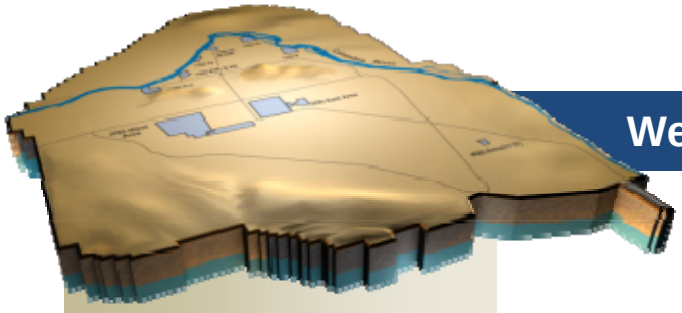
CH2MHILL
Plateau Remediation Company

ARRA Weekly Report



Week Ending November 12, 2010

November 16, 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

Two additional glove boxes were isolated from building ventilation and removed: one in the former RMC process line and one in the Plutonium Process Support Laboratory. Use of the new, more efficient process for containment and removal of highly contaminated process vacuum piping continued, with nearly 70 feet of piping removed this week. More than 30 containers of waste were shipped out of PFP including five boxes of MLLW and one roll-off container of LLW shipped to the Environmental Restoration Disposal Facility (ERDF), 23 drums of TRU/TRU mixed waste shipped to the Waste Receiving and Processing (WRAP) facility, and one container of hazardous non-radioactive waste shipped offsite.

Structures, equipment, waste disposition	Total to Date (since April 2009)
Glove boxes/hoods removed	78 glove boxes/hoods
MLLW/LLW shipped	2,122 m^3
TRU shipped	229 m^3
Non-radioactive waste shipped	22 m^3
Process transfer line removed	268 feet
Process vacuum system piping removed	342 feet
Asbestos removed	11,705 feet
Ancillary structures demolished or removed	22 fuel vaults & ancillary buildings prepared for demolition

Photo 1

Outside of the Plutonium Finishing Plant, workers load drums of waste for shipment and disposal. Last week, 23 drums of transuranic (TRU) and mixed-TRU waste were shipped to the Waste Receiving and Processing facility. With Recovery Act funding, CHPRC has shipped nearly 230 cubic meters of TRU and mixed-TRU waste from the Plutonium Finishing Plant.

Laboratory & Processing Areas

In the RMC Line, large glove box HC-230C-4 was removed from room 230C and transferred to waste operations for disposal as LLW. D&D crews are preparing to separate and remove glove boxes HC-230C-3 and C-5, both of which are expected to qualify for disposal as LLW. In the RMA Line, crews made two supplied-breathing-air entries into the 232-A Hydrogen Fluoride Scrubber Cell for inspections and characterization. In the Analytical Laboratory areas, crews continued cleanup and recovery actions from a contamination event during separation of two hoods. In the Plutonium Process Support Laboratory, glove box 179-5 was isolated from building ventilation and removed to a low-background area for final non-destructive assay (NDA) measurements.

2736-Z/ZB Vault Complex

Chemical decontamination continued on glove boxes 642-C and -D, and initial surface contaminated objects (SCO) surveys were completed to determine if glove box 642-D can be disposed of as LLW. Nitrogen lines were removed from the outside of the glove box, which is nearly ready for removal.

Photo 2

Workers inside the 242-Z Facility at the Plutonium Finishing Plant adjust a window port to prepare for decontamination and decommissioning work inside glove box WT-3. With the use of Recovery Act funding, the team has made more than 75 entries to the facility this year and lifted the more than 30-year restriction on intrusive work.

242-Z Americium Recovery Facility
The 242-Z D&D team made a number of entries this week, inspecting the interior of the glove boxes, gathering information for work planning, and initiating installation of temporary lighting in the control room. Preparations continued for mechanically and electrically isolating the facility.

Infrastructure, process support systems, and equipment removal
Work to remove highly contaminated process support piping throughout the 234-5Z building continued at an accelerated rate, and the insulator crew removed nearly 100 feet of insulation from ductwork and piping.

