U. S. Department of Energy
Finding of No Significant Impact
Proposed Decontamination, Demolition, and Removal
of Certain Facilities at the West Valley Demonstration Project

AGENCY: U. S. Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) has prepared an Environmental Assessment (EA), DOE/EA-1552, for a proposed action to demolish and remove 36 facilities from the West Valley Demonstration Project (WVDP) site in West Valley, New York. Based on the analyses in the EA and considering public comments, DOE has determined that the proposed action is not a major federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (NEPA) 42 United States Code 4321 *et. seq.* Therefore, preparation of an Environmental Impact Statement (EIS) is not required, and DOE is issuing this Notice of Finding of No Significant Impact (FONSI).

PURPOSE AND NEED: The 36 facilities are, or within the next 4 years, will no longer be needed to support site operations, and there is no reasonably expected future use for these 36 facilities to support site decommissioning or related functions. DOE needs to remove and appropriately disposition the facilities in order to avoid the unnecessary cost expenditures for maintenance and monitoring that would be associated with leaving them in place.

DESCRIPTION OF THE PROPOSED ACTION: As part of its ongoing WVDP responsibilities and in accordance with the West Valley Demonstration Project Act (Public Law 96-368, October 1, 1980), DOE proposes to demolish and remove 36 facilities. Although some of the facilities are currently in use, DOE will be able to eliminate or significantly reduce the functions that are undertaken in those facilities over the next 4 years. Replacement of any remaining functions could require minor modifications of existing facilities but no new construction. A few functions will be taken over by qualified off-site vendors. Once the functions are replaced or are no longer needed by WVDP, DOE will demolish and remove the facilities from the site. DOE will develop a logically sequenced dismantlement plan to ensure that site services and functions remain available until no longer needed. All applicable Resource Conservation and Recovery Act and corollary New York State Department of Environmental Conservation (NYSDEC) Quality Services regulations for management (storage, shipping, reporting, and off-site disposal) of solid waste, including hazardous waste, will be followed in completing this work.

DOE will decontaminate any facilities as needed. All decontamination activities will be conducted in accordance with the WVDP Radiological Protection Program, which meets the requirements of 10 CFR Part 835, *Occupational Radiation Protection*. The Radiological Protection Program requires that radiological operations be performed in a manner that ensures the health and safety of all workers and the public. The program also requires that radiation exposures to workers and the public, and releases of radioactivity to the environment, be maintained below federally allowed limits (applicable federal limits for public exposure are set at 10 millirem (mrem) per year by the National Emission Standards for Hazardous Air Pollutants regulations, 40 CFR Part 61, for the airborne pathway, and 100 mrem per year by DOE Order 5400.5 for the sum of all exposure pathways) and that deliberate efforts be taken to further

reduce exposures and releases in accordance with a process that seeks to make any such exposures or releases as low as reasonably achievable (ALARA).

DOE will package the generated wastes on-site and transport them to licensed commercial or DOE disposal facilities located off-site. Class A low-level radioactive waste (LLW) and mixed LLW (LLW that is both radioactive and hazardous) will be sent either to DOE radioactive waste disposal sites at the Nevada Test Site (NTS) in Mercury, Nevada, and/or at the Hanford Site in Richland, Washington. The LLW could also be sent to Energy Solutions (formerly known as Envirocare), a commercial waste disposal site in Clive, Utah. Disposal of waste at commercial facilities will be conducted in accordance with existing licenses and permits. In accordance with the settlement agreement between DOE and the State of Washington of January 6, 2006, regarding the case *Washington v. Bodman*, DOE would not ship LLW and mixed LLW from WVDP to Hanford until DOE had satisfied the requirements of the settlement agreement, including completion of the Tank Closure and Waste Management EIS (DOE/EIS-0391).

No radioactive waste will be disposed of within the State of New York. Industrial waste and building debris waste will be shipped to a landfill in Model City, New York, or to a landfill outside of Angelica, New York, where this type of WVDP waste is currently shipped for disposal. Asbestos waste will be shipped to a landfill in Model City, New York. Hazardous waste will be shipped to a landfill in Indianapolis, Indiana, where this type of WVDP waste is currently shipped for disposal.

