

Range of Potential Phase 2 Decommissioning Alternatives

What is the Proposed Action?

The Proposed Action is the West Valley Demonstration Project's (WVDP's) completion and the decommissioning and/or long-term management or stewardship of the Western New York Nuclear Service Center (WNYNSC) and State-Licensed Disposal Area (SDA). This includes the decontamination and decommissioning of the facilities remaining at the West Valley Site (the WVDP, WNYNSC, and SDA) after completion of Phase 1 decommissioning.

What are the decisions to be made?

After completion of a supplemental environmental impact statement (SEIS) for the West Valley Site, the U.S. Department of Energy (DOE) and New York State Energy Research and Development Authority (NYSERDA) will make Phase 2 decisions on the disposition of facilities and areas that would remain after completion of Phase 1 decommissioning. The remaining facilities are the Waste Tank Farm, U.S. Nuclear Regulatory Commission (NRC)-Licensed Disposal Area (NDA), non-source area of the North Plateau Groundwater Plume, Construction and Demolition Debris Landfill, Cesium Prong, contaminated stream sediments, balance of the WNYNSC property, and SDA.

Why do the agencies need to take action (what is the purpose and need)?

DOE is required by the West Valley Demonstration Project (WVDP) Act to decontaminate and decommission the tanks and facilities used in the solidification of the high-level waste, and any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe. NRC has prescribed its License Termination Rule (LTR) as the decommissioning criteria for the WVDP. Therefore, DOE needs to determine the manner in which facilities, materials, and hardware are managed or decommissioned, per NRC's LTR and applicable Federal and state requirements. To that end, DOE needs to determine what, if any, material or structures for which it is responsible that were not addressed in Phase 1 (i.e., Phase 2 facilities) will remain on site, and what, if any, institutional controls, engineered barriers, or stewardship provisions would be needed. That is, DOE needs to determine what it needs to do to complete the WVDP and return the Project Premises to NYSEERDA.

NYSERDA needs to determine the manner in which Phase 2 facilities and property for which NYSEERDA is responsible, including the SDA, a portion of which is shown in an historical photo at right, will be managed or decommissioned, in accordance with applicable Federal



and state requirements. To this end, NYSEERDA needs to determine what, if any, material or structures for which it is responsible will remain on site, and what, if any, institutional controls, engineered barriers, or stewardship provisions would be needed. NYSEERDA intends to pursue termination of the existing NRC license for the WNYNSC upon DOE's completion of decontamination and decommissioning under the WVDP Act. NYSEERDA plans to use the analysis of alternatives in the SEIS for the West Valley Site to support any necessary NRC or New York State Department of Environmental Conservation license or permit applications.

What alternatives are under consideration?

The SEIS will examine the range of reasonable Phase 2 alternatives (i.e., the alternatives that meet DOE's and NYSEERDA's respective purpose and need for action) and their potential environmental impacts. The SEIS will also analyze the No Action Alternative, as required by NEPA and SEQR. The range of reasonable alternatives encompasses those involving release of West Valley Site facilities and areas for re-use under unrestricted and restricted conditions as allowed under the License Termination Rule. Accordingly, the SEIS will evaluate whether the alternatives would meet the NRC decommissioning criteria and other applicable requirements. The alternatives and associated environmental analyses will be structured so that decisions based on the SEIS need not be limited only to a specific set of elements that happen to define a particular alternative. Rather, decisionmakers could ultimately select an alternative comprised of elements of one or more of the primary (including hybrid) alternatives and their associated implementing options.

How will final details of the alternatives be determined?

DOE and NYSERDA anticipate that details of the alternatives will continue to evolve in response to public scoping comments, conceptual engineering and design development, and the analysis of long-term dose impacts. The resulting alternatives will be analyzed in detail in the Draft SEIS.

Are specifics on the alternatives available yet?

Alternatives proposed for analysis in the SEIS include:

No Action Alternative:

- Baseline for comparing impacts of the alternatives.
- No further decommissioning actions after Phase 1 completion.
- Continue management and oversight of site facilities for the foreseeable future.
- Conduct periodic maintenance activities during an assumed period of active institutional controls.

Sitewide Removal Alternative:

- Remove site facilities and contaminated soil, sediment, and groundwater to meet criteria for unrestricted release of the Western New York Nuclear Service Center (WNYNSC).
- Characterize radioactive, hazardous, and mixed waste.
- Package the waste and ship it off site for disposal.
- Would require disposition of waste that currently has no offsite disposal location and, as such, would be stored on site until an appropriate offsite facility is available.

Sitewide Close-In-Place Alternative:

- Close-in-place most Phase 2 facilities and release large areas of the WNYNSC for unrestricted use.
- Manage major facilities and sources of contamination at their current locations.
- Isolate residual radioactivity in facilities with larger inventories of long-lived radionuclides using special structures and barriers.
- Design such structures and barriers to meet regulatory requirements to retain hazardous and radioactive constituents, resist long-term degradation, and discourage inadvertent intrusion.
- Allow facilities with lesser amounts of contamination to naturally attenuate.
- Requires long-term stewardship.

Hybrid Alternatives:

- May contain elements of the other alternatives.
- May include complete or partial removal of certain facilities and close-in-place for the remaining facilities.
- Implementation may occur immediately after a decision or after a safe-storage period.

DOE and NYSERDA invite comments during the public scoping process on the alternatives and issues to be analyzed, including the specific elements, facilities, and areas to be included in the hybrid alternatives.