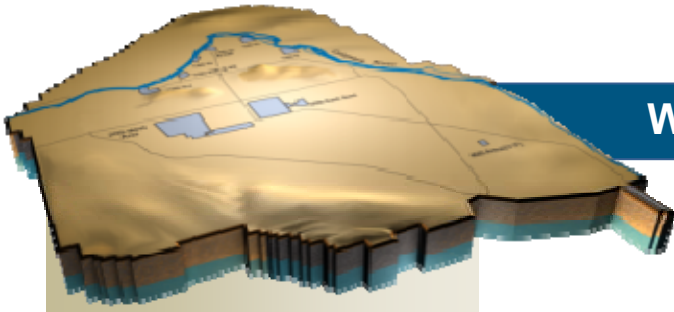


ARRA Weekly Report



Week Ending November 6, 2009

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ACCOMPLISHMENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

Four inter-connected glove boxes from room 146 of the Analytical Laboratory were transferred to Solid Waste Operations Complex and loaded into a groutable IP-2 container for disposal at the Environmental Restoration Disposal Facility (ERDF) as low-level waste (LLW). Preparations also continued for initiating decontamination and decommissioning (D&D) of glove boxes in rooms 136 and 139 in the Analytical Laboratory. Since funds from the American Recovery and Reinvestment Act (Recovery Act) were released in April, CH2M HILL Plateau Remediation Company (CHPRC) has removed 26 glove boxes and hoods from the 234-5Z building.

In the Standards Laboratory, work continued toward the removal of three hoods in room 221E, including the application of contamination fixative on the inside of the hoods and beginning the installation of lifting equipment to support isolation of hoods from the ventilation system. In the former production areas of the 234-5Z building, process equipment removal was completed on glove box HC-60 and the box was isolated from the process drain. Preparations for process equipment removal continued on HA-19B1, HA-19B2, and HA-46, and were initiated on glove box HC-227S. Mechanical isolation was initiated on glove box HC-230C-2.

Also at the 234-5Z building, a primary focus for Recovery Act funding at PFP, modifications were completed to provide a second change area, an Access Control Entry System station, and an access route to the newly consolidated backside Contamination Area. Preparations also continued for the removal of the highly contaminated process vacuum system. In the 291-Z building, removal of hazardous materials and steam piping was also initiated. Insulators removed asbestos from nearly 300 feet of piping, bringing the total removed under Recovery Act work to approximately 5,200 feet.



Photo 1

Four inter-connected glove boxes being transferred to the Solid Waste Operations Complex, where they were loaded into a groutable container for disposal. Since Recovery Act funds were released in April, CHPRC has removed 26 glove boxes and hoods from the 234-5Z building.



Photo 2

A crane at the Solid Waste Operations Complex is staged to lift four inter-connected glove boxes into a container for disposal.

