WEST VALLEY DEMONSTRATION PROJECT

"The West Valley Demonstration Project team continues to deliver results in a manner that is safe and protective of employees, the local community, and environment. Employees continue to reduce legacy risks at the site in an environmentally sound manner, which is a testament to their dedication and commitment. The removal and area restoration of 46 site structures that are no longer needed changed the landscape of the site and the community. The safe and deliberate deactivation of several fuel reprocessing cells, along with the removal of the west wall of the Main Plant Process Building, signals that demolition of this last and largest remaining structure is in the very near future. I am truly proud to be a part of this team, and I look forward to continuing our work together."

– *Bryan Bower, Director, West Valley Demonstration Project*

HIGHLIGHTS

- Restored rail shipment capabilities for the site.
- Continued preparation for the Main Plant Process Building (MPPB) demolition by:
  - Installing a new water collection and treatment system; and
  - Repurposing an administrative trailer complex into a multipurpose building to support MPPB demolition activities.
- Placed several cells used during spent fuel reprocessing operations in a readiness state for future demolition.
- Removed the west wall of the MPPB to continue deactivation activities inside the Acid Recovery Cell.
- Continued aggressive decontamination in the Product Purification Cell-South (PPC-S).
- Completed the removal and restoration of 46 balance of site facilities that are no longer needed for current or future cleanup efforts.

RESUMED RAIL SHIPMENTS

Rail shipments at the site resumed in June as part of ongoing cleanup efforts at the West Valley Demonstration Project (WVDP). The rail line was last used in 2007 and will now support waste shipments for the MPPB demolition project. The rail line will help accelerate decommissioning and remediation activities in the very near future.

Rail shipments resumed to transport materials from a soil and structure removal project.

The upgraded rail line is being used to ship materials from the soil and structure removal project used in building the permeable treatment wall that is aiding in addressing a contamination plume in the site groundwater. The wall, which will remain in place, was designed and installed to effectively remove and contain the expansion of the plume that resulted from previous nuclear fuel reprocessing operations. This project will provide lessons learned and hone logistics when using the rail line for the future demolition of MPPB.

CONTINUED PREPARATION FOR MAIN PLANT PROCESS BUILDING DEMOLITION

Crews completed the physical installation of the new water collection and treatment system for capturing and treating dust suppression water and storm water from the MPPB demolition. This one-of-a-kind system was designed to handle severe weather events and is capable of performing multiple water treatment processes that may be required to support the demolition.

Crews install a robust water management system in preparation for MPPB demolition.

In addition, WVDP crews repurposed a former office trailer complex into a multi-purpose facility to support MPPB demolition work. The building now includes locker rooms, showers, a respirator issuance area and a radiological monitoring control room.

CONTINUED MAIN PLANT PROCESS BUILDING DEACTIVATION ACTIVITIES

Crews completed the final stabilization of the General Purpose Cell (GPC), GPC Crane Room, GPC Operating Aisle and GPC Crane Room Extension by placing 2,000 cubic yards of grout, which provides structural stability for equipment tracking over below-grade rooms and shielding while still being readily removable.

All final deactivation activities in the Equipment Decontamination Room have been completed, which included a fixative application, draining fluids from the crane and manlift, and electrical waste removal.

The fixative application in the Chemical Process Cell shield door's lower and upper penthouse have been completed. Work in this cell also included the draining of fluids from the shield door's motors and hoists.

REMOVAL OF WEST WALL FOR CONTINUED DEACTIVATION ACTIVITIES INSIDE THE MPPB

Crews used a heavy-duty excavator with a shear attachment to safely remove a large portion of the west wall on the MPPB to allow for deactivation activities inside the ARC that will include precutting the floor to prepare its removal during MPPB demolition. This work will be done under ventilation controls using an excavator with a quarry saw attachment to cut the floor into blocks, so they can be removed later with minimal disturbance during MPPB demolition.

A large excavator is used to remove the west wall for continued deactivation work inside the Acid Recovery Cell.

CUTTING-EDGE TECHNOLOGY IN PRODUCT PURIFICATION CELL-SOUTH

The PPC-S contains very high levels of contamination from previous nuclear fuel reprocessing operations. Operations resumed in September, after COVID-19 restrictions were lifted on close-contact work activities. The state-of-the-science technology WVDP uses employs liquid nitrogen at up to 60,000 pound-force per square inch to provide an aggressive, yet safe, cleaning application. Decontamination is accomplished by removing one-eighth of an inch from the surface of the wall and safely collecting the material in a vacuum system for disposal.

A worker gets trained on how to get suited up for PPC-S decontamination work.

DEMOLITION OF THE LAST BALANCE OF SITE FACILITY

A septic system and well associated with a former schoolhouse at WVDP were safely removed, which completed the removal and demolition of 46 balance of site facilities.

Workers remove the steel well casing from a former schoolhouse site and restored the area.

The School House septic system and all associated piping were removed using an excavator; and the 37-foot deep well and six-inch casing were removed in five-foot sections. The School House area was restored after being graded and reseeded. The former School House was used as a training center for WVDP employees during the early days of the project.