U.S. Environmental Protection Agency (EPA) and U.S. Department of Transportation shipping regulations will be followed to ensure safe packaging, temporary on-site storage, and shipment of waste.

ALTERNATIVES: Under the No Action Alternative, current operations would continue and DOE would not decontaminate, demolish, or remove the 36 facilities. Contaminated soil, equipment, and structures would remain in place. Funds would continue to be spent for routine maintenance and monitoring of these unused and unneeded structures. Ongoing activities at the WVDP site would continue, including the loading, transportation, and off-site disposal of LLW and mixed LLW as analyzed in the WVDP Waste Management (WM) EIS (DOE/EIS-0337) (DOE 2003) and the *Supplement Analysis for the West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE/EIS-0337F-SA-01). DOE also considered but did not analyze in detail demolishing a subset of buildings.

ENVIRONMENTAL IMPACTS: Impacts of activities associated with the decontamination (as necessary), demolition, and removal of the 36 facilities were analyzed in the EA.

Air Quality. Implementation of the Proposed Action would result in the unavoidable short-term mobilization or emission of small amounts of radioactive and nonradioactive particulates. It would also result in short-term emissions of hydrocarbons and carbon monoxide from the exhaust of a small number of gasoline and diesel engines used for demolition and transportation activities. Releases of airborne contamination to the environment during building removal activities would be minimized through the use of at least two levels of high efficiency particulate air filtration. Fugitive dust controls, including water sprays, will be used where soil disturbance and demolition-related activities would substantially increase airborne particulate levels. Vehicle and equipment emissions will be minimized by keeping all equipment maintained to manufacturer specifications.

Geology and Soils. Environmental impacts to geological and soil resources will be limited to the removal of soil surrounding, and from up to 0.6 meters (2 feet) below, several uncontaminated building slabs. All topsoils and subsoils that will be disturbed under the Proposed Action have been previously disturbed.

Surface and Ground Water Quality. The Proposed Action will not require any facility construction and is not expected to cause any impacts requiring EPA or NYSDEC review or additional permitting on the surface water or groundwater quality. Intermittently and for relatively short periods during the Proposed Action, suspended solids in stormwater runoff may increase during soil excavation activities that will occur for some facilities. This intermittent short-term impact will be mitigated by stabilization techniques and sediment controls as prescribed in the *New York State Standards and Specifications for Erosion and Sediment Control*. Such impacts will be temporary, occurring only during soil excavation, disturbance, and placement activities.

Mitigation actions that will be implemented include fugitive dust controls such as water sprays that will be used where soil disturbance and demolition-related activities could substantively increase airborne particulate levels. For certain contaminated buildings such as the O2 Building, DOE will construct dikes around the building to prevent stormwater runoff and collect water from fugitive dust control and vehicle washdowns. Collected water will be treated and released to the Low-Level Wastewater Treatment Facility Lagoon. At other facilities, mitigation measures will include runoff diversion (around the work area) or straw bale or fabric filter fencing for silt control. Post-demolition stabilization of exposed work areas will include the addition of topsoil, seed, and mulch. For paved areas, stabilization will include the use of washed stone, washdown and water collection, or broom sweeping (for example, for concrete or asphalt pads).

Potential increases in erosion rates and associated nonradioactive solids loadings into surface waters from removal of pads and foundations in several noncontaminated areas will be reduced as former building footprints were replaced by permeable, vegetation-covered soils. The increase in vegetation will reduce stormwater runoff velocities and increase stormwater infiltration into the soil. The Proposed Action will have no measurable adverse impacts on groundwater.