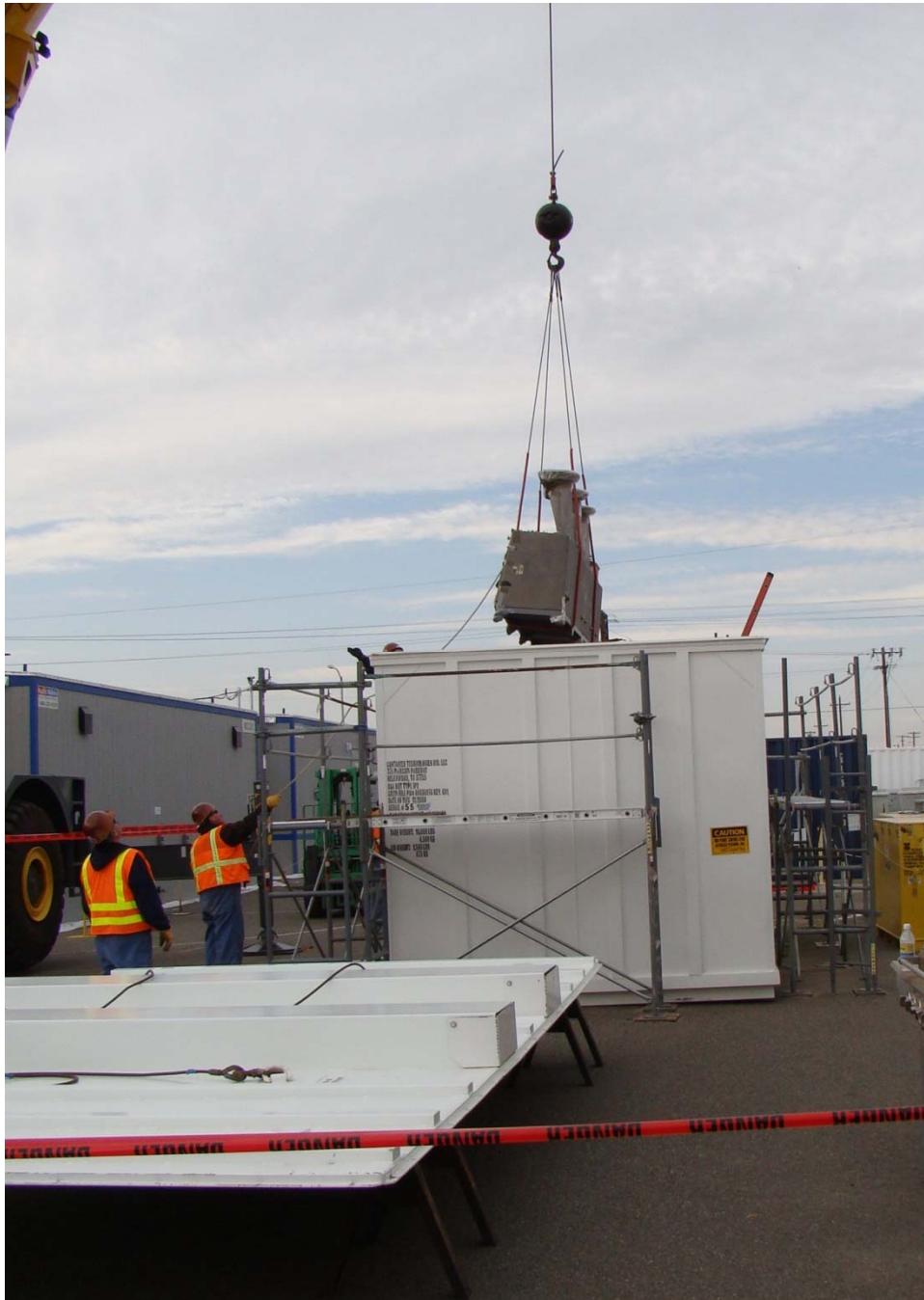


Photo 3

Workers load the four inter-connected glove boxes into a groutable container for disposal at the Environmental Restoration Disposal Facility. Over the last few weeks, workers prepared the glove boxes for removal – including removing process equipment and decontaminating the equipment to low-level waste – and expanded an opening in the building to allow all four glove boxes to be removed at once.



Photo 4

Workers place the lid on a container that now holds four inter-connected glove boxes removed from room 146 in the Plutonium Finishing Plant's Analytical Laboratory. The box will be filled with grout and disposed of at the Environmental Restoration Disposal Facility.

RL-0013 Solid Waste Stabilization & Disposition

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

Of the 1,800 m³ planned for treatment and disposal under the Recovery Act:

- 573 m³ of the 1,800 m³ have been shipped to date including:
 - 246.5 m³ of LLW have been treated and disposed

- 326.5 m³ are at off-site treatment facilities awaiting processing. Treatment is scheduled for FY 2010.

Two shipments of waste were sent out for treatment this week. Twelve drums (2.5 m³) of MLLW and Toxic Substances and Control Act (TSCA) MLLW containing liquids and solids were shipped Nov. 5 from the Central Waste Complex (CWC) (2.3 m³) and T Plant (0.2 m³) to Perma-Fix East. This waste will be treated through the vacuum thermal desorption process and the resulting condensate will be shipped to a hazardous waste facility and incinerated to thermally destroy the polychlorinated biphenyls.

Environmental Restoration Disposal Facility (ERDF) "Self Perform"

The ERDF "Self Perform" project continues retrieving roll-off cans from the 100K Area. Thirty of 70 roll-off cans with the identified weld issue have been repaired and re-certified by the vendor. Construction mobilized and site preparations began for the container maintenance facility. Hiring and training continue.