Photo 3
Using the new containment and pipe cutting method, a team in the duct level of the Plutonium Finishing Plant's 234-5Z building cuts process vacuum piping for removal and disposal as transuranic waste. The new method is safer and has produced a five-fold increase in removal efforts.

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:

- 1,035 m³ of MLLW and LLW have been shipped to date including:
  - 891 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 on Nov. 11 from the Central Waste Complex (CWC) to Perma-Fix East. The shipment contained 13 drums (2.7 m^3) of MLLW. The waste will be treated in a vacuum thermal desorber unit and the resulting condensate will be destroyed in an industrial furnace to destroy the organics. Any residues generated after treatment will be tested for compliance and returned for disposal in Hanford's Mixed Waste Disposal Units.

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

Of the 2,500 m^3 of suspect TRU waste planned for retrieval under the Recovery Act:

- 169 m^3 are staged, pending shipment.
- 698 m^3 have been shipped to a treatment, storage, or disposal facility.

In the 3A burial ground, workers completed the reinforcement walls and removed Box 12 from Trench 17. A shoring box was constructed around the box prior to shipment. The last remote-handled culvert in Trench 8 was excavated and lifting slings were installed to help with removal. Two fiberglass-reinforced plywood boxes from Trench 8 were retrieved and over-packed.

In the 4B burial ground, workers conducted an enhanced work planning session for 4B Trench 11 event site mitigation – drum removal work package (2X-10-9639).

In the 12B burial ground, operational testing is complete for drum venting system 3. The calibration, confirmation, and verification of the passive/active neutron (PAN) assay system continued. Daily sealed source shipments continued from WRAP to the 12B burial ground to support the PAN assay system calibration activities. Retrieval procedures for Next Generation Retrieval were approved and issued.

TRU Project Drum Repackaging

Of the 850 m^3 planned to be characterized and repackaged with funding from the Recovery Act:

- 1,944 drums (404.4 m^3) 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 m^3 total)] have been shipped.

Suspect TRU Waste Shipments

Of 637 m^3 of low-gram, large box TRU mixed waste planned for repackaging under the Recovery Act:

- 243.4 m^3 have been shipped to date (40 m^3 were shipped using Base funding).
- 119.4 m^3 have been repackaged.

Photo 4

Workers at the Central Waste Complex load a box of transuranic waste for shipment to Perma-Fix Northwest for repackaging. The waste will be repackaged into 55-gallon drums or standard waste boxes. The resulting repackaged waste will be returned to Hanford for Waste Isolation Pilot Plant-certification.