Ecological Resources. No federally or state-listed threatened or endangered species and no critical habitat for any federally or state-listed threatened or endangered species will be affected by the Proposed Action because none exist on the WVDP Project Premises. During demolition operations, noise and increased human activity could temporarily disturb local wildlife. In the long term, the demolition and removal of unused and unneeded or contaminated facilities will enhance the quality of the WVDP habitat for local indigenous or migratory species. Any required backfilling, regrading, and revegetation around foundation areas will also enhance the WVDP habitat. Because the Proposed Action will not entail any new construction activities or any planned disturbance to or discharge into any delineated wetlands or wetland buffer areas, no adverse impacts to wetlands are expected.

Cultural Resources. The Proposed Action will not affect any known historical or cultural resources. In 1995, the State Historic Preservation Office determined that no site facilities are eligible for inclusion in the *National Register of Historic Places*.

Socioeconomic Impacts. Under the Proposed Action, no significant changes to the existing workforce at WVDP are anticipated. Functions that are still needed by site operations will be taken over by qualified off-site vendors. For that reason, there will be no impact to

socioeconomic resources such as housing, schools, and other public facilities. The existing tax base will neither increase nor decrease. For this reason, no adverse or beneficial socioeconomic impacts are expected.

The only impact from the Proposed Action with the potential to disproportionately and adversely affect minority or low-income populations will be the short-term increase in uncontaminated suspended solids carried by stormwater runoff from areas where soil was temporarily unarmored (uncovered) or disturbed during the course of facility removal. If existing and planned sediment and silt control measures unexpectedly failed, there could be a disproportionate adverse impact to residents along Cattaraugus Creek, which traverses the Cattaraugus Reservation of The Seneca Nation of Indians. No such failures have occurred in the past, and such failures are unlikely in the future.

Noise. It is likely that activities performed under the Proposed Action will result in a short-term increase in noise at the WVDP. Noise will be generated by decontamination, demolition, excavation, grading, scraping, and removal operations. Truck or rail traffic traveling to and from the area as part of the Proposed Action will also contribute to the noise impact. This will be a short-term impact lasting only for the duration of the Proposed Action. There will be no long-term noise impacts.

Land Use. The Proposed Action will not affect the current land use at the WVDP or the surrounding area. The removal of unused and unneeded facilities and planned regrading and revegetation (where pads and foundations were removed) will enhance the visual aspects of the site by modestly reducing the degree to which the WVDP visually contrasts with the surrounding rural landscape. Some temporary land disturbance will be caused by the Proposed Action, although there will be no long-term or permanent adverse impacts on the topography or physiography of the WVDP.

Health and Safety. Under the Proposed Action, waste management activities will involve the generation of Class A LLW, mixed LLW, asbestos waste, hazardous waste, industrial waste, and building debris waste. During the 4-year time period for the Proposed Action, the collective radiation dose to involved workers is estimated to be about 5.4 person-rem, or about 1.4 person-rem per year, from activities under the Proposed Action. This is equivalent to a latent cancer fatality (LCF) risk of 0.0032 over 4 years, or 0.00081 per year. Over this same time period, the individual radiation dose to the average involved worker will range from 44 to 63 mrem per year. This radiation dose is well below the limit in 10 CFR Part 835 of 5 rem (5,000 mrem) per year and the WVDP administrative control level of 500 mrem per year, and will result in less than 1 (1.1×10^{-4} to 1.5×10^{-4}) LCF.

In addition to radiation doses from the Proposed Action activities, workers will be exposed to radiation doses from the ongoing operations of the WVDP site. When radiation doses are calculated for involved and noninvolved workers for both Proposed Action activities and ongoing operations, the total collective radiation dose to the workers is estimated to be about 160 person-rem over the duration of the Proposed Action, or about 39 person-rem per year. This radiation dose is equivalent to less than 1 (0.093) LCF within the worker population, or 0.023 LCF per year.

In over 20 years of operations, there has never been a work-related worker fatality at the WVDP site. Over the past 4 years, there has not been a lost time work accident or injury. Based on these data, the expected number of worker fatalities from industrial accidents for the Proposed Action

is zero. It is estimated that there will be less than 1 (4.4×10^{-5}) worker fatality from industrial accidents under the Proposed Action.