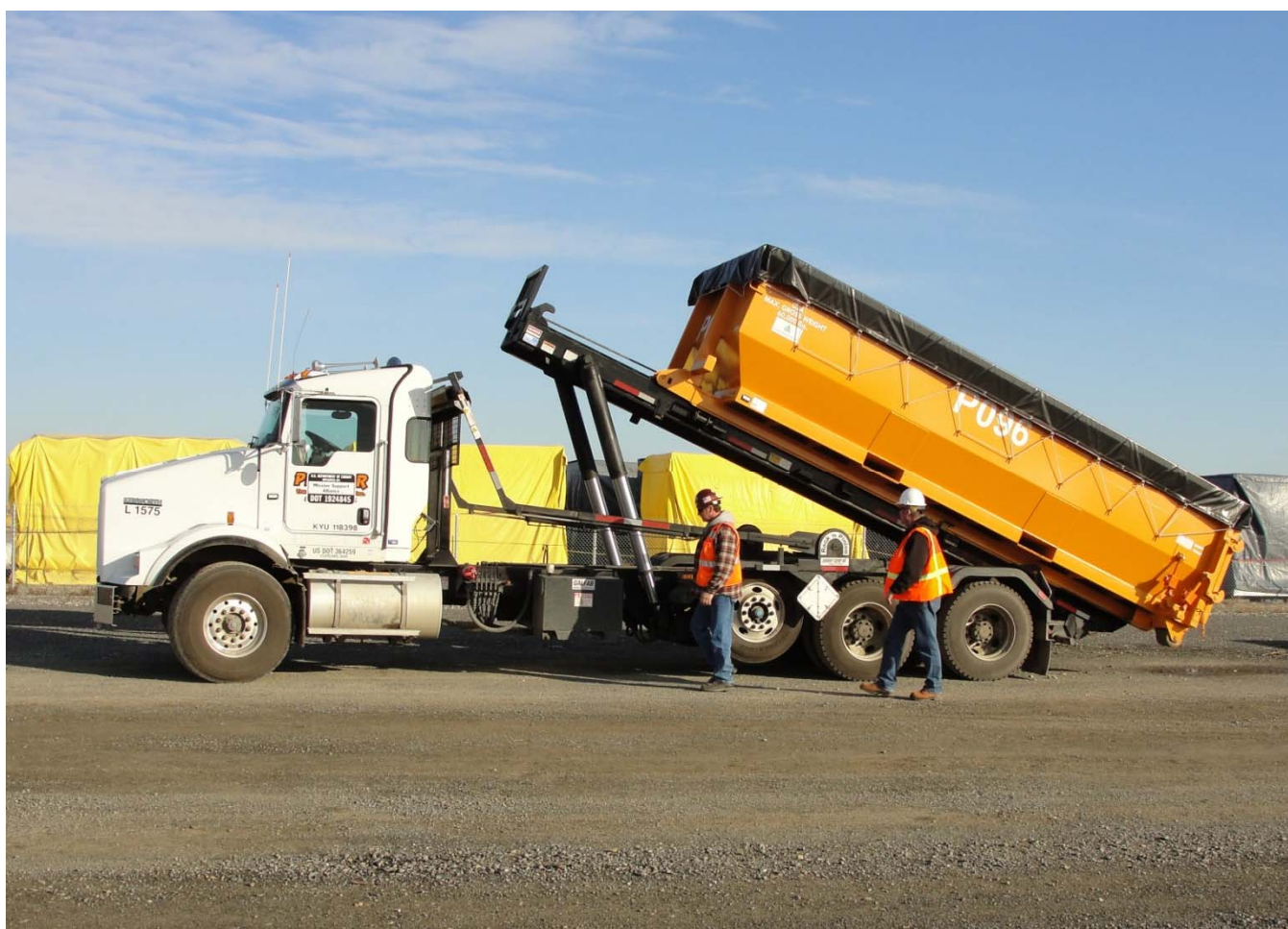


Photo 5

Teamsters prepare a roll-on/roll-off container for transport to the 100K Area. As Recovery Act work ramps up, the ERDF "Self Perform" project provides resources and equipment to support CHPRC's increasing waste streams.

