DOE/EA-1552

Environmental Assessment for the Decontamination, Demolition, and Removal of Various Facilities at the West Valley Demonstration Project

Draft

U.S. Department of Energy
West Valley Area Office
West Valley, New York

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List of Acronyms and Abbreviations

ALARA	as low as reasonably achievable
CAIRS	Computerized Accident/Incident Reporting System
CFR	Code of Federal Regulations
dBA	A-weighted decibel
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EA	environmental assessment
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
F	Fahrenheit
FONSI	Finding of No Significant Impact
ft^2	square foot
ft^3	cubic foot
HEPA	high efficiency particulate air
HLW	high-level radioactive waste
HWMU	Hazardous Waste Management Unit
LLW	low-level radioactive waste
mrem	millirem
NA	not applicable
NDA	NRC-Licensed Disposal Area
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFS	Nuclear Fuel Services, Inc.
NRC	U.S. Nuclear Regulatory Commission
NTS	Nevada Test Site
NYSERDA	New York State Energy Research and Development Authority
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
SDA	State (of New York)-Licensed Disposal Area
SPDES	State Pollutant Discharge Elimination System
SWMU	Solid Waste Management Unit
TRU	transuranic
U.S.C.	United States Code
WMA	Waste Management Area
WNYNSC	Western New York Nuclear Service Center
WVDP	West Valley Demonstration Project
WVDP WM EIS	West Valley Demonstration Project Waste Management Environmental Impact Statement

CHAPTER 1 INTRODUCTION AND PURPOSE AND NEED FOR AGENCY ACTION

1.1 Overview

As part of its ongoing West Valley Demonstration Project (WVDP) responsibilities and in accordance with the West Valley Demonstration Project Act (Public Law 96-368, October 1, 1980), the U.S. Department of Energy (DOE) proposes to demolish and remove 42 unneeded and unused buildings and other structures at the WVDP in West Valley, New York.[1] DOE would develop a logically sequenced dismantlement plan to ensure that site services and functions remained available until no longer needed. DOE would decontaminate any facilities as needed. Industrial, hazardous, and radioactive waste resulting from decontamination and demolition would be transported off-site for disposal at licensed commercial or DOE disposal facilities.

DOE has prepared this draft environmental assessment (EA) in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] §§ 4321 *et seq*.) and applicable Council on Environmental Quality requirements at Title 40 Code of Federal Regulations (CFR), including Part 1506.1, to determine whether the environmental impacts of the proposal may be significant. The draft EA is being circulated for review and comment to the State of New York and other interested stakeholders. After reviewing and considering any comments received, DOE will issue a final EA, along with a Finding of No Significant Impact (FONSI), if applicable. Otherwise, this action will be included in the scope of the *Decommissioning and/or Long-Term Stewardship Environmental Impact Statement* (DOE/EIS-0226-R) (Decommissioning EIS), which is currently in preparation (see Section 1.2).

1.2 West Valley Demonstration Project

The Western New York Nuclear Service Center (WNYNSC or the Center) encompasses 14 square kilometers (5 square miles) in West Valley, New York, in rural Cattaraugus County, approximately 50 kilometers (30 miles) southeast of Buffalo, New York. The WNYNSC was once a commercial nuclear fuel reprocessing plant and was the only one to have operated in the United States. Figure 1 shows the locations of the Center and the WVDP site within the State of New York (USGS 1979).

The Center operated under a license issued by the Atomic Energy Commission (now the Nuclear Regulatory Commission [NRC]) in 1966 to Nuclear Fuel Services, Inc. (NFS) and the New York State Atomic and Space Development Authority, now known as the New York State Energy Research and Development Authority (NYSERDA) (AEC 1966). Under the Energy Reorganization Act of 1974, the regulatory functions of the Atomic Energy Commission were given to the NRC, which became the licensing authority for the Center's operation.

[1] Some of the buildings are currently being used to store low-level radioactive waste. This waste is being shipped offsite in accordance with DOE's Record of Decision for the *West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE/EIS-0337) (DOE 2003) (WVDP WM EIS). When the shipments are complete, the buildings will be empty and ready for decontamination (if needed), demolition, and removal from the WVDP site. The proposed decontamination, demolition, and removal of the 42 buildings and the resulting waste volumes were not included in the scope of the WVDP WM EIS or in the *Supplement Analysis for the West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE/EIS-0337-SA-01) (DOE 2006) issued after the Record of Decision (70 FR 35073, June 16, 2005.

