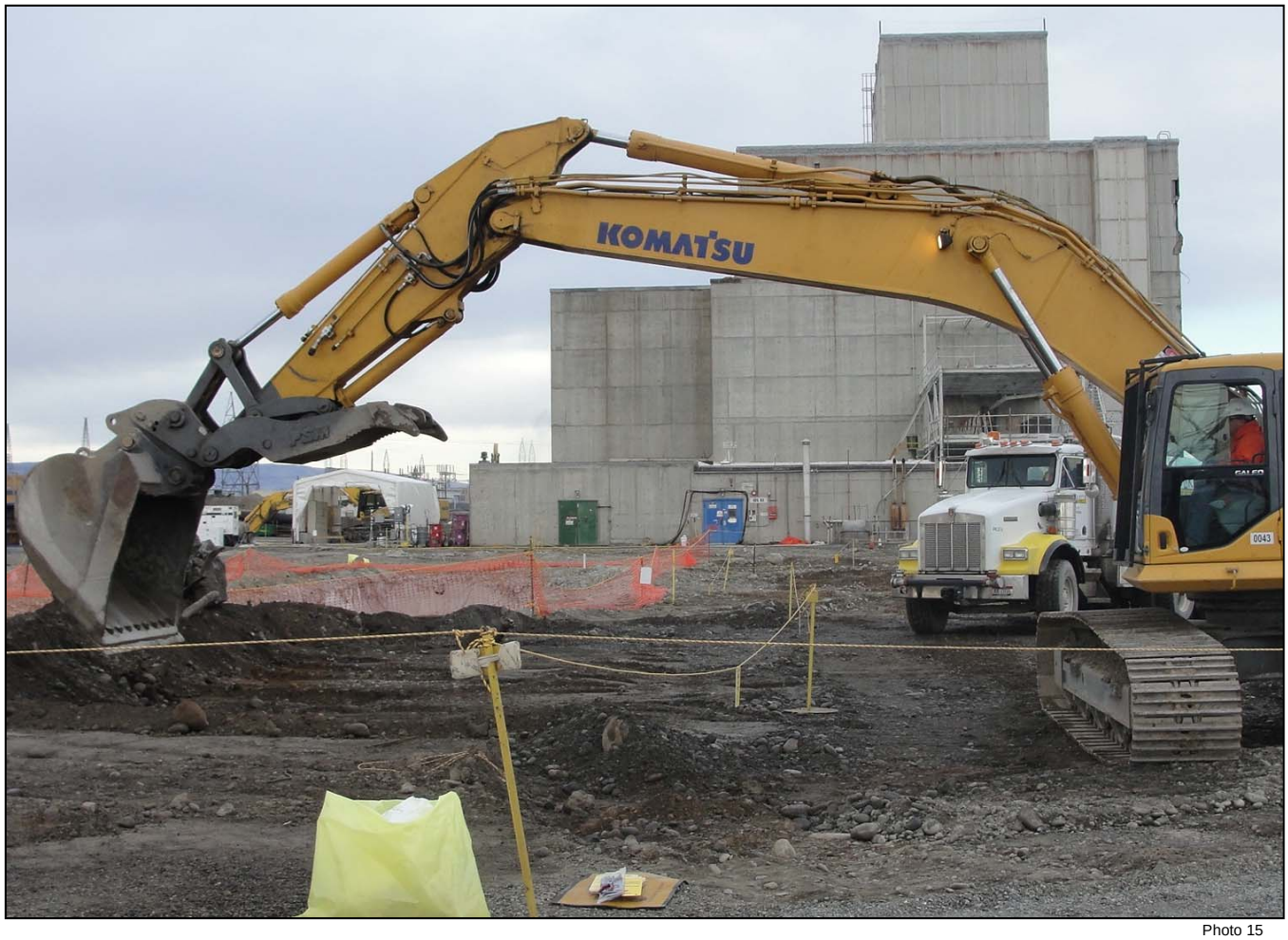

Photo 15

An excavator removes soil from waste sites in the area of the former 115-, 116-, and 117-KE buildings.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