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

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

- 17.8 m³ have been removed and are staged, pending shipment.

- 426 m³ have been shipped to a treatment, storage, or disposal facility.

Removal activities continued in 3A Trench 17. Workers installed a cover box over Box 27 to protect it until it can be removed and they continued excavating to allow for the inspection and evaluation of Boxes 3 and 12 for removal. Workers also continued incorporating experience from the disassembly mock-up into the roof disassembly work package for Boxes 80 and 82.



Photo 6

A cover box that will be used to protect a waste box from weather during the repackaging of the waste contents. The cover box is shown secured to jersey barriers to prevent winds from tipping or damaging the cover. Boxes that are deteriorated and require in-trench repackaging are provided a temporary cover box.

Alpha Caisson Retrieval Project

The Alpha Caisson Retrieval Project Management Group conducted a design interface meeting to ensure commonality in the design of the retrieval and processing design packages. The primary focus was on the modules dealing with shielded transport containers, drum handling, drum decontamination, drum liners, and drum lid removal. Design responsibilities were assigned to AREVA or ARES as appropriate, optimizing the costs for the conceptual design. A technical readiness level review meeting was held with the design engineering team and subject matter experts to validate the project's tailored approach to the Department of Energy (DOE) guidance document. Although this project is utilizing primarily off-the-shelf or proven technology, there are three areas that may require further development: the retrieval mechanism that will access the caisson, the manipulators and bridge crane interfaces in the processing

cells, and the drum liner adaptability for full remote operations. The safety design strategy and material at risk are complete and in the final sign-off cycle.

The waste retrieval system team is finishing the alternative analysis for the retrieval design and is continuing the development of conceptual drawings. The waste processing system team completed the hazard analysis and presented it to the safety design integration team for final review.

TRU Project Drum Repackaging

Of the 1,210 drums (400 m³) planned to be characterized and repackaged in fiscal year 2010:

- 374 drums have been quick-scanned to date.
- Corrective actions for 495 drums have been developed.

Training Efforts

In 2008, the Waste Receiving and Processing (WRAP) facility was staffed with employees to perform limited waste processing activities. However, Recovery Act funding will allow the facility to operate the repackaging and shipping processes full-time by June 2010. With a team assembled, the staff will be able to support the WRAP 2010-2011 mission to process, prepare, and ship TRU waste to the Waste Isolation Pilot Plant located in Carlsbad, New Mexico.

At this time, the Recovery Act funding is being used to train new employees that will be brought to the WRAP facility to perform repackaging duties. Approximately 65 personnel are being hired with Recovery Act funding. The new hire positions include nuclear chemical operators (NCOs), radiological control technicians (RCTs), first line managers, operations specialists, radiological control supervisors and a variety of additional facility support positions.

The training of all new hires is being staggered. Presently, a group of 15 NCOs are finishing up their core fundamentals and basic information training at the HAMMER facility. They are scheduled to complete this training in mid-December. After the training at HAMMER, they will come on-site to complete their facility-specific training.

Training is also well underway for the current class of RCTs who started training in September. This session has welcomed over 40 students, some new to the field and the Hanford Site, and all were welcomed thanks to Recovery Act funding.

“I think it’s a great opportunity to work out at the Hanford site, President Obama is trying to stimulate the economy with jobs, and it’s great that jobs have come to the Tri-Cities,” said Richard Curtis, an RCT trainee. “All of my friends and my wife work out at Hanford. I’m excited and I can’t wait to get out there and start working.”

When training is complete, the new RCTs will be put to work across all CHPRC projects. Sixteen RCTs will be trained to support WRAP. The other RCTs will support facilities such as T Plant and PFP. Another session of training is scheduled to begin in February.

“This opportunity was perfect, I was looking for a change and my husband was laid off. And it’s kind of a family legacy – my great grandpa came out here in the 40s and worked for DuPont on the bomb, and now my parents work here, too,” said Becky Broyles, RCT trainee. “The stimulus is great. It’s helping out a lot of people. It’s a great opportunity to see what was started, and how we’re returning the environment back to what it was and protecting the river.”

