

West Valley Demonstration Project

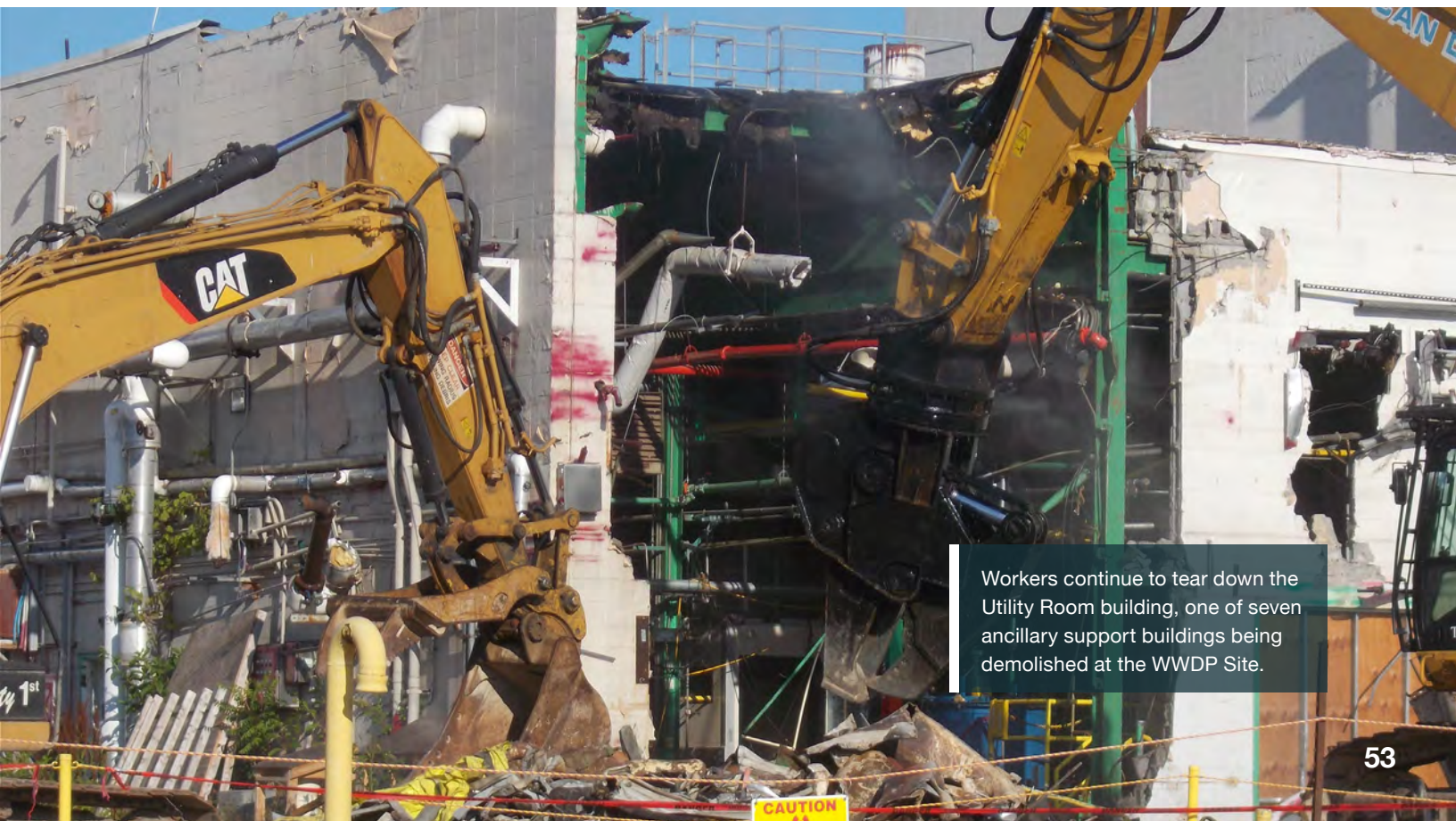
Overview

The WVDP is an approximate 150-acre area located within the Western New York Nuclear Service Center (WNYNSC), which is a 3,338-acre site 30 miles south of Buffalo, New York. The site is owned by the New York State Energy Research and Development Authority (NYSERDA) and is home to the only commercial SNF reprocessing facility to operate in the United States. In 1962, Nuclear Fuel Services, Inc., entered into agreements with the Atomic Energy Commission (AEC) and New York State to construct, license, and operate the commercial reprocessing plant. The fuel reprocessing plant, along with two associated waste burial grounds and an underground set of four tanks for reprocessing waste, operated from 1963 to 1972, processing 640 metric tons of SNF and generating over 600,000 gallons of liquid HLW.

