



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
**ENVIRONMENTAL  
MANAGEMENT**

# The Future of the West Valley Demonstration Project

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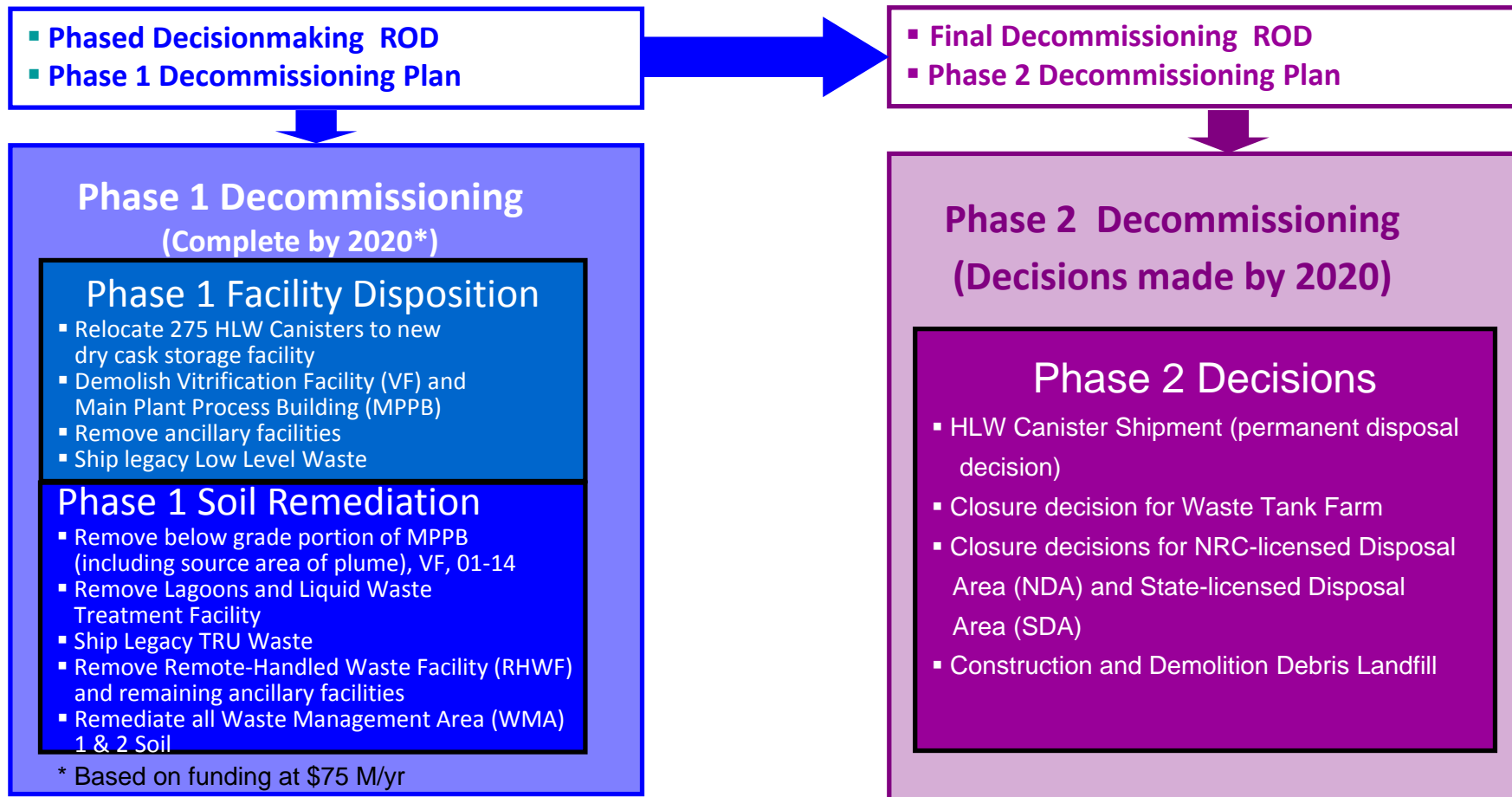
***EM*** ***Environmental Management***

*safety ❖ performance ❖ cleanup ❖ closure*

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# WVDP Decommissioning Phased Decision Making

In 2010, DOE published the Final Environmental Impact Statement and Record of Decision (ROD) for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project (WVDP) and the Western New York Nuclear Service Center (WNYNSC)



- Complete Phase 1 Decommissioning Facility Disposition (March 2020)
- Implement Phase 1 Decommissioning Soil Remediation (March 2020)
- Develop the Record of Decision (ROD) for Phase 2 Decommissioning (2020)
- Implement the Phase 2 ROD