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

RL-0030.R1: Central Plateau Soil & Groundwater

With the slab completed for the 100-HR-3 DX Groundwater Treatment Facility, construction crews continued work on the infrastructure for the facility. Construction of road crossings is 94% complete and installation of high-density polyethylene piping is 66% complete. These systems will connect wells to the DX facility, which is being constructed with Recovery Act funding to address chromium contamination in the groundwater in the 100 Area.

Recovery Act funds are also supporting preparations for drilling numerous wells across the Hanford Site:

- *100-NR-2* – Drilling on the 171 wells for the expanding the apatite barrier continued with 13 wells in process. The 13 wells have been drilled to total depth and seven have been constructed and developed.
- *100-HR-3* – In the H Area, 25 wells are planned to be drilled for the Remedial Process Optimization, a modeling process for determining how current groundwater extraction methods may be improved. The remaining 13 wells for this effort are in the planning stages and awaiting State Historic Preservation Officer approval. In the D Area, 14 wells are expected to be drilled in support of the new DX Groundwater Treatment Facility. Three of the 14 wells have been drilled, constructed, and developed, and the remaining wells are awaiting approval from the State Historic Preservation Officer.
- *200-ZP-1* Expansion – Drilling continued on six wells: Two wells have been developed, three wells are under construction, and one well is being drilled.
- *100-BC-5* – Drilling continued on two of the four planned wells. The drilling depths are approximately 130 feet and 145 feet, respectively.



Photo 7

The concrete slab for the DX pump-and-treat facility. With the slab completed, construction crews are developing the infrastructure to support the facility, which will be over 11,500 square feet in size.



Photo 8

Workers from the subcontractor Boart Longyear work on one of the 13 wells currently in process at the 100-NR-2 site, where CHPRC is using Recovery Act funds to drill 171 wells and expand the apatite barrier to stop the migration of a strontium-90 plume.



Photo 9

Workers from the subcontractor Boart Longyear work on a well in the 100-NR-2 operable unit, which is located along the shoreline of the Columbia River. Thirteen wells have been drilled to total depth and seven have been constructed and developed.

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

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

Significant progress is being made in the U Plant Canyon, where workers are clearing the canyon deck in an effort to prepare the canyon for demolition by 2011. All the equipment designated for placement in cell 4 of the canyon was relocated from the canyon deck into the cell and the cell cover blocks were put back into place. This includes a large centrifuge, a condenser, a high-dose rate jumper, two off-gas heaters, three source boxes, and all the pumps previously located in cell 7. Bulk application of contamination fixative throughout the canyon also commenced at the south end of the canyon and will be completed over the next few weeks.

Asbestos abatement work is continuing at U Plant Ancillary Facilities, 224-U and 224-UA, with the primary focus on asbestos removal from the Hammer mill/tower and calciner areas in 224-UA, and the south and east side piping and tower area at 224-U.

Preparations are continuing for cold and dark isolation of the 200 East Area core industrial buildings, and development of waste management and various work plans are underway. Authorization has been

received from DOE for the deactivation and demolition of an additional building, 2716-E, along with the remainder of the 200E powerhouse complex. Planning and hazards analysis continued in preparation for deactivation work at the 209-E building, Hanford's former Critical Mass Laboratory, also in the 200 East Area.

Modification of a 90-ton excavator for Hanford demolition applications and fabrication of a 120-ton high-reach excavator are continuing at the manufacturers' facilities. A contract for fabricating a heavy-haul truck was awarded this past week, although delivery of the heavy-haul trailer will likely be delayed to mid-December as a result of delays experienced by the vendor. Development is also continuing for procurement specifications for a variety of excavation multi-processors and hydraulic hammers.



Photo 10

Workers prepare a centrifuge for relocation from the U Canyon deck into cell 4. The centrifuge was lifted and lowered into the cell. Clearing the deck of equipment is one of the first steps to preparing the canyon for demolition.



Photo 11

A crane hoists a centrifuge from the U Canyon deck. The crane was previously used to remotely lift cell cover blocks and equipment and to support operation and maintenance of the uranium recovery processes within the canyon. The crane was reactivated earlier this year to support the stimulus-funded effort to prepare the canyon for demolition.



Photo 12

Lowering of a centrifuge into cell 4 of U Canyon. Equipment relocated into the cell will be grouted in place and covered with a cell block where it will remain as the upper third of the U Canyon is demolished and covered with a protective barrier.



