

# OLEAN TIMES HERALD

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## WVDP employs video tech to improve waste tank inspection



A tank where DOE crews performed a video inspection is located in this grouping of underground waste tanks at the West Valley Demonstration Project.

**WEST VALLEY** — Federal Department of Energy crews completed a virtual inspection of an underground tank that once stored liquid waste from spent fuel reprocessing operations at the **West Valley Demonstration Project** in the 1960s and '70s.

The work is part of an ongoing effort by DOE and its **West Valley** cleanup contractor **CH2M HILL BWXT West Valley, LLC (CHBWV)**, to better characterize residual waste, including sludge sampling and analysis. The results of the analyses will help determine disposition alternatives for the remaining content in the tank.

“Obtaining better samples is an important part of the characterization process,” said Stephen Bousquet, assistant director of Project Management. “Better samples lead to improved characterization, which leads to safer planning and execution. Comprehensive planning combined with solid information leads to a safe and successful outcome.”

DOE crews had retrieved and solidified waste from that tank and two others through a process called vitrification from 1996 to 2002. Over 98% of the curies were removed from the waste tanks and vitrified. A curie is a unit used to measure the intensity of radioactivity in a material sample.

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The 278 stainless steel canisters of resulting vitrified waste are being held at a temporary onsite storage pad until a permanent repository is available.

For that vitrification effort, workers neutralized the waste from the tank recently inspected, known as 8D-4, and blended it with other high-level waste in a second, larger tank called 8D-2. That allowed crews to use Tank 8D-4 to support vitrification efforts. The vessel received condensate and other liquids from vitrification.

Following vitrification activities, DOE crews used the 14,300-gallon Tank 8D-4 to support the deactivation of the site's vitrification facility, which DOE crews successfully demolished in 2018. The tank currently has about 3,900 gallons of residual liquid waste or sludge from the facility's deactivation.

Although DOE had completed initial liquid and sludge sampling from the tank in 2012, an additional archived sludge sample was shipped offsite for analysis last year. Additional samples were needed to better characterize the tank's content for future disposition and cleanup. The camera inspection provided additional insight into the liquid level and depth of the sludge, which will help workers obtain better depth sludge samples for offsite analysis.

DOE acquired a high-definition, radiation-resistant video camera and light assembly used in nuclear and non-nuclear applications. The camera, which also has pan and tilt capabilities, was lowered into the tank with sleeving to minimize camera and cord contamination. Once workers obtained video footage inside the tank, the camera was removed, surveyed as clean and released for future use.

Three liquid samples were sent offsite for analysis last month. More samples are expected to be dispatched for analysis.

"Our team continues to use their collective knowledge to find ways to improve processes, planning, and execution of challenging work," said Peggy Loop, manager of Waste and Site Operations for CHBWW. "Comprehensive planning improves safety, quality, and compliance."

KELLEN QUIGLEY