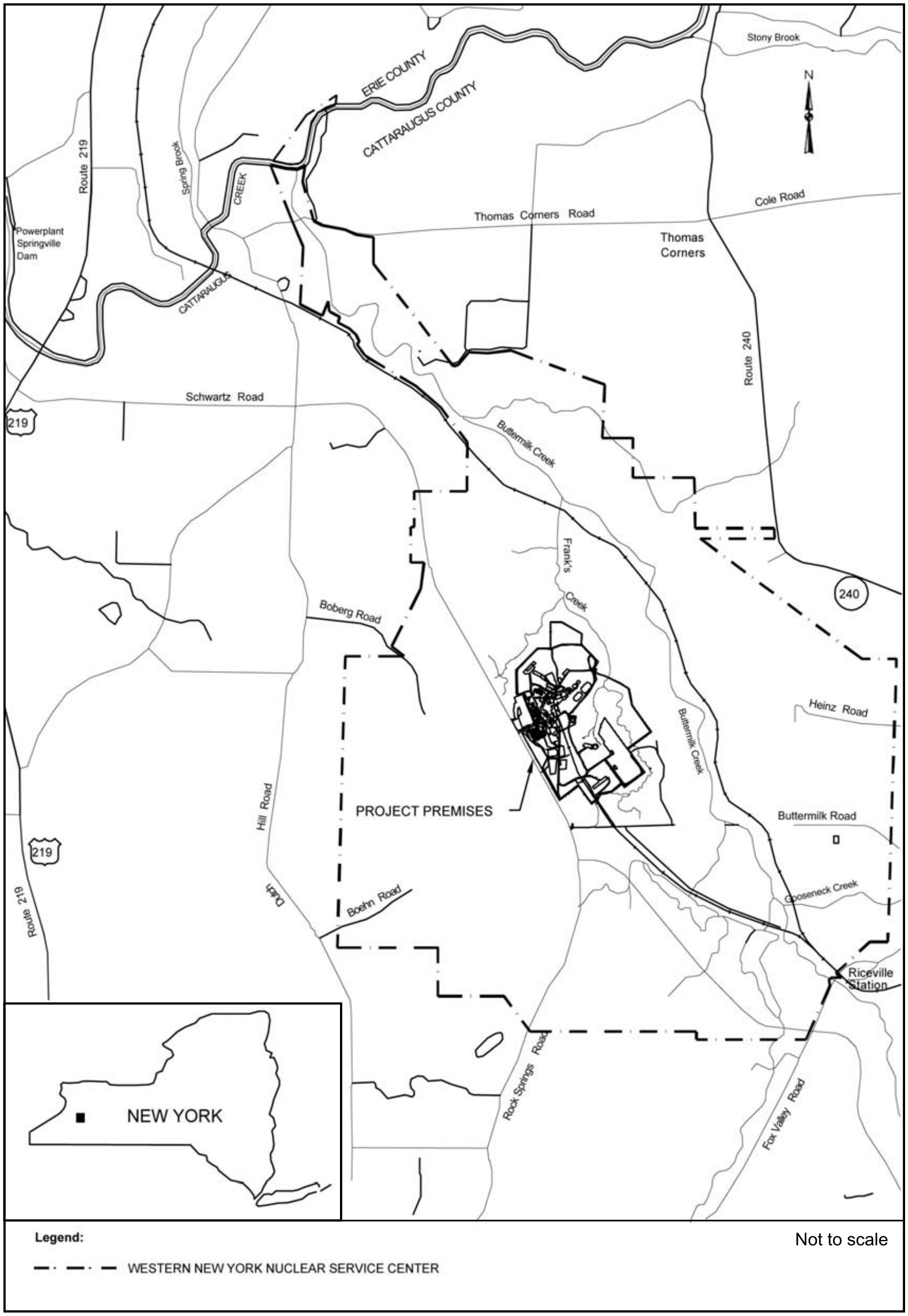

Figure 1. Location of the West Valley Demonstration Project and Western New York Nuclear Service Center (WNYNSC)

During reprocessing, spent nuclear fuel was chopped, dissolved, and processed by a solvent extraction system to recover uranium and plutonium. Fuel reprocessing ended in 1972 when the plant was shut down for modifications to increase its capacity, reduce occupational radiation exposure, and reduce radioactive effluents. At the time, NFS, the owner and operator of the reprocessing plant, expected that the modifications would take 2 years and $15 million to complete. However, between 1972 and 1976, there were major changes in regulatory requirements, including more stringent seismic and tornado siting criteria for nuclear facilities and more extensive regulations for radioactive waste management, radiation protection, and nuclear material safeguards.