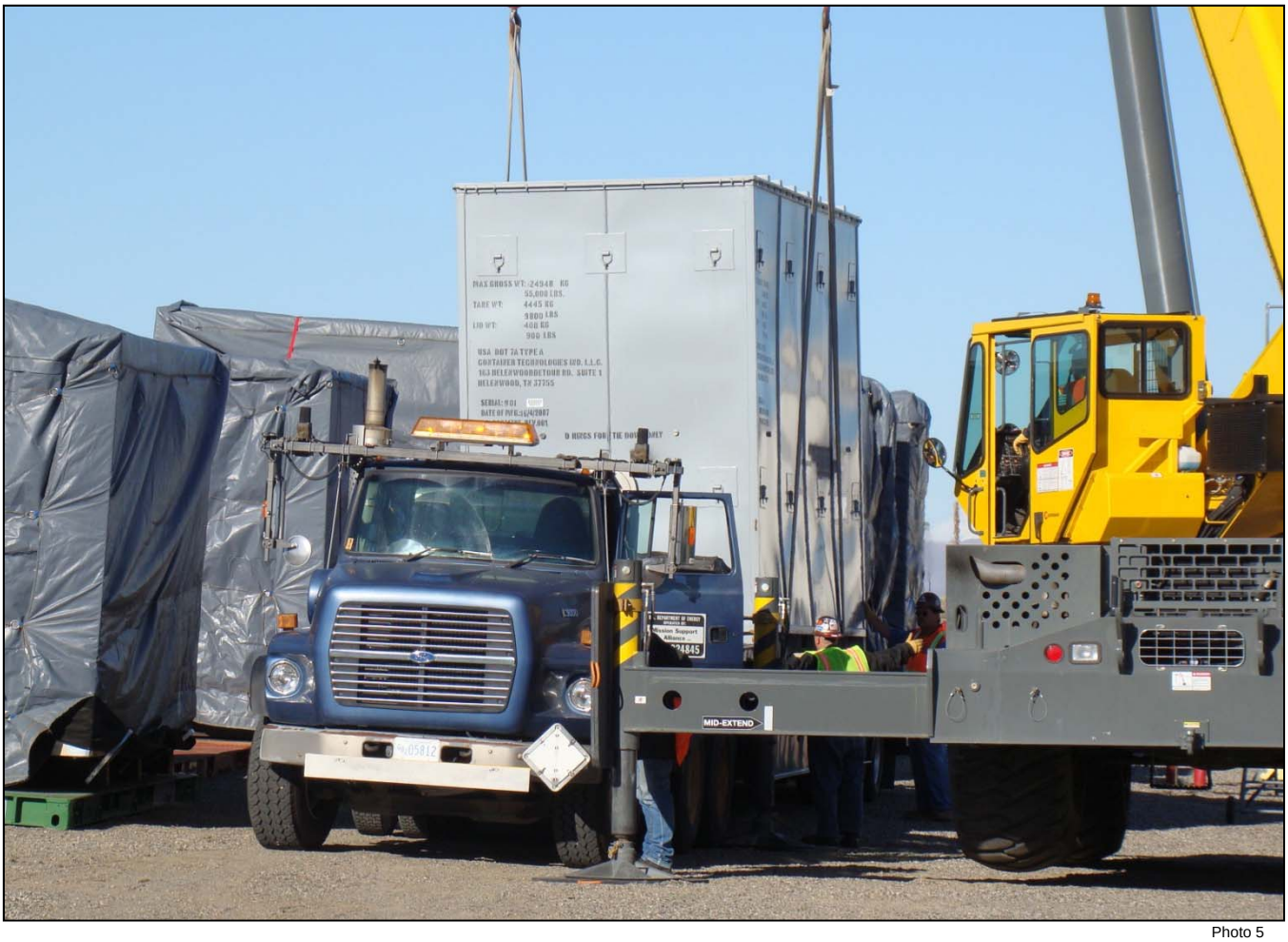

Photo 5

Workers load a box of transuranic waste for shipment from the Central Waste Complex to Perma-Fix Northwest.

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)	9	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	1	-
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	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 450 cubic yards of concrete were placed for the 200 West Groundwater Treatment Facility, bringing the project total-to-date to approximately 4,500 cubic yards placed.

Construction of the main process buildings, under construction by subcontractor Skanska USA Build Inc., included (listed by building):

- Radiological Building: Siding activities continued.
- Bio-Process Building: Night shifts were initiated for erection of the building and will last for approximately three weeks.
- Bio-Process Pad: Three additional slab-on-grade pours are scheduled for late this week (approximately 600 cubic yards).

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

- Extraction #1:Weld nuts are being installed on C-channel tabs. Installation of translucent panels and walk doors is scheduled for next week.
- Extraction #2: Installation of C-channels and wall girts is complete. Weld nuts are being installed on the C-channel tabs. Installation of simple saver, insulation, and roofing continued.
- Injection #1: Erection of the structural steel is complete.
- Injection #2: Slab rebar is 90 percent complete. Schedule of the concrete placement is dependent on installation of temporary power for cold weather placement.

Photo 6

Structural steel is constructed for the Bio-Process building, the second process building under construction for the 200 West Groundwater Treatment Facility. CHPRC and subcontractor Skanska USA Build Inc. kicked off night shift work to ensure timely construction of the buildings before winter weather conditions set in.

DX Groundwater Treatment Facility

Acceptance testing continued. Testing of building instruments in the transfer buildings is complete. Pressure testing of the ion exchange trains in the main process building is complete. The non-compliance report was closed out for a leaking differential pressure gauge on the ion exchange train "C" and on issues dealing with workmanship.

