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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

Using the new, more efficient process for removing process vacuum system piping, 110 feet of pipe have been removed within the past two weeks. Insulators removed asbestos from another 245 feet of piping and ductwork, one of their most productive weeks since April 2009. One glove box from the vault complex and two hoods from room 137 of the Analytical Laboratory were shipped to the Waste Receiving and Processing facility for disposal as TRU waste.

Structures, equipment, waste disposition	Total to Date (since April 2009)	
Glove boxes/hoods removed	75 glove boxes/hoods	
MLLW/LLW shipped	2,058 m ³	
TRU shipped	203 m ³	
Non-radioactive waste shipped	22 m³	
Process transfer piping removed	201 feet	
Process vacuum system piping removed	238 feet	
Asbestos removed	11,185 feet	
Ancillary structures demolished or removed	22 fuel vaults & ancillary buildings prepared for demolition	

Laboratory & Processing Areas

Chemical decontamination with RadPro® was completed on three hoods in room 139 of the Analytical Laboratory, and surface contaminated object surveys were completed. Like the first two hoods in the room, none qualified for onsite disposal and all five hoods will need to be size reduced and packaged for disposal as TRU waste. Equipment removal continued on hood 144-9 and large glove box 145-1.

In the Plutonium Process Support Laboratory, the Limited Water Bottle System and glove box heat detectors were deactivated in room 179, and the crew began removing drain lines on glove boxes 179-3, 4, and 5.

In the RMC Line, crews began reactivating glove ports on glove box HC-7A. In the Radioactive Acid Digestion Test Unit area, the crew continued external isolations and asbestos removal on large glove box 200 and began preparations for isolating and removing glove box 100A.

2736-Z/ZB Vault Complex

Removal of the Bagless Transfer System welder from beneath glove box 642-E is under way, along with equipment removal from room 641. Remaining sections of ductwork and filter boxes in room 636 were non-destructively assayed to determine the level of residual contamination in the systems and evaluate whether they need to be removed prior to demolition.





Photo 1

Workers load a laboratory hood removed from the Analytical Laboratory at the Plutonium Finishing Plant into an IP-2 container for shipment offsite for disposal as transuranic waste. The hood is one of four removed recently using Recovery Act funding.

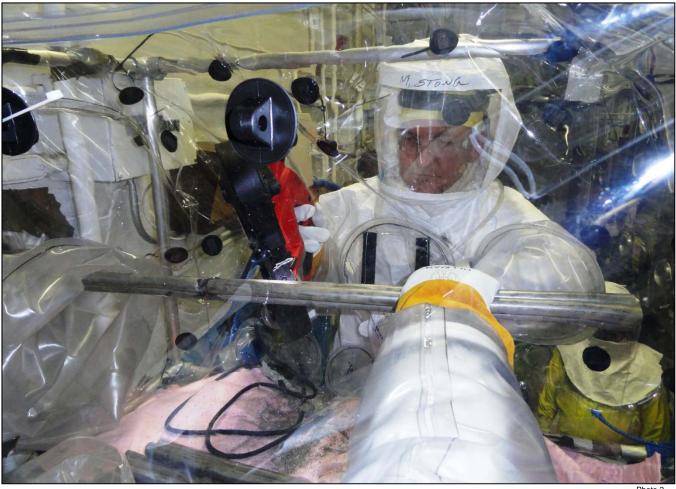
242-Z Americium Recovery Facility

Work was focused on preparations for installating temporary power to the facility and planning for electrically isolating the control room and glove box WT-2. Process equipment removal from WT-2 is scheduled to begin in mid-November.

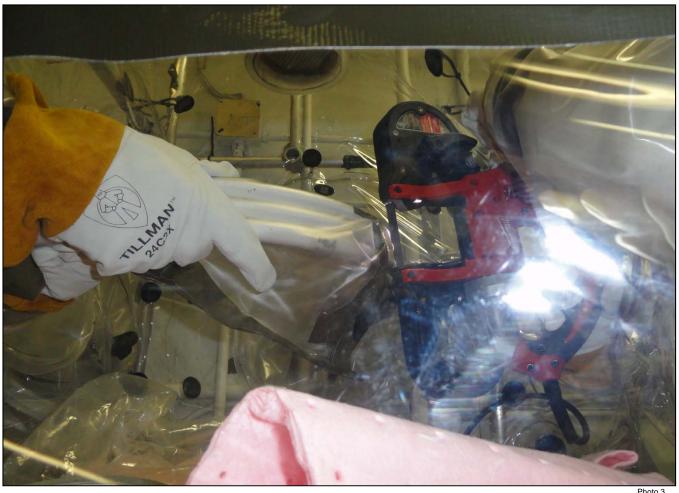
Infrastructure, process support systems, and equipment removal