Photo 13

Workers prepare a condenser for relocation into cell 4 of the U Canyon deck, where it will be grouted in place along with other equipment.



Photo 14

Relocating a condenser from the U Canyon deck into cell 4. The condenser is one of several pieces of equipment recently placed into cell 4, including a large centrifuge, a high-dose rate jumper, two off-gas heaters, three source boxes, and pumps previously located in cell 7.



Photo 15

Lowering of a condenser into cell 4 of the U Canyon deck, where it will be grouted in place along with other equipment and covered with a cell cover block.

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

Facility D&D

In the 200 North Area, the filter box previously stored at 212-R has now been disposed of at ERDF, and last sub-grade section of the high-bay wall is being removed. At 212-P, the walls of the sub-grade structures and approximately half of the fuel basin floor has been broken up. Debris load out continues from both 212-R and 212-P.

Preparations for demolition of the structures on the Arid Lands Ecology reserve on Rattlesnake Mountain continued during this reporting period.

Waste Sites

Recovery Act funding is being used at various outer zone waste sites to prepare for the cleanup of legacy waste and to stop the potential migration of contamination to the groundwater. Recent progress includes:

- *200-MG-1 operable unit* – Review of the Response Action Completion Report is in process for waste sites 200-E-110, 200-E-101, 600-21, and 600-51.
- *200-CW-3 operable unit* – The 216-N-1 waste site received approval to utilize the super dump trucks. The 200-CW-3 operable unit comprises a series of waste sites in the 200 North Area.

- *BC Control Area* – Soil remediation continued. Approximately 5,000 tons have been delivered to ERDF.
- *Multi-Incremental Sampling* – Sampling instructions were issued and remediation equipment was mobilized. This project will compare three sampling designs on two selected waste sites near the 216-S-19 pond area.



Photo 16

Remediation equipment mobilizing to the 216-S-19 pond area for the Multi-Incremental Sampling project. The project will compare sampling designs on selected waste sites.



Photo 17

A super dump truck is filled with excavated soil from the BC Control Area. Since remediation began in October, approximately 5,000 tons of soil from the waste site have been delivered to the Environmental Restoration Disposal Facility.



Photo 18

A super dump truck full of soil from the BC Control Area pulls up to a survey station before leaving to the Environmental Restoration Disposal Facility.

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

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

Facility D&D

Debris removal from the 100KW Fuel Storage Basin was on hold this week during KW Basin configuration revision. Debris removal will continue at a reduced rate for the next several months. The integration of KW Basin Sludge Treatment Plant operations with the debris removal campaign will support both projects but debris removal will slow as planned during this period.

The Preliminary Design review workshop was held for the 100K Area River Water Isolation, Electrical Power Isolation, and the KW Basin Airborne Contamination remediation projects that will support accelerated cleanup at the 100K Area. Comment resolution will occur over the next few weeks.

Structure demolition was completed for trailers MO048 and MO969 and the debris was loaded for shipment to ERDF. Remediation of the buried septic tank also began last week.



Photo 19

Debris from trailers MO049 and MO696 awaiting shipment to the Environmental Restoration Disposal Facility. Removal of these offices provides access to the 115KE Gas Recirculation Facility, which is scheduled for demolition in FY2010.

Waste Sites

Recovery Act funding is being used in the 100K Area to remediate 49 waste sites in order to cleanup legacy waste and protect the groundwater. Recent progress includes:

- *UPR-100-K-1* – DOE authorized the payload evaluations to ship the contaminated materials to ERDF. The project is implementing the requirements, including setting and calibrating truck scales to ensure compliance.
- *100-K-3* – Ground-penetrating radar scans were performed during the past week to identify pipelines or other systems in the soil. This waste site is a pipeline that mixed water to simulate outfall conditions in support of laboratory studies of the effects of contaminated water discharges.
- *100-K-47* – Ground-penetrating radar scans were performed and underground lines were identified and followed by hand excavation. Excavation away from the identified line was initiated to sever the 100-K-47 lines from the outfall effluent line. This waste site consists of multiple pipes that drained various facilities or areas and dumped directly into the outfall or retention basins.
- *100-K-56* – The remediation of this waste site continued. The waste site is a 72-inch diameter primary effluent pipeline that discharged reactor cooling water from the 105KE Reactor.