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

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

U Canyon

CHPRC is planning for disposition of the D-10 tank in Cell 30. The D-10 tank was previously identified as containing radioactive material that must be disposed of before demolition of the canyon can begin. Video was successfully taken that attests to the integrity of the tank welds and lifting trunnions. Extraneous material from previous characterization activities was removed from the top of the tank. Absorbent material was installed and the various access ports were capped. The cell will be closed next week. Contractor interface and work package preparation continues in support of grouting activities, including the haul road, core drilling, water tie-in, batch plant power supply, and bulkhead installation.

U Plant Ancillary Facilities

Final cleanup and "as-left condition" surveying of the 224-U and 224-UA Buildings area continued. Grouting of the C Cell is complete. C Cell was part of the 224-U Building and once contained process equipment.

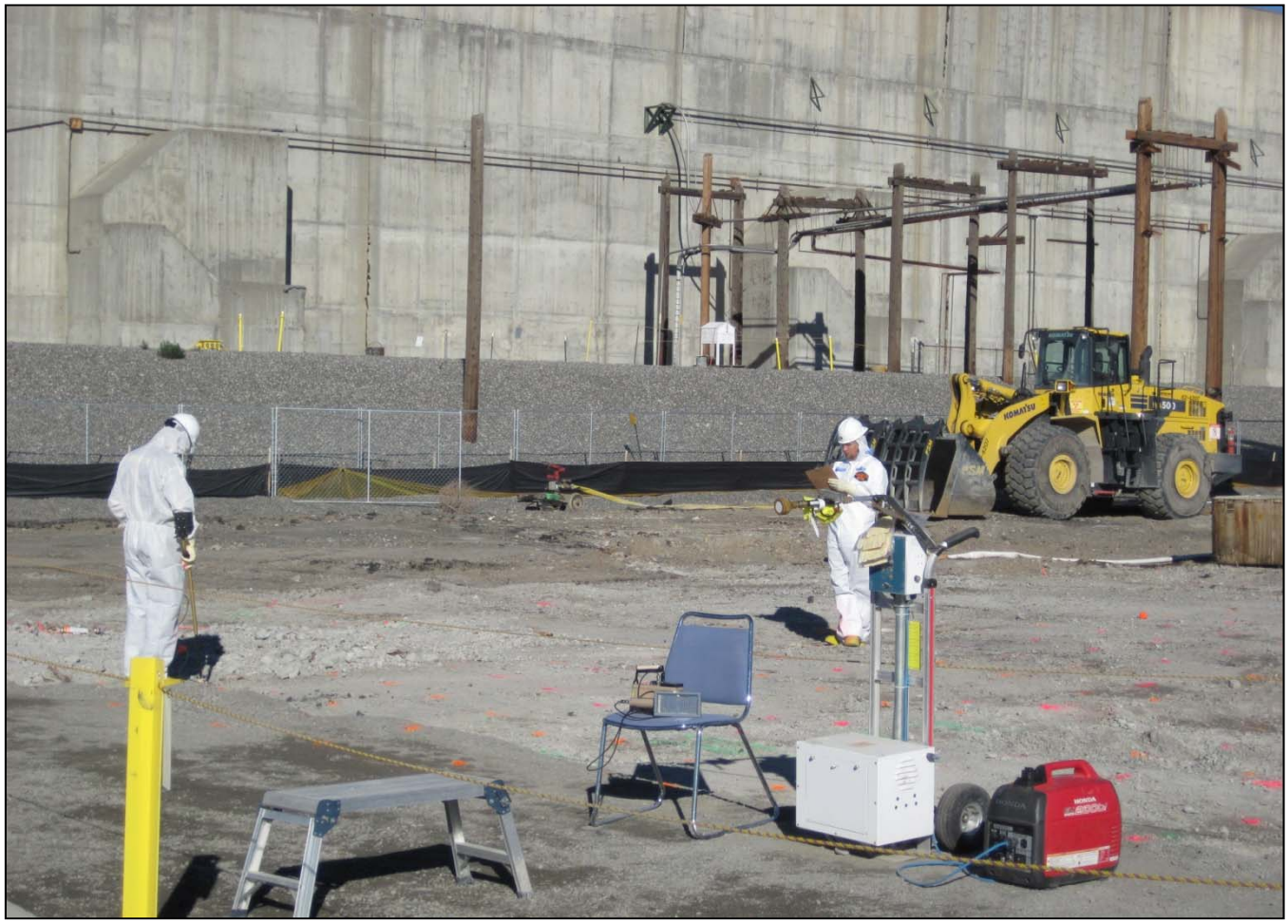

Photo 7

Radiological control technicians survey the site of the former 224-U and 224-UA buildings, the last of five U Plant ancillary facilities CHPRC demolished with Recovery Act funding. Demolishing the five buildings removed more than 53,000 square feet of facilities no longer of service at Hanford Site and helped clear the way for the future demolition of the U Plant canyon.