D&D crews removed nearly 50 feet of process vacuum pipe and 20 feet of transfer lines. The PFP insulators also removed 245 feet of asbestos from piping and ductwork in the 234-5Z building, bringing the total removed with Recovery Act funds to more than 11,000 feet. Preparations were initiated to grout fill the first five of nearly 50 trenches containing the below-grade drain lines servicing PFP's many glove boxes and hoods. The first five trenches are being filled to assure that the floors above them will support the weight of the largest and heaviest glove boxes that need to be removed from the process areas of the 234-5Z building.





Pipefitters size reduce a section of process transfer line inside a containment bag, after pulling it into the room and containment bag from its original location in the connecting hallway. With Recovery Act funding, CHPRC is removing more than 1,100 feet of this highly contaminated piping that runs throughout the Plutonium Finishing Plant.



A close-up of workers cutting a section of process transfer pipe in a containment structure. More than 1,100 feet of transfer line piping run throughout the 234-5Z facility at the Plutonium Finishing Plant.



Photo 4

Workers remove a section of process transfer line piping from a non-standard waste box to be loaded into a standard waste box for shipment and offsite disposal. Since removal of the highly contaminated piping began in late August 2010, CHPRC has used Recovery Act funding to remove approximately 200 feet of the piping.

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:

- 1,013 m³ of MLLW and LLW have been shipped to date including:
 - o 861 m³ that have been treated and disposed.
 - o 152 m³ at off-site treatment facilities awaiting processing. Treatment is scheduled for FY11.

One shipment went out this week on Oct. 14 from the Central Waste Complex (CWC) to Perma-Fix Northwest (PFNW). The shipment contained 13 drums (2.7 m³) of MLLW. This waste will undergo macro-encapsulation and be packaged for disposal in Hanford's Mixed Waste Disposal Units.

RL-0013C:R1.2: TRU Waste

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

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



In the 3A burial ground, two culverts (2.9 m³ each) were excavated for removal from Trench 8. Workers continued excavating the east end of Trench 8 over the remaining boxes while hand and mechanical excavation continued for Trench 17 Box 12 retrieval. A critical lift and other supporting documents were completed for the Trench 17 Box 12 work package. The portable assay was completed for seven containers retrieved from Trench 8. A Hazard Review Board (HRB) preparation meeting was conducted regarding the *Interrogator Excavation of Event Site Work Package 2X-10-04470* for 4B Trench 11. The retrieval plan breakout meeting was conducted for 4B Trench 11.

In the 12B burial ground, the final dressing of the lag storage area north of the asphalt pad was completed along with construction activities for the drum venting system 3 in preparation for installation of the nitrogen bottle and the continuous air monitor. A full-scale dry-run was performed for excavation and removal of horizontally stored waste drums at the Simulation Test Site Trench.

TRU Project Drum Repackaging

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

- 1,867 drums (388.4 m³) have been repackaged.
- 96 TRUPACT-II shipments [1,343 55-gallon drums, 24 standard waste boxes (SWBs), two tendrum 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

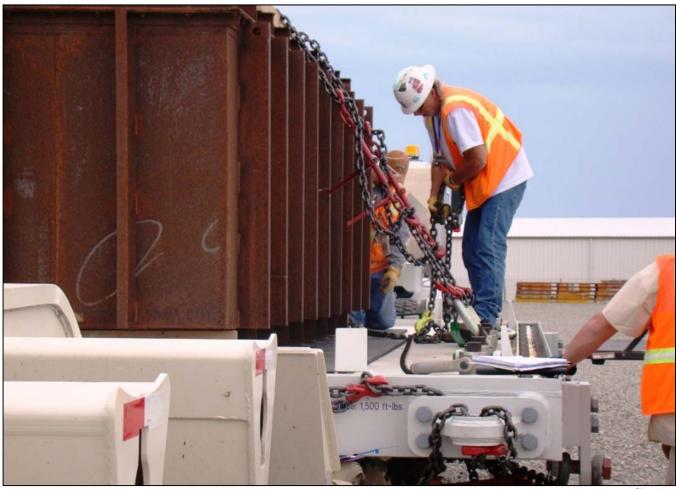
Of the 637 m³ of suspect TRU waste planned for shipment under the Recovery Act:

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





Workers place friction mats on the base plate for the Super Type A shipping container prior to placing the waste package on the base.