Photo 20

Workers excavating soil to gain access to the pipeline waste sites in the 100K Area. The pipeline waste sites are several pipelines and systems that became contaminated while supporting reactor operations.

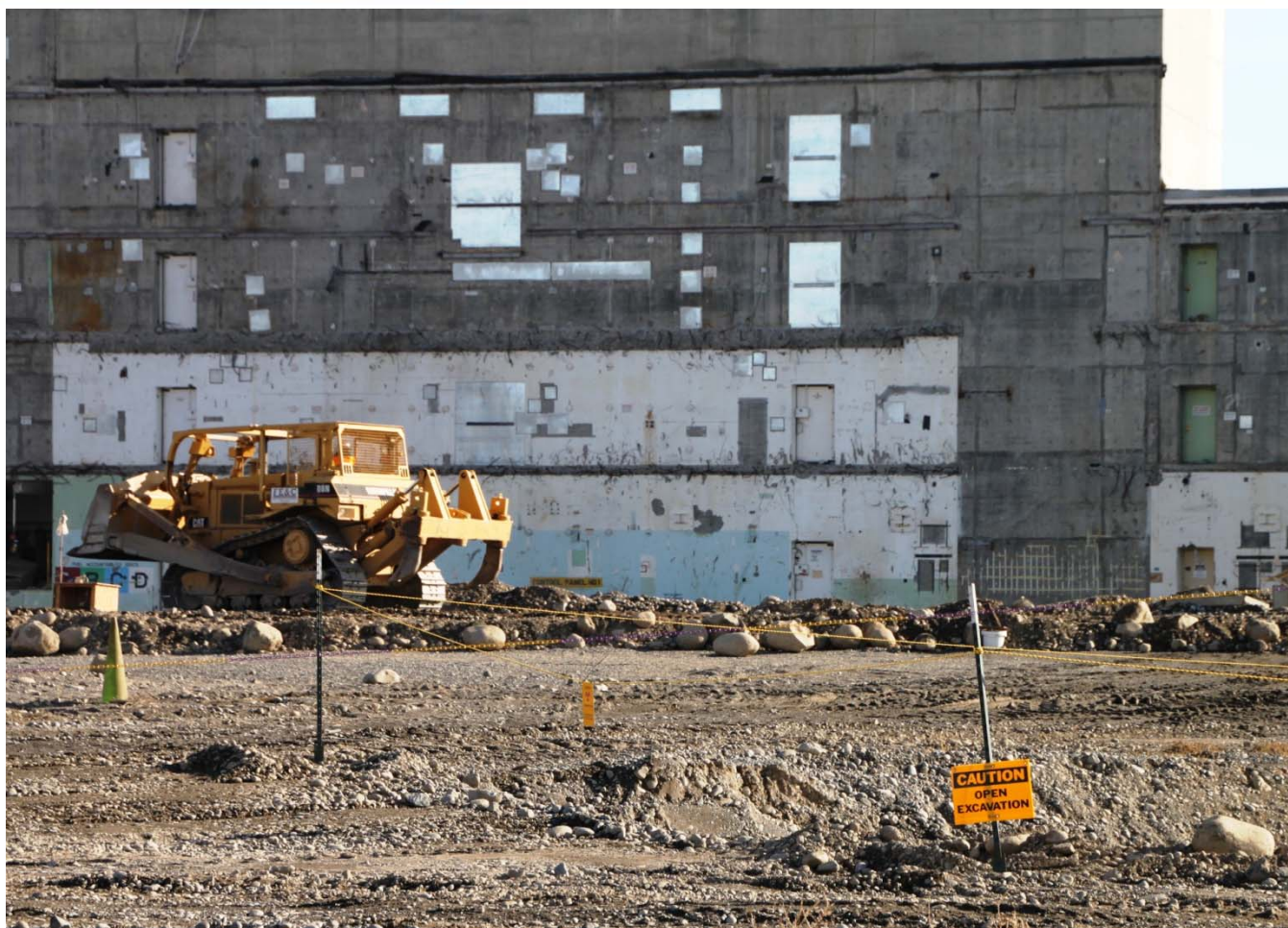


Photo 21

A worker creates a platform of clean fill from which heavy equipment can operate while working in the UPR-100-K-1 waste site.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