Photo 8

Grout is poured into the C Cell. C Cell was part of the 224-U Building and once contained process equipment.

200 East Core Industrial Area
Ongoing activities for the 284-E Powerhouse complex included waste load-out of the crusher house and conveyor system, asbestos abatement within the powerhouse, and detailed planning for the explosive demolition of the powerhouse stacks.

200 West Area Industrial Facilities
Planning, characterization, and radiological surveys are ongoing for a series of industrial facilities CHPRC plans to demolish with Recovery Act funding in the 200 West Area. Asbestos abatement is in progress on the exterior of the 284WB Package Boiler Plant.

209-E Criticality Mass Laboratory
Readiness preparations and validation review are in progress for implementing the documented safety analysis document. Materials are being obtained for mock-ups that will support development of techniques for radiological control during tank cutting activities. The east end of Tank 108 in the Criticality Assembly Room was removed to provide access to two solution storage drums inside the tank for NDA. NDA of the solution storage drums is complete. Tank 108 was used for controlled criticality experiments using different arrays of fuel pins.

Photo 9

Workers remove the east end of Tank 108 in the Criticality Assembly Room of the 209-E Criticality Mass Laboratory to provide access to two solution storage drums.

Photo 10

Workers place protective tape over the sharp edges resulting from removal of the east end of Tank 108. The end of the tank was removed to allow access to two solution storage drums.

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

Arid Lands Ecology Reserve (ALE) D&D
With the last structure atop Rattlesnake Mountain demolished the week ending Nov. 5, CHPRC D&D crews and equipment are demobilizing from the ALE Reserve work sites.

North Slope Debris Removal
Personnel with Sealaska Environmental Services, a subcontractor to CHPRC, continued debris site cleanup on the North Slope in Hanford Reach National Monument Areas 15, 16, and 18.

D&D of Railcars Located on the 212-R Rail Spur
The Action Memorandum and the Removal Action Work Plan for the disposition of contaminated railcars on the 212-R Rail Spur are being routed through review and approval. CHPRC is securing resources, finalizing the work package for visual inspection of the railcars, and planning for the transportation of shipments to ERDF. An estimate is being finalized for the possibility of relocating a locomotive and two railcars to the B Reactor.

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 Nov. 12, 2010	*Total to Date*
600-222	150	150
600-286/287-PL	1,595	12,200
200-W-147-PL	640	640
BC Control Area	6,100	262,000

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

- *200-MG-1*
  - 216-S-26: Updated proposals were received from potential vendors.
  - 600-36: The Remediation Action Report is being prepared.
  - 600-40: Verification sampling was performed; results are pending.
  - 600-220: Direct pushing test (DPT) sampling is complete; results are pending.
  - 600-222: Excavation is complete; verification should be complete this week.
  - 600-226: Excavation is complete and the request for sample verification was initiated.
  - 600-228: DPT sampling is expected to resume this week.
  - 600-OCL: Retrieve, treat, and disposal activities will commence after completion of 600-286/287-PL activity.
  - 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 14,200 tons stockpiled.
  - 216-N-6: The RSVP is being prepared. Radiological Operations will down-post the area the week of Nov. 15, 2010.
  - 600-286-PL: Remediation is complete, pending verification sampling.
  - 600-287-PL: Remediation is in process with ongoing shipments to ERDF. Radiological Operations will down-post the area the week of Nov. 15, 2010.
- *BC Control Area*
  - For Zone A, approximately 89 acres have been excavated and surveyed.
  - For Zone B, radiological down-posting surveys are in process.

