

Main Plant Process Building controlled deconstruction

The following is a guest article from the United State Department of Energy project director at the West Valley Demonstration Project Bryan Bower.

The U. S. Department of Energy plans to commence the controlled deconstruction of the Main Plant Process Building in September, as part of its ongoing cleanup efforts at the **West Valley Demonstration Project** site. This facility removal and major milestone is expected to take about three years to complete.

Our dedicated workforce has conducted significant work over the past two decades to prepare the MPPB for deconstruction in a manner that is protective of human health and the surrounding environment. These employees have safely reduced the radioactivity in the facility by over 98 percent through the removal of more than seven miles of contaminated piping and over 50 tons of contaminated equipment. This effort also included the use of liquid nitrogen at up to 60,000 psi (pounds per square inch) to provide an aggressive, yet safe, cleaning application to ensure that deconstruction is safe and protective of the surrounding community.

The planned approach for safely deconstructing the MPPB incorporates best practices and lessons learned from previous deconstruction at the **West Valley** site, as well as lessons learned from across the DOE complex. As the world leader in the safe removal of complex, contaminated facilities, DOE has three decades of experience in doing this type of deconstruction using deliberately planned and sequenced deconstruction and implementation of robust work controls.

At **West Valley**, DOE is deploying the best detection technology for this project in consideration of safety and maintaining compliance. This includes a three-tiered approach for the protection of our workers, our community, and our environment. In the immediate vicinity to the deconstruction, real-time monitoring is conducted to ensure worker and community protection. This provides early warning of a potential change in work area conditions. More sensitive continuous air monitors and fixed air samplers are placed slightly further away from the deconstruction site monitor for any potential migration of contamination from the deconstruction area. Finally, through collaboration with the U.S. Environmental Protection Agency, DOE has deployed highly sensitive ambient air samplers that surround the site at the closest public access to the site, about one mile from the deconstruction area.

Experienced radiological personnel will monitor, provide guidance, and respond immediately to potentially changing conditions to protect the health and safety of the workforce, surrounding community, and environment.

In the past decade, the **WVDP** has safely deconstructed the Cement Solidification System Building (2013) and Vitrification Facility (2019), along with six ancillary support structures surrounding the MPPB, completed the relocation of 278 vitrified high-level waste canisters in casks to an onsite interim storage pad and demolished all of 46 balance of site structures no longer needed for future cleanup efforts. The waste generated from these activities has been transported off-site for disposal at facilities licensed to accept this waste.

The safety of our site workforce, our neighbors and our environment is our highest priority. DOE and its cleanup contractor, CH2M HILL BWXT West Valley (CHBWV), at **West Valley** are committed to keeping state and local officials, nearby residents and other stakeholders informed of the preparations and progress of the MPPB deconstruction activities. The DOE holds quarterly public meetings that are open to all interested parties.

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DOE's most recent meeting, held on August 24, provided a Project Update and information on the next phase of cleanup, both of which can be found on DOE's website (www.wv.doe.gov) and CHBWV's website (www.chbwv.com). Our next public meeting will be held virtually on November 16. Mr. Joseph Pillittere is the site's point of contact for the public meetings and can be reached at Joseph.Pillittere@chbwv.com.