

Preferred Alternative Recommended by Core Team

*Environmental Impact Statement (EIS) for
Decommissioning and/or Long-Term Stewardship at
the West Valley Demonstration Project (WVDP) and
the Western New York Nuclear Service Center
(WNYNSC)
(DOE/EIS-0226)*

Bryan Bower
DOE Director
West Valley Demonstration Project
WVDP Quarterly Public Meeting, January 23, 2008

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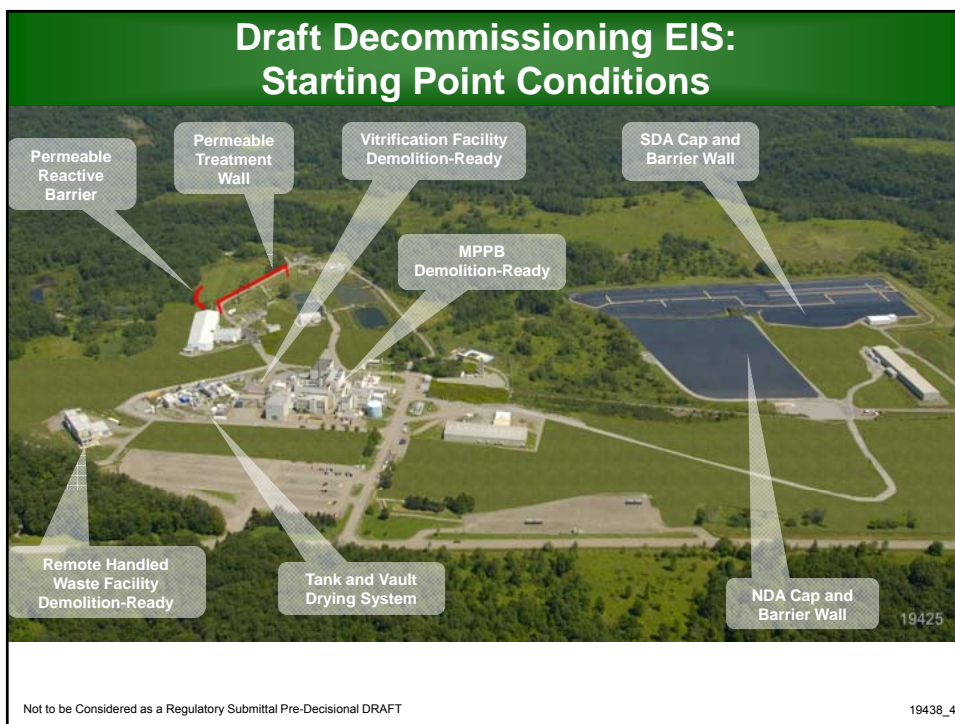
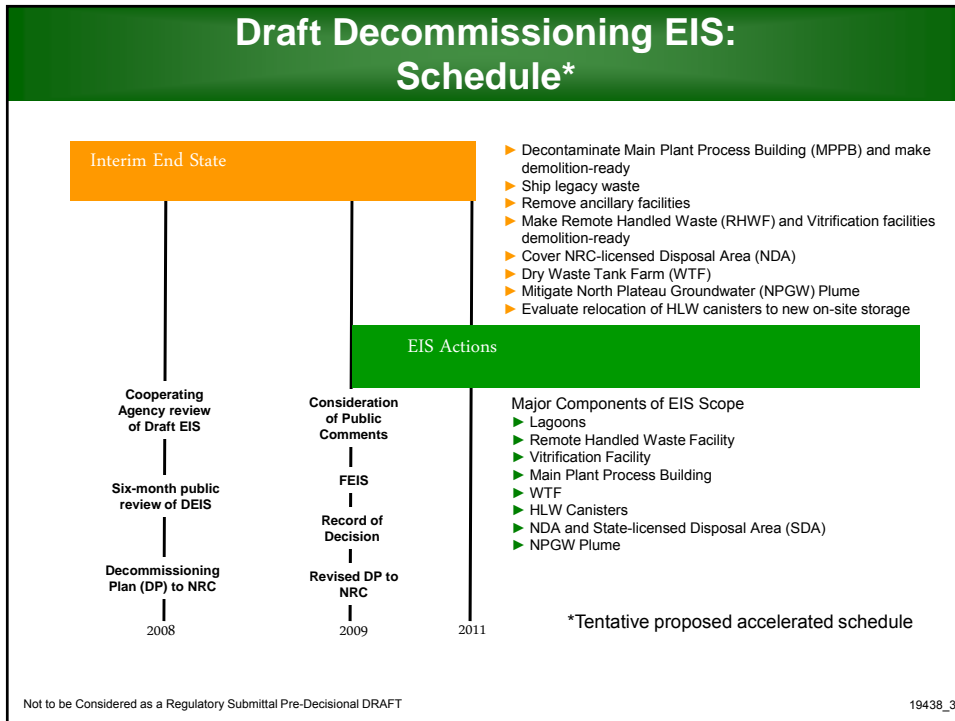
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Core Team Members

- U. S. Department of Energy (DOE)
- U. S. Nuclear Regulatory Commission (NRC)
- U. S. Environmental Protection Agency (EPA)
- New York State Energy Research and Development Authority (NYSERDA)
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of Health (NYSDOH)