- Remove six hoods in Room 139 and stage them for size reduction.
- Complete grouting of the first phase of drain line trenches in the 234-5Z building.
- Complete disposition of remaining chemicals from Room 144.
- Enlarge the door on Room 144 and transfer glove box 144-9 to waste operations for disposal.
- Complete isolation of glove box 179-5 from building ventilation and remove it from Room 185.
- Initiate process equipment removal from the first three glove boxes in Room 179.
- Isolate and remove the remaining four glove boxes from Room 642 of the 2736-ZB building.
- Remove glove boxes HC-230C-3, -4, and -5 and transfer them to waste operations for disposal.
- Complete external isolations, decontamination, and removal of glove box 100A.
- Authorize use of Aspigel® as an alternate decontamination process and deploy it to the field.
- Initiate chemical decontamination of glove box HA-46.
- Begin isolation and cleanout of glove box WT-2 in 242-Z building.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

- Planned shipment of one box (11.6 m^3) of MLLW debris from CWC to PFNW.

RL-0013C:R1.2: TRU Waste

- TRU Retrieval
  - 3A burial ground:
    - Continue work planning for removal/shipment of Boxes 27 and 13 from Trench 17.
    - Continue excavating Boxes 16-20 in Trench 17.
    - Complete excavation of Box 12 in Trench 17, install structural repairs, assemble shoring box base and lower walls, and remove container.
    - Continue excavation and begin retrieval of remaining Trench 8 boxes.
    - Remove and over-pack remaining culvert from Trench 8.
    - Plan excavation and retrieval of last Trench 8 culvert.
    - Complete assay campaign for removed Trench 8 containers.
  - 4B/4C burial grounds:
    - Conduct 4B Trench 11 retrieval planning meeting.
    - Complete the initial disinfection and filling of the MDU with potable water.
  - 12B burial ground:
    - Complete all remaining construction upgrades.
    - Complete calibration, confirmation, and verification of the PAN system.
    - Complete the operational tests for drum venting system 3 and the operational tests for the real-time radiography/drum warming unit.
    - Validate/approve remaining operating procedures for Next Generation Retrieval.
- TRU Repack
  - No planned TRUPACT-II shipments.
- Suspect TRU Waste Shipments
  - Two 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 and DX Groundwater Treatment Facilities.
- 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

- Complete final surveys, stabilization, grouting of C Cell, and demobilization at 224-U/224-UA.
- Continue asbestos abatement in the U Canyon galleries.
- Continue asbestos abatement and demolition preparations for the 284-E Powerhouse.
- Continue demolition of the crusher house and conveyor building at the 284-E Powerhouse.
- Complete demobilization from the 272-E Fabrication Shop work site.
- Continue preparations for demolition of the 209-E Criticality Mass Laboratory.
- Continue demolition planning, characterization, and asbestos abatement activities for the 200 West Area industrial facilities.

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

- Continue demolition of upper ALE communication facilities.
- Continue debris pile cleanup activities on lower ALE.
- Continue demobilization activities on the ALE Reserve.
- Continue removing debris and processing cultural and ecological reviews for removing debris from the North Slope.
- Continue planning, document preparation, and compilation of characterization information for the railcars in the 200 North Area. Initiate mobilization and set up for visual inspections.
- Continue remediating contaminated soil from waste sites.
- Continue use of mobile survey technology at BC Control Area.

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

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

- Continue with demolition on the west side of the 105KE Reactor building.
- Continue demolition on the 105KE discharge chute and the remaining basin floor at the base of the discharge chute.
- Complete activities for upgrading the 105KW HVAC system.
- Continue preliminary design and review activities for disposition of the 105KE Reactor.
- Continue Infrastructure Utilities Upgrade Project activities.
- Continue remediating contaminated soil from waste sites.