

West Valley Worker Feedback Leads to Safe Deactivation on Path to Major Demolition



A floor-to-ceiling view of the Product Purification Cell-South within the Main Plant Process Building at the [West Valley Demonstration Project](#). Workers have safely completed deactivation activities in the cell. They applied fixative for contamination control as part of the deactivation process. The cell had previously contained high levels of contamination from former fuel reprocessing operations. This successful deactivation effort has contributed to an overall reduction in radiological hazards that will support the demolition of the Main Plant, an EM 2022 priority.

WEST VALLEY, N.Y. – [EM](#) and its cleanup contractor at the [West Valley Demonstration Project \(WVDP\)](#) recently overcame unique challenges and successfully finished deactivating a highly contaminated cell resembling an elevator shaft in the Main Plant Process Building.

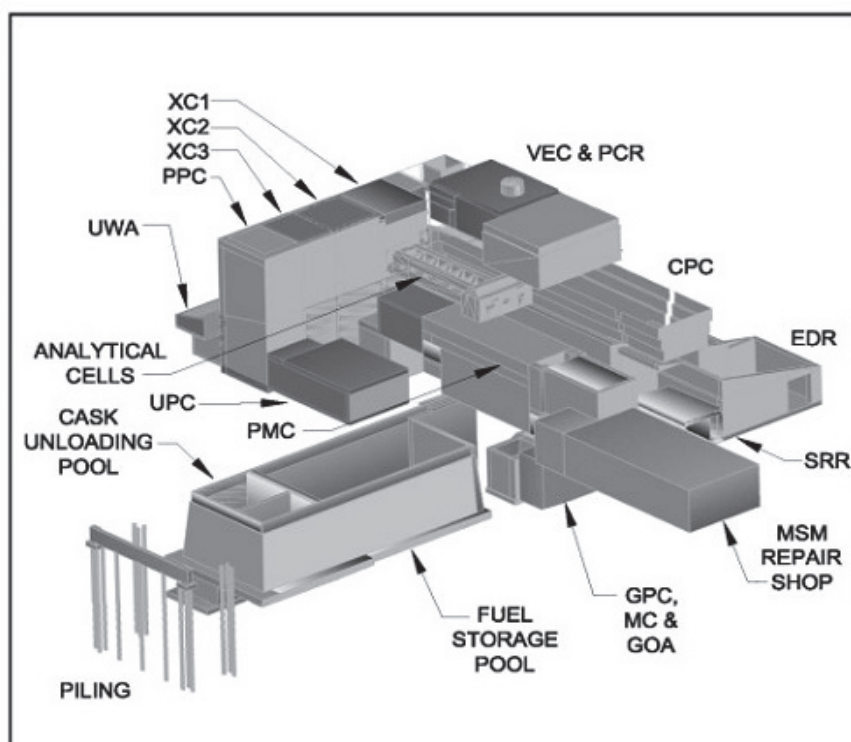


The successful cleanup of the Product Purification Cell-South by EM and CH2M HILL BWXT West Valley (CHBWV) contributed to an overall reduction in radiological hazards that will support the demolition of the Main Plant, an [EM 2022 priority](#).

During former nuclear fuel reprocessing operations, the cell was used to house vessels associated with plutonium separation, concentration, material controls and batching for shipping.

Due to its configuration, the cell was a potentially oxygen-deficient workspace that required additional planning and work controls, including a trained confined space rescue team.

“Safety is our priority throughout any and all work activities at the site,” said Stephen Bousquet, EM WVDP federal project director for the Main Plant demolition. “This led to an impressive decontamination effort that involved a confined workspace, requiring layers of protective clothing, and numerous industrial and radiological hazard controls.”



The Product Purification Cell-South can be viewed in the upper left portion of this graphic of the Main Plant Process Building at the [West Valley Demonstration Project](#).

After decades of deactivation work in the Main Plant, the cell remained the building’s largest source of radioactive material. Crews used liquid nitrogen — an aggressive, yet safe, cleaning application that included use of a decontamination wand — to decontaminate the cell, safely collecting material in a vacuum system for disposal. A unique benefit of the liquid nitrogen technology is that it did not create a secondary waste stream.



Site workers designed several mock-ups to train employees on the system, leading to improvements in safety, work controls and equipment.

Similar to an elevator, an in-cell mast climber was used to allow employees to safely access all areas of the 57-foot-tall cell. Portable ventilation units provided appropriate air exchanges to ensure a safe work environment. Operators also performed work in air-supplied bubble suits with air-supplied respirators.

Work plans incorporated previous site experience and corporate experience, industry best practices and lessons learned from similar deactivation projects to anticipate and mitigate potential adverse events. Work controls were implemented to reduce radiation exposure to workers during deactivation and waste packaging.

“This accomplishment demonstrates the importance that planning, work control and worker feedback have when it comes to high-hazard work activities,” said Tom Dogal, CHBWV facility disposition manager. “Working closely with employees, management and DOE, feedback was used to further improve processes and safety controls during the deactivation. It was this employee engagement that led to a safe, compliant and successful outcome.”

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