The WVDP at the end of Phase 1 Decommissioning

# Phase 1 Decommissioning Facility Disposition

- **Scope of work includes:**
  - Relocate High-Level Waste (HLW) canisters to new on-site storage at WVDP *Complete*
  - Process, ship and dispose of all legacy waste off-site *~50 % Complete*
  - Demolish and remove Main Plant Process Building (MPPB), Vitrification Facility (VF), and ancillary facilities. *VF Deactivation Complete  
MPPB Deact. ~60 % Complete*
  - Manage and maintain site infrastructure and conduct other work described in the Performance Work Statement
- **Scope of work performed by CH2M HILL BWXT West Valley, LLC (CHBWV) [contract awarded in 2011]**

# Phase 1 Decommissioning – Soil Remediation

- Scope:
  - Remove below grade portions of MPPB and VF, including the source area of the plume (physical boundary)
  - Remove the waste water lagoons and liquid waste treatment facility
  - Ship the legacy Transuranic (TRU) waste (potentially)
  - Remove the Remote Waste Handling Facility (RHWF) and remaining ancillary facilities (after shipment of TRU waste)
  - Remediate Waste Management Area (WMA)1 and 2 soil (MPPB, VF, Lagoons)
- Timing:
  - Will align with the completion of the Facility Disposition work

# Planning for the Phase 2 Decommissioning Decision

- DOE and NYSERDA have agreed to proceed with Phase 2 decommissioning decision using the NRC's License Termination Rule criteria as prescribed in the NRC Final Policy Statement to evaluate in an integrated manner all WVDP and WNYNSC facilities, including the:
  - HLW Tanks
  - NRC-Licensed Disposal Area (NDA)
  - State-Licensed Disposal Area (SDA)
  - Construction Demolition and Debris Landfill
  - Non-Source Area of the Plume
  - Creeks
  - Cesium Prong
  - Contaminated Soils

## Probabilistic Performance Assessment (PPA) (2017-2018)

- Develop a probabilistic modeling approach (GoldSim) capable of performing a long-term PPA
- Iterative sensitivity analyses to refine the model, evaluate the nature and magnitude of uncertainty, and determine how uncertainty may be reduced
- Iterative evaluation of potential decommissioning approaches (source term removals, engineered barrier designs) to develop Phase 2 alternatives for analysis in the SEIS
- Perform a long-term PPA to evaluate radiological dose impacts from the Phase 2 closure alternatives analyzed in the SEIS

## Supplemental Environmental Impact Statement (SEIS) (2017-2020)

- A joint DOE/NYSERDA SEIS will be prepared to fulfill NEPA/State Environmental Quality Review Act requirements and in keeping with the agency's commitment to develop an integrated Phase 2 decommissioning decision approach for the WVDP, WNYNSC, and SDA
- DOE, NYSEERDA, the PPA contractor, and the SEIS contractor will develop Phase 2 alternatives to be evaluated in the SEIS
- The DSEIS and SEIS will incorporate the long-term PPA
- NRC, EPA, NYSDEC, and NYS Department of Health are cooperating agencies participating in the development and review of the SEIS
- NRC will review the SEIS and if determined to be acceptable, NRC will adopt the SEIS to fulfill NRC's NEPA responsibilities under the WVDP Act
- If unacceptable NRC will publish its own SEIS for public review



## Phase 2 Decommissioning Plan (DP) Approach (2017-2020):

- Two DPs will be prepared that are consistent with the preferred alternative in the DOE ROD and NYSERDA Feasibility Study and the cost allocation/responsible parties in the 2010 Consent Decree
- The DOE DP will address the WVDP Project Premises and soil and streambed contamination within the WNYNSC Retained Premises
  - NRC would review and analyze DOE's DP against the NRC decommissioning criteria consistent with the WVDP Act and the 1981 DOE/NRC Memorandum of Understanding
- NYSERDA will prepare a "Proposed DP" to address anticipated license termination for the Cesium Prong, Bulk Storage Warehouse, and soil/streambed sediment contamination outside the WNYNSC. The SDA will also be included to allow a comprehensive view of dose contributions from the entire licensed premises
  - The NYSERDA "Proposed DP" will not be docketed but would be reviewed by the NRC
  - After the Part 50 license has been re-instated and NYSERDA decides to terminate its Part 50 license, a NYSERDA DP will be docketed and formally reviewed by the NRC

# Integrated Phase 2 Decision Timeline