People near the WVDP site could also be exposed to airborne and liquid releases of radionuclides due to normal operations. During the 4-year time period for the Proposed Action, the individual radiation dose to the maximally exposed individual living near the WVDP site would be 0.14 mrem per year from airborne and liquid releases, which is much less than the 100-mrem per year standard in DOE Order 5400.5, *Radiation Protection of the Public and the Environment*, and would result in less than 1 (8.4×10^{-9}) LCF per year, or a chance of about 1 in 120,000,000 for the maximally exposed individual. When combined with the impacts of continued operations at the WVDP site, the radiation dose to the maximally exposed individual would be 0.076 mrem per year, which is also much less than the 100-mrem per year standard in DOE Order 5400.5.

Over this same time period, the collective radiation dose to people living within 80 kilometers (50 miles) of the site would be 0.12 person-rem, or about 0.31 person-rem per year. This is equivalent to an LCF risk of 2.7×10^{-5} over 4 years, or 1.9×10^{-5} per year. When combined with the impacts of continued operations at the WVDP site, the collective radiation dose is estimated to be 1.1 person-rem. This is equivalent to an LCF risk of 6.8×10^{-4}.

Precautions taken to protect the public against releases of nonradioactive hazardous material would be similar to the precautions taken to minimize releases of radioactive material. Therefore, the impacts to members of the public from releases of nonradioactive hazardous material are expected to be minimal.

DOE evaluated the potential impacts that could occur as a result of accidents at the WVDP site during the implementation of the Proposed Action. Under the three accident scenarios analyzed, using 50-percent atmospheric conditions, the potential impacts to workers range from 5.1×10^{-8} to 8.4×10^{-5} LCFs; the potential impacts to the maximally exposed individual range from 1.7×10^{-8} to 2.8×10^{-5} LCFs; and the potential impacts to the population living within 80 kilometers (50 miles) of the WVDP site range from 5.4×10^{-5} to 0.090 LCFs. Using 95-percent atmospheric conditions, the potential impacts to workers range from 5.0×10^{-7} to 8.4×10^{-4} LCFs; the potential impacts to the maximally exposed individual range from 1.9×10^{-7} to 3.1×10^{-4} LCFs; and the potential impacts to the population living within 80 kilometers (50 miles) of the WVDP site range from 8.4×10^{-4} to 1.4 LCFs.

Human health and safety impacts of radioactive waste management activities at DOE off-site locations that would be used to dispose of radioactive wastes under the Proposed Action (Hanford and NTS) have been addressed in earlier NEPA documents. For all waste types, WVDP waste represents less than 2 percent of the total DOE waste inventory. Human health impacts at these sites as a result of the disposal of WVDP waste during the 4-year period of Proposed Action will be very minor (substantially less than 1 LCF).

Transportation Impacts. During the Proposed Action, there would be a small increase in the number of daily truck trips on roads servicing the WVDP, including those required to bring topsoil to the site for stabilization and revegetation. DOE estimates that removal of the wastes generated by the Proposed Action to a licensed off-site disposal facility would require approximately 700 truck shipments during an estimated 4-year period. About 75 percent of these shipments would be shipments of non-nuclear/non-hazardous material, mostly industrial waste, concrete, and debris.

Under the Proposed Action, about 20,600 cubic meters (727,000 cubic feet) of Class A LLW, mixed LLW, asbestos waste, hazardous waste, industrial waste, and building debris waste will be shipped for disposal. These shipments will take place over 4 years. The transportation impacts of shipping the Class A LLW, mixed LLW, asbestos waste, hazardous waste, industrial waste, and building debris waste will be from two sources: incident-free transportation and transportation accidents.

If either trucks or trains were used to ship the waste, essentially no additional fatalities are anticipated under incident-free transportation. When the transportation impacts of the Proposed Action are combined with the transportation impacts of continued operations at the WVDP site, after adding the impacts of the Proposed Action to those anticipated from continued operations, about 1 fatality might occur.