Workers secure a transuranic waste box inside the Super Type A shipping container prior to shipment.

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

¹Wells are drilled to varying depths to address contaminants at different depths in the soil.



²When 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.

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 550 cubic yards of concrete were placed for the 200 West Groundwater Treatment Facility, bringing the project-to-date total to approximately 3,200 cubic yards. The general contractor, Skanska USA Build Inc., and their subcontractors completed the steel erection and slab-on grade and began roof sheeting for the Radiological Building. For the four transfer buildings under construction by subcontractor George A. Grant, approximately 50 cubic yards of concrete were placed; sheeting and roof panels were completed for Extraction Building #1; curbs, piers, and slab-on-grade as well as curing and structural steel erection were completed for Extraction Building #2; and the slab-on-grade was completed for Injection Building #1.

Only one of 47 Phase I road crossings remains to be completed. For the nine accelerated Phase II road crossings under construction, eight are complete with one under construction.

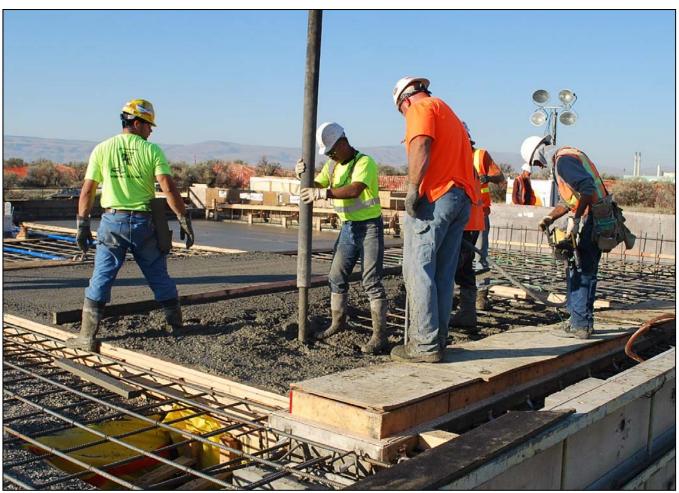


Photo 7

Concrete is placed for the foundation of one of two injection buildings that will support the 200 West Groundwater Treatment Facility.

DX Groundwater Treatment Facility

Acceptance testing continued. Progress also included testing facility heaters, roll-up doors, and the air compressor. Electrical and mechanical equipment installation is approximately 45 and 85 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

Canyon activities centered on replacing the wire rope on the 10-ton hook. Removing the damaged wire rope and reeving the replacement wire rope required numerous canyon entries to complete. Preparations continue in support of closure activities for the D-10 tank in Cell 30. Absorbent material will be placed in the tank and vessel openings will be closed. Shielding is being placed around Cell 30 in anticipation of the tank preparation activities. DOE Richland Operations Office approval is being obtained for the documented safety analysis (DSA) for removal of the D-10 tank. Temporary electrical modifications for grout placement are in progress. Grout preparation efforts continued with a demonstration of grout preparation and flow characteristics presented by the grout provider.

U Plant Ancillary Facilities

Debris from the demolition of the 224-U and 224-UA buildings continues to be size reduced and loaded for disposal at Environmental Restoration Disposal Facility (ERDF).



As of mid-October 2010, most of the debris from demolition of the 224-U and 224-UA U Plant ancillary buildings has been removed from the demolition site and disposed of at the Environmental Restoration Disposal Facility. 224-U and 224-UA were the last of five ancillary facilities adjacent to the U Plant scheduled for demolition with Recovery Act funding.



200 East Core Industrial Area

Final cleanup and demobilization continued at the site of the former 272-E Fabrication Shop. Demolition of the crusher house and conveyor system in the 284-E Powerhouse complex continued. Construction of the asbestos abatement containment in the Powerhouse is complete and asbestos abatement was started. Detailed planning for the explosive demolition of the 284-E Powerhouse stacks is in progress.