Photo 11

Fill material is stockpiled near the 216-N-4 waste site in the 200 North Area. The material will be used to backfill the 216-N-4 and -6 waste sites, which were once contaminated by releases from the former 212-N/P/R Interim Fuel Storage Buildings. Remediation of these sites as well as the nearby 216-N-1 waste site and demolition of the 212-N/P/R buildings is a Recovery Act-funded effort.

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

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

Facility D&D

Demolition continued on the 105KE discharge chute and the remaining basin floor at the base of the discharge chute.

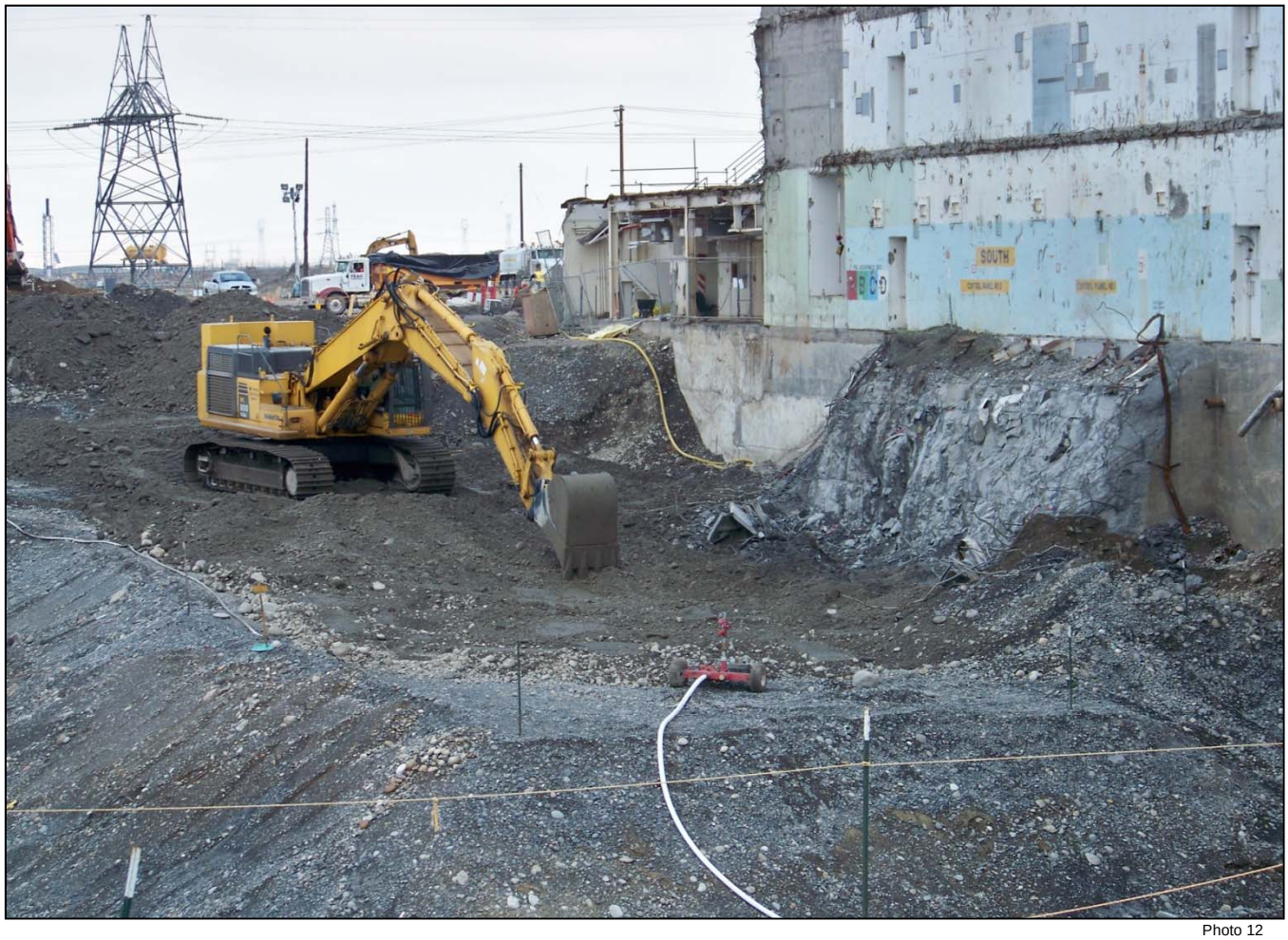

Photo 12

CHPRC is demolishing the 105KE Basin discharge chute and floor at the base of the chute. The chute is located on the backside of the 105KE Reactor building at the site of the former fuel storage basin, which CHPRC finished demolishing in 2009 with base funding.