As a result of these changes, in 1976, NFS estimated that over $600 million would be required to modify the facility to increase its capacity and to comply with the new regulatory standards (DOE 1978). The company subsequently announced its decision to withdraw from the nuclear fuel reprocessing business and exercise its contractual right to yield responsibility for the Center to NYSERDA. NYSERDA now holds title to and manages the Center on behalf of the people of the State of New York.

In 1978, Congress passed the Department of Energy Organization Act (Pub. L. No. 95-238), which, among other things, directed DOE to conduct a study to evaluate possible federal operation or permanent federal ownership of the Center and use of the Center for other purposes. Congress subsequently passed the West Valley Demonstration Project Act in 1980, which directed DOE to demonstrate solidification techniques for the disposal of high-level radioactive waste (HLW) and to decontaminate and decommission facilities in accordance with NRC requirements.

In 1981, the NRC license for the facility was modified, giving DOE exclusive use and possession of the facility. In the following year, the NRC license was once again modified to terminate NFS's responsibilities under the license coincident with NYSERDA's acceptance of surrender of the facility from NFS and DOE's assumption of exclusive possession.

Site Terminology

The Center or the WNYNSC – The 14-square-kilometer (5-square-mile) Western New York Nuclear Service Center in West Valley, New York.

The Project or the WVDP – All activities undertaken in carrying out the solidification of the liquid HLW at the Center, including (1) solidification of liquid HLW; (2) preparation of the Project Premises and Project Facilities to accommodate action 1; (3) development of containers suitable for the permanent disposal of the HLW solidified at the Center; (4) transportation of the wastes solidified at the Center to an appropriate federal repository for permanent disposal as soon as feasible after solidification and in accordance with applicable provisions of law; (5) decontamination and decommissioning of the tanks, other facilities at the Center in which the solidified wastes were stored, all Project Facilities, and other facilities, material, and hardware used in carrying out the solidification of the HLW at the Center; (6) disposal of low-level radioactive waste (LLW), mixed LLW, and transuranic (TRU) waste in accordance with applicable licensing requirements; and (7) all other activities necessary to carry out the foregoing.

Project Premises – An area of approximately 80 hectares (200 acres) within the WNYNSC made available to DOE for carrying out the WVDP. The Project Premises include the Project Facilities and the 2-hectare (5-acre) NRC-Licensed Disposal Area (NDA).

Project Facilities – The facilities that NYSERDA made available to DOE to be used in the solidification of the HLW at the Center.

Retained Premises – The 1,335-hectare (3,300-acre) portion of the Center, not including the Project Premises, retained by NYSERDA. The Retained Premises include the 6-hectare (15-acre) State-licensed Disposal Area (SDA) adjacent to the NDA.

The WVDP (or the Project) was established to implement the West Valley Demonstration Project Act. The WVDP is located on approximately 80 hectares (200 acres) within the WNYNSC. The Project includes the former NFS plant and related facilities. Several additional buildings and facilities were constructed to complete the WVDP mission. In addition to the WVDP facilities, the WNYNSC includes two former radioactive disposal areas: an NRC-Licensed Disposal Area (NDA) within the Project premises, and a State of New York-Licensed Disposal Area (SDA), which is not within the Project premises. Figure 2 shows the Project Premises, NDA, and SDA.

In 2002 and in accordance with the West Valley Demonstration Project Act, NRC issued its final policy statement regarding West Valley site decommissioning. The NRC criteria are based on radiological doses to members of the most affected population and are intended to protect public health and safety. DOE also has an obligation, under a Stipulation of Compromise with the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign, to prepare a site closure EIS in accordance with NEPA. Before NYSERDA's license for the site could be terminated (assuming it would be reactivated) in order to close the site, the NRC decommissioning criteria must be met.

Accordingly, DOE is jointly preparing, with NYSERDA, the Decommissioning EIS specifically focused on alternatives for decommissioning the site and identifying potential needs for long-term stewardship there. That is, the EIS will evaluate the range of reasonable alternative strategies for meeting the NRC radiological decommissioning criteria as the primary condition for eventual site closure, as well as potential needs for long-term stewardship at the site.

This EA evaluates the potential environmental impacts of demolishing and removing a set of structures and other facilities which have been or are currently used by the WVDP that, because of their design, function, and lack of significant source term, are not expected, either individually or collectively, to affect whether the decommissioning criteria for the site could be met. DOE estimates that the total radiological content of