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West Valley crews complete decontamination of hottest cell

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WEST VALLEY — Crews have completed decontamination in the most highly radioactive cell at the Main Plant Process Building at the West Valley Demonstration project.

Cleanup of the Product Purification Cell-South, which resembled a 57-foot tall elevator shaft, "contributed to an overall reduction in radiological hazards that will support the demolition of the Main Plant," according to Joseph Pillittere, a spokesman for CH2M HILL BWXT West Valley, the contractor working on the nuclear cleanup at the West Valley site.

The U.S. Department of Energy is removing as much radioactive and other hazardous material like asbestos as possible before demolition of the plant begins sometime this fall.

The West Valley plant, which operated from the mid 1960s to 1972, was the first commercial reprocessing site for spent nuclear fuel rods. The owner, Nuclear Fuel Services, shut down the plant rather than install additional environmental safeguards.

Procuct Purification Cell-South 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.

During former nuclear fuel reprocessing operations, the cell "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," Bousquet said.

Radioactivity had penetrated the walls of Product Purification Cell-South, which required 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.

Before the process began, employees used mock-ups of the cell to train tem in use of the nitrogen technology. That lead employees to suggest improvements in safety, work controls and equipment.

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 controls were implemented to reduce radiation exposure to workers during deactivation and waste packaging. An in-cell mast climber similar to an elevator was used to allow employees to safely access all areas of the 57-foot-tall cell.

"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," Dogal said.

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