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Draft Decommissioning EIS

Purpose: Evaluate the range of reasonable alternatives for decommissioning and/or long-term stewardship of the WVDP and WNYNSC

Key Points

- ▶ An EIS is an analytical document that analyzes and compares potential environmental impacts of alternatives
- ▶ The EIS (study) does not determine the decision
- ▶ Regulatory requirements are discussed in the EIS, but compliance is not determined

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Draft Decommissioning EIS: Alternatives

- Four Alternatives Defined
 - Site-wide Removal
 - Site-wide Close In-place
 - No Action
 - Phased Decision-Making
 - Recommended by Core Team as Preferred Alternative

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Draft Decommissioning EIS: Site-Wide Removal Alternative

- Action: Removal of all wastes, contaminated facilities and soils/sediments

Key Points

- ▶ MPPB, NDA, SDA, WTF and all contaminated soils/sediments above levels that would restrict land use would be demolished, exhumed, removed
- ▶ Wastes for which there is no available disposal option would be stored on site awaiting shipment

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Draft Decommissioning EIS: Site-Wide Close In-Place Alternative

- Action: Close existing facilities and contamination in current locations with use of engineered barriers for containment

Key Points

- ▶ Analysis of both ongoing institutional controls and loss of institutional controls at 100 years would be conducted
- ▶ For regulatory purposes, would also evaluate loss of institutional control at time = 0
- ▶ Non-impacted areas of the WNYNSC could be considered for release without restrictions

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Draft Decommissioning EIS: No Action Alternative (Continuing Operations)

- Action: No decommissioning actions would be taken; active monitoring and maintenance would continue

Key Points

- ▶ This alternative is a procedural NEPA/SEQRA requirement
- ▶ Evaluation would begin with Interim End State actions completed
- ▶ Analysis of both long-term institutional controls and loss of institutional controls at 100 years would be conducted

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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team

- Action: Removal of most WVDP facilities; identification and completion of activities to support future decisions on exhumation or in-place closure of remaining WVDP facilities (phased decommissioning); and active on-site management of SDA for up to 30 years

Key Points

- ▶ Two-phase decision process with definite schedule for completion
- ▶ First decision would identify removal actions and assessment activities to support future decisions on the WTF, NPGW Plume, and NDA
- ▶ First decision would identify management strategy for SDA
- ▶ Integration of decisions and actions over time is challenging, but essential to progressing toward WVDP completion

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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team

- Phase 1 would include both actions and assessments (studies)
 - Proposed Phase 1 Actions (~2011 – 2018)
 - Construct new on-site storage facility for High-Level Waste (HLW) canisters; move the 275 canisters of solidified HLW to a new on-site storage facility
 - Remove the Main Plant Process Building including below-grade sections and the source area of the North Plateau Ground Water Plume
 - Removal of Liquid Low-Level Waste Water Treatment Facility, lagoons and all facilities not needed to maintain: Waste Tank Farm, North Plateau Groundwater Plume, NRC-licensed Disposal Area and general site monitoring and maintenance.
 - Further characterize and evaluate site surface soils to identify and remove areas of higher contamination.

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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team



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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team

- Rationale for Proposed Phase 1 Actions
 - Relocating HLW canisters would place them in cost-effective configuration, ready for shipment
 - Removal of MPPB would eliminate highly-contaminated 40+ year-old facility and allow removal of contaminated soil (i.e. the source area of the NPGW Plume) under and around the MPPB
 - Reduction in facilities would allow removal of the radioactive waste water treatment system and lagoons precluding future spread of contamination from lagoon sediments
 - Removal of areas of higher surface soil contamination would advance overall site soil management

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Draft Decommissioning EIS: After Phase 1 Actions

- The following facilities/areas would remain and would continue under active management
 - WTF
 - NDA, SDA
 - Remaining contained portion of the contaminated NPGW Plume
 - Areas of low-level surface soil contamination
 - Canisters containing HLW solidified in glass
 - Waste without off-site disposal options

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Draft Decommissioning EIS: Site After Phase 1 Actions

Decommissioning decisions on the remaining WVDP facilities/areas would await further assessments



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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team

- Proposed Phase 1 Assessments
 - A number of activities are proposed to support future decisions on exhumation or in-place closure of the WTF, NDA and remaining portion of NPGW Plume
 - Site-specific erosion data collection
 - Further evaluation of long-term landscape evolution modeling and application to the West Valley site
 - Evaluation of engineered barriers
 - Monitoring and evaluation of exhumation technologies
 - Monitoring and evaluation of potential disposal pathways for site wastes
 - Ongoing site performance evaluations

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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team

- Ongoing Assessment Period
 - An assessment period is proposed to begin with issuance of the Record of Decision. Evaluations would be conducted during this period and reviews of the WTF, NDA, SDA and remaining portion of contained NPGW Plume would be conducted every five years, in association with:
 - Completion of DOE supplement analysis process
 - RCRA permit renewal (DOE, NYSERDA, NYSDEC)
 - SDA permits and license renewal (NYSERDA, NYSDEC, NYSDOH)

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Draft Decommissioning EIS: Preferred Alternative Recommended by Core Team

- Ongoing Assessment Period (continued)
 - Site monitoring and maintenance would continue throughout the assessment period
- A decommissioning decision (Phase 2) for the WTF and NDA and contained portion of NPGW Plume would be made no later than 30 years after the Phase 1 Record of Decision

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