Photo 9

Portions of the 284-E Powerhouse crusher and conveyor system are size reduced in preparation for debris load-out. The debris will be loaded into roll-on/roll-off containers and disposed of at the Environmental Restoration Disposal Facility.

200 West Area Industrial Facilities

Planning, characterization, and radiological surveys are ongoing for the six industrial structures planned for demolition. Asbestos abatement continued on the 2902W Elevated Water Storage Tank.

209-E Criticality Mass Laboratory

Work continued on activation of glove ports to support removal activities. The DSA and environmental documents approval is ongoing. Planning continued on the DSA implementation and implementation validation review process pending approval of the DSA. An HRB was completed for the work package for internal inspection of tanks. Repairs were performed on the Critical Assembly Room doors and ramp to support waste removal. A special packaging authorization was approved for shipping contaminated equipment.



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

Arid Lands Ecology Reserve (ALE) D&D

Demolition started on the 623A Plant Radio Relay Building. Cold and dark isolation and waste characterization began on the 6632 Verizon Communications Building. Debris pile cleanup continued on lower ALE; overall debris site cleanup is approximately 98 percent complete. Demobilization activities are ongoing and include relocating materials and equipment to the 200 West Area.



The 623A Plant Radio Relay Building and tower prior to the start of demolition. The building is one of few radio and communications structures remaining on top of Rattlesnake Mountain at the Arid Lands Ecology Reserve.







Guided by cables, the 623A Plant Radio Relay Building tower is lowered to the ground level.

Photo 1



The 623A Plant Radio Relay Building tower is size reduced for disposal at the Environmental Restoration Disposal Facility.

North Slope Debris Removal

Sealaska Environmental Services, a subcontractor to CHPRC, is securing resources and preparing for mobilization to perform debris site cleanup on the North Slope. Ecological and cultural reviews are continuing for other areas on the North Slope.

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

The Action Memorandum and the Removal Action Work Plan documents for D&D of the railcars on the 212-R rail spur are being routed through regulatory review. The contract for performing the railcar disposition activities was awarded and resources are being secured. DOE has requested an estimate to move three railcars to the B Reactor museum.



Waste Sites

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

Waste Site in Progress	Tons of Contaminated Soil Removed		
waste site in Frogress	Week Ending Oct. 15, 2010	Total to Date	
600-286-PL	2,775	5,435	
BC Control Area	7,900	236,900	

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

• 200-MG-1

- o 216-S-26: Selection of a vendor is anticipated this week.
- o 600-36: Remediation field work is complete. Sample analyses are acceptable. The Remediation Action Report (RAR) is being prepared.
- o 600-222: The Remediation Action Work Plan (RAWP) was approved; field work commenced.
- o 600-226: The RAWP was approved; field work commenced on Oct. 15, 2010.
- o 600-OCL: ERDF profile/investigative sampling is complete; access road and brush clearing are complete. Retrieve, treat, and disposal activities will commence after completion of 600-286/287-PL activity.

• 200-CW-3

- o 216-N-4: Sample results indicate remediation is complete; the RAR is being prepared.
- 216-N-6: Excavation is complete, initial screening was performed, and detailed down-post-surveys are complete. Sampling is complete with results expected the week of Oct. 18, 2010.
- o 600-286-PL: Remediation is in process with ongoing shipments to ERDF.
- o 600-287-PL: Remediation preparations are complete; overburden removal is under way.

• BC Control Area

- o For Zone A, approximately 74 acres have been excavated and surveyed.
- o For Zone B, radiological down-posting surveys are in process.





A worker secures a sign to indicate hazards and requirements at the BC Control Area. In Zone B of the 13-square-mile area, radiological surveys are in progress and crews are down-posting from contaminated areas where appropriate. Altogether at the BC Control Area, CHPRC has removed 236,900 tons of contaminated soil from the waste site since late 2009.

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

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

Facility D&D

Demolition continued on the 183.2 KW Sedimentation Basin and is nearing completion. Demolition continued on the west side of the 105KE Reactor. Asbestos abatement continued in the 190KE Main Pump House.





Demolition continues on the west side of the 105KE Reactor building. With Recovery Act funding, CHPRC plans to demolish the horizontal control rod racks and the office area located on the west and east ends of the building, respectively.

Planning continued on a multi-day design review meeting scheduled for November for the preliminary design for disposition of the 105KE Reactor. The reactor characterization report is complete.