If trucks were used to ship the waste, the maximally exposed worker would be a driver who would receive a radiation dose of about 250 mrem per year based on driving a truck containing radioactive waste for about 700 hours per year. This is equivalent to a probability of an LCF of about 1.5×10^{-4}. If trains were used to ship the waste, the maximally exposed worker would be an inspector. This worker would receive a radiation dose of about 1.8 mrem per year. This is equivalent to a probability of an LCF of about 1.1×10^{-6}.

For truck shipments, the maximally exposed member of the public would be a person working at a service station who would receive a radiation dose of about 0.097 mrem per year. This is equivalent to a probability of an LCF of about 5.8×10^{-8}. If shipments were made by rail, the maximally exposed member of the public would be a rail yard worker who was not directly involved with handling the railcars. This person would receive a radiation dose of about 0.33 mrem per year. This is equivalent to a probability of an LCF of about 2.0×10^{-7}.

In a reasonably foreseeable transportation accident involving a truck shipment of Class A LLW or mixed LLW, the maximally exposed individual would receive a radiation dose of 1.0 rem. This is equivalent to a probability of an LCF of about 6.2×10^{-4}. The population would receive a collective radiation dose of about 290 person-rem from this truck accident involving Class A LLW or mixed LLW. This could result in about 0.18 LCF.

For the maximum reasonably foreseeable transportation rail accident involving Class A LLW or mixed LLW, the maximally exposed individual would receive a radiation dose of about 2.1 rem. This is equivalent to a probability of an LCF of about 1.2×10^{-3}. The population would receive a collective radiation dose of about 580 person-rem from this rail accident involving Class A LLW or mixed LLW. This could result in about 0.35 LCF.

No human health impacts would be expected from acute exposure to hazardous materials released during a severe transportation accident. In addition, radioactive releases from a Class A LLW or mixed LLW accident will not be likely to cause persistent, measurable deleterious changes in populations or communities of terrestrial or aquatic plants or animals.

Cumulative Impacts. In the short term, the Proposed Action would slightly increase the amount of contaminants currently being released to the environment at the WVDP. Specifically, removal activities would result in releases of contaminants to the air and stormwater runoff. Monitoring and mitigation controls would be in effect throughout the Proposed Action to ensure that the short-term increases in released contaminants would be minimized and kept in compliance with

regulatory guidelines. The cumulative long-term impacts of the Proposed Action would be beneficial due to the demolition and removal of the 36 facilities and the removal, consolidation, and appropriate disposal of hazardous and radioactive wastes.

PUBLIC COMMENTS ON THE DRAFT EA: The Draft EA was circulated for review and comment to the State of New York and other interested stakeholders for a 30-day comment period that ended on July 29, 2006. A public meeting to discuss the Draft EA was held on July 19, 2006. Based on the comments received on the Draft EA, some facilities that were proposed for demolition and removal were eliminated from the scope of the EA and will be included in the *Decommissioning and/or Long-Term Stewardship Environmental Impact Statement* (DOE/EIS-0226-R) (Decommissioning EIS) currently in progress. Appendix D of the EA contains an index of all commenters and DOE's responses to specific comments received.

DETERMINATION: Based on the analysis in the EA, DOE has determined that the proposed decontamination (as necessary), demolition, and removal of the 36 unused and unneeded facilities does not constitute a major federal action significantly affecting the quality of the human environment within the meaning of NEPA, and DOE will not prepare an environmental impact statement. Further, based on the facilities' design, function and lack of significant source term, DOE has determined that the proposed demolition and removal of the facilities, either individually or collectively, will not affect whether decommissioning criteria for the site could be satisfied, nor will the proposed action affect the selection of any alternative under the Decommissioning EIS, consistent with Council on Environmental Quality NEPA implementing regulations at 40 CFR 1506.1

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PUBLIC AVAILABILITY: Copies of the EA (DOE/EA-1552) are available from:

WVDP Communications
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799
(716) 942-2152
or
sonja.allen@wvnsco.com

Copies of the EA are also available for review at the following locations:

Concord Public Library
18 Chapel Street
Springville, NY 14141
or
www.wv.doe.gov

For further information regarding DOE's NEPA process at West Valley, contact:

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