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

- Remove three hoods in room 221E.
- Mechanically isolate and remove process equipment from glove boxes in room 146.
- Initiate chemical decontamination of glove box HC-60.
- Continue D&D of the HA-19B1 and B2 glove boxes.
- Commence D&D of the large HC-227S glove box.
- Reassess the radiological status and determine a disposition path for six glove boxes previously removed from rooms 131 and 137 of the Analytical Laboratory.
- Complete removal/return of the 2734-ZJ nitrogen storage tank to the vendor and remove remaining appurtenances to slab-on-grade.
- Initiate removal of the 26" process vacuum system from throughout 234-5Z building.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

- Planned shipment of 18 m³ (6 boxes) of TSCA-LLW containing miscellaneous debris waste items on Nov. 9 from the CWC to PFNW.
- Planned shipment of 20.9 m³ (65 drums) of MLLW debris on Nov. 12 from WRAP to PFNW.
- Planned shipment of 12.7 m³ (2 boxes) of retrievably stored MLLW from the Waste Retrieval Project on Nov. 12 from the CWC to PFNW.
- Planned shipment of 1.0 m³ (3 drums) of LLW debris on Nov. 17 from the CWC to PFNW.
- Planned shipment of 18.1 m³ (87 drums) of LLW debris on Nov. 17 from the CWC to PFNW.
- Planned shipment of 6.8 m³ (21 drums) of MLLW debris on Nov. 19 from WRAP to PFNW.
- Planned shipment of 15 m³ (65 drums) of MLLW debris on Nov. 19 from WRAP to PFNW.

RL-0013C:R1.2: TRU Waste

- 3A Trench 17 Removal:
 - Install a cover box over Box 80.
 - Excavate around Boxes 3 and 12 and inspect and perform screw test evaluations to assess the potential for removal.
 - Complete work package and prepare for the Hazard Review Board for the disassembly of Boxes 80 and 82.
 - Continue site preparation excavation for Box 82 disassembly.
- Alpha Caisson Retrieval:
 - Finalize conceptual design report outline.
 - Finalize work breakdown structure for conceptual design report.
 - The Alpha Caisson team submitted the project review board approach to the Engineering, Procurement and Construction Vice President for approval. The meeting will be Dec. 14.
 - Submit the safety design strategy to the DOE for approval.
- TRU Program:
 - Value Engineering Workshop.

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

RL-0030.R1: Central Plateau Soil & Groundwater

- Continue construction of the DX Pump-and-Treat Facility foundation.
- Continue drilling at 200-ZP-1, 100-HR-3-H, 100-HR-3-D, 100-BC-5, and 100-NR-2.
- Continue developing decision documentation.

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

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

- Take delivery of the remaining D&D heavy equipment to be procured.
- Continue asbestos removal and other preparations for demolition of U Plant ancillary facilities 224-U, 224-UA and 203-UX.
- Continue the applying contamination fixative within the U Canyon and relocating equipment on the canyon deck into the cells.
- Complete preparations for demolishing the 200 East Area core industrial complex, including the 200E powerhouse.
- Complete detailed planning for cleanout of the 209-E building.

RL-0040.R1.2: Outer Zone

- Complete demolition of the 212-P building basin and dispose of all demolition debris and soil from 212-R and -P.
- Complete surveys and inspection of all three 212 building sites to support closure.
- Continue preparations for demolishing excess facilities at the ALE reserve.
- Continue remediation of BC Control Area.

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

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

- Initiate asbestos removal from 183.1 KW Headhouse.
- Initiate demolition and removal of the 183KW Chemical Storage silo.
- Continue remediation of pipeline waste sites: 100-K-47, 100-K-56, and 100-K-3.
- Continue characterization of 117KE Exhaust Air Filter Building.
- Continue characterization of the 183KW Complex.
- Continue Preliminary Design activities for the 105KE Reactor Core Removal.
- Continue debris removal from the KW basin.
- Complete comment resolution for River Water Isolation, Electrical Power Isolation, and the KW Basin Airborne Contamination remediation projects.
- Perform the reactor Graphite Tumble Test to obtain dusting properties of the reactor graphite.