At the 105KW Fuel Storage Basin, punch list items are being completed for the facility heating, ventilation, and cooling system upgrades. Insulation is being installed on the exterior ducting and heat trace is being installed on the condensate piping.

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. Preparations are being made for connecting the new fire water and potable water lines to facilities in the 100K Area. Trench excavation is complete for the future tie-in of potable water piping at the Cold Vacuum Drying Facility.

Electrical installation continued at the water treatment building. Items that need to be finished in order to obtain Building Occupancy Permit are being completed for the water treatment building. A concrete splash pad and landing were put in place at the water storage tank.



Punch list items are being worked and construction closeout documents are being prepared for the A9 Substation Refurbishment and for the 13.8KV re-route.

Waste Sites

Crews continue to mobilize into the area of the 115-KE, 117-KE, and 116-KE-1 waste sites. Planning is in progress for remediation of the 100-K-57 waste site (107-KE Drainage Ditches).



Crews and equipment begin cleaning a highly contaminated area to clear access to Recovery Act-funded waste sites 100-K-42 and 116-KE-1 and buildings 115KE and 117KE.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

- Complete decontamination of the remaining four glove boxes/hoods in room 139.
- Complete the disposition of remaining chemicals from room 144.
- Clean out and initiate decontamination of five remaining glove boxes/hoods in room 144.
- Initiate D&D work on glove boxes in room 185.
- Isolate and remove the second of six glove boxes from room 642 of the 2736-ZB building.



- Complete the application of contamination fixative in glove boxes HC-230C-3, -4, and -5; remove them from building ventilation; and transfer them to waste operations for disposal.
- Complete external isolations and initiate decontamination of glove boxes 100A and HA-46.
- Continue removing process vacuum and process transfer piping.
- Begin isolation and cleanout of glove box WT-2 in the 242-Z building.
- Authorize use of Aspigel® as an alternate decontamination process and deploy it to the field for chemical decontamination.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

- Planned shipment of one box (11.6 m³) of MLLW debris from CWC to PFNW.
- Planned shipment of two boxes (6.4 m³) of LLW non-debris from CWC to PFNW.

RL-0013C:R1.2: TRU Waste

- TRU Retrieval
 - o 3A burial ground:
 - Approve Trench 17 Box 12 work package, complete box repairs and construction of shoring box, and remove Box 12.
 - Continue work planning for removal and shipment Boxes 27 and 13 from Trench 17.
 - Continue excavating Boxes 16-20 in Trench 17.
 - Develop and review operating documentation for the portable containment enclosure in preparation for repackaging Box 80 in Trench 17.
 - Continue excavation and begin retrieval of remaining Trench 8 boxes.
 - Remove and over-pack two culverts from Trench 8.
 - Plan excavation and retrieval of last Trench 8 culvert.
 - Continue assay campaign for retrieved Trench 8 containers.
 - o 4B/4C burial grounds:
 - Complete HRB preparation and work package (2X-10-04470) updates for Trench 11 Interrogator Excavation of Event Site and conduct HRB.
 - Conduct 4B Trench 11 retrieval planning meeting.
 - Perform 10-04470 218-W-4B Trench 11 Interrogator Excavation of Event Site Work Package 2X-10-04470.
 - o 12B burial ground:
 - Complete all remaining construction upgrades.
 - Complete calibration, confirmation, and verification of the PAN assay system.
 - Complete the acceptance and operational tests for drum venting system 3 and the real-time radiography/drum warming unit.
 - Validate and approve remaining operating procedures for the Next Generation Retrieval Project.
- TRU Repack
 - o No planned TRUPACT-II shipments.
- Suspect TRU Waste Shipments
 - o 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 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 debris load-out of the 224-U and 224-UA facilities.
- Continue asbestos abatement in the U Canyon galleries.
- Continue demolition preparations for the 284-E Powerhouse.
- Continue demolition of the crusher house and conveyor building at the 284-E Powerhouse.
- Complete final surveys and demobilization for the 272-E Fabrication Shop.
- 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.
- Continue remediating contaminated soil from waste sites.

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

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

- Continue demolition of the 183.2KW Sedimentation Basin.
- Complete activities for upgrading the 105KW HVAC system.
- Continue preliminary design and review activities for disposition of the 105KE Reactor.
- Continue with the Infrastructure Utilities Upgrade Project activities.
- Continue remediating contaminated soil from waste sites.