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

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. Hanford Fire Marshall approval of the system is being obtained prior to proceeding with fire water and potable water lines tie-ins.

Testing of the microfiltration unit proceeded at the water treatment building. Building electrical design changes are being processed and crews are completing items that need to be finished in order to obtain the Building Occupancy Permit.

Waste Sites
CHPRC continued excavating soil from the 100-K-42 waste site, located near the former K East Reactor fuel storage basin; 509 tons of soil have been removed from the waste site in November, with a cumulative total of more than 11,300 tons. CHPRC is also removing soil from waste sites near the former

115-KE and 117-KE buildings, with a total of 748 and 1,644 tons of soil removed to date, respectively.

Photo 13

Remediation of the 100-K-42 waste site continues. The waste site is located near the former fuel storage basin of the K East Reactor.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

- Remove six hoods from 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, and initiate D&D of glove boxes 144-1 through 144-4.
- Enlarge the door on room 144 and transfer glove box 144-9 to waste operations for disposal.
- 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.
- Transfer glove boxes HC-230C-3 and C-5 to waste operations for disposal.
- Initiate D&D of glove box 100A.
- Complete readiness assessment and initiate use of Aspigel® as an alternate decontamination process.

- Complete characterization entries into the 232A scrubber cell and initiate chemical decontamination of adjacent glove box HA-46.
- Continue removing process vacuum and process transfer piping.
- Begin isolation and cleanout of glove box WT-2 in the 242-Z building.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

- Planned shipment of 34 drums (7.1 m^3) of LLW debris from CWC to PFNW.
- Planned shipment of two boxes (12.7 m^3) of MLLW debris from CWC to PFNW.
- Planned shipment of one box (1.8 m^3) of MLLW debris from CWC to PFNW.
- Planned shipment of one drum (0.2 m^3) of MLLW non-debris from CWC to PFNW.
- Planned shipment of 29 drums (6 m^3) of LLW debris from CWC to PFNW.

RL-0013C:R1.2: TRU Waste

- TRU Retrieval
  - 3A burial ground:
    - Complete excavation of metal boxes 16, 17, and 19 in Trench 17.
    - Complete the excavation of the north side of containers 13-22 in Trench 17 and begin excavating a ramp to facilitate removal of Box 13 and subsequent boxes.
    - Complete work planning for removal/shipment of Boxes 16 and 13 in Trench 17.
    - Continue excavation and removal of remaining six boxes in Trench 8.
    - Complete excavation and removal of the last culvert in Trench 8.
  - 4B/4C burial grounds:
    - Complete initial disinfection and filling of the Mobile Decontamination Unit with potable water.
    - Complete final review and approval of the 4B Trench 11 Retrieval Plan.
    - Perform 4B Trench 11 event site drum mitigation (2X-10-9639).
    - Conduct Hazard Review Board meeting for 4B Trench 11 Retrieval Operations.
  - 12B burial ground:
    - Complete operator qualifications required to meet staff requirements for 12B start-up.
    - Complete calibration, confirmation, and verification of the PAN assay system.
    - Complete the operational testing for the real-time radiography/drum warming unit.
    - Validate/approve remaining 12B equipment and processing procedures.
- TRU Repack
  - No 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 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, equipment decontamination, and gravel placement at the site of the former 224-U/224-UA buildings.
- Continue preparations for removing the D-10 Tank from U Canyon.
- Continue preparations for grouting the U Canyon cells.
- 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.
- Continue preparations for demolishing the 209-E Criticality Mass Laboratory.
- Continue demolition planning, characterization, and asbestos abatement activities for the 200 West Area industrial facilities. Approve the work package for visual inspections.

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

- Complete 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 disposition of contaminated railcars in the 200 North Area.
- 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 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.