In 1980, Congress passed the WVDP Act, which required DOE to conduct a HLW management demonstration project at the WNYNSC and transport it to a federal repository for disposal. The WVDP Act directed DOE to:

- Solidify the HLW in a suitable form for transportation and disposal
- Develop containers suitable for the HLW's disposal
- Transport the solidified waste to a federal repository for disposal as soon as feasible
- Dispose of LLW and TRU waste produced by the HLW solidification process*

* Because WVDP TRU waste was derived from commercial nuclear fuel reprocessing, it is considered commercial TRU waste. DOE refers to this waste stream as Greater than Class C (GTCC)-like waste.



Workers continue to tear down the Utility Room building, one of seven ancillary support buildings being demolished at the WVDP Site.

Workers perform waste loadout while demolition activities continue on the Main Plant Office Building.



- **Decontaminate and decommission the tanks and other facilities used at the WYNSC in which the HLW was solidified, the facilities used in the waste's solidification, and any material and hardware used in connection with the WVDP**

DOE completed vitrifying the HLW in 2002. The resulting 278 canisters of vitrified HLW are currently stored on-site, pending availability of a federal repository. Since 1998, DOE has been disposing of LLW; processing and packaging both contact-handled

and remote-handled GTCC-like waste; and deactivating, decontaminating, and removing unneeded facilities.

In 2010, DOE and NYSDERDA published, in compliance with the National Environmental Policy Act, a joint final environmental impact statement that addressed both DOE's completion of the WVDP and NYSDERDA's decommissioning and/or long-term stewardship of the WYNSC. The same year, DOE and NYSDERDA issued a ROD to proceed with a phased decision-making approach for remaining cleanup activities. Phase 1 covers soil remediation and disposition of the remaining

facilities. Phase 2 will address the four underground waste tanks and the two on-site disposal areas, and the non-source area of the groundwater plume. DOE intends to complete the remaining decision-making with its Phase 2 decision in a supplemental environmental impact statement.

DOE has a strong public outreach program at WVDP including conducting Quarterly Public Meetings (QPMs) and participating in monthly meetings with the West Valley Citizen Task Force (CTF). During the planning of the Phase 1 decommissioning decision, DOE discussed the approach at both the QPMs and CTF meetings. DOE provides updates of the status of ongoing Phase 1 decommissioning activities at both the QPM and CTF meetings. DOE also provides a status of site progress at the monthly Ashford Town Board meetings.

Calendar Year 2020 Accomplishments

- **Completed removal of all removable asbestos-containing material from the MPPB Fuel Receiving and Storage Facility**
- **Initiated deactivation of below-grade cells in the MPPB**
- **Completed removal of two additional of MPPB ancillary support buildings (the Main Plant Office Building and the Utility Room), bringing the total number of ancillary support buildings removed to six of seven**
- **Completed removal of one additional balance of site facility, bringing the number removed to 44 out of 46**

Planned Cleanup Scope 2021–2031

Over the next decade, DOE will complete Phase 1 soil remediation and facility decommissioning activities, though completion could be impacted by a lack of disposal options for GTCC-like waste. In 2021, DOE will continue deactivation activities and begin demolition of the MPPB, the last major remaining facility at the site. By September 2023, DOE expects to complete demolition the MPPB. In addition, demolition activities will be completed at the remaining ancillary support building, and two remaining balance of site facilities.

By the end of 2028, DOE will complete decommissioning of the below-grade portions of the MPPB and the Vitrification Facility, where aboveground demolition was completed in 2019. DOE will also complete the decommissioning of the site's radioactive water treatment system, including four active lagoons and one closed lagoon. By the end of 2030, DOE will complete soil remediation efforts in Waste Management Area-1 and Waste Management Area-2.

By 2023, DOE and NYSERDA intend to make an integrated decision on the path forward for the Phase 2 decommissioning activities and/or long-term stewardship of the WNYNSC. Phase 2 decommissioning decisions will address the Waste Tank Farm, the waste disposal areas, and the non-source area of the groundwater plume.

Key Regulatory Milestones 2021–2031

- **None**

Post-2031 Cleanup Scope

Remaining work at West Valley post-2031 will focus on disposal of orphan waste and completion of Phase 2 decommissioning activities. If a disposal option for GTCC-like waste is available, DOE could, by the end of 2033, complete the processing, packaging, shipment, and disposal of GTCC-like waste and removal of remaining waste processing facilities, such as the Remote-Handled Waste Facility, once GTCC-like waste shipping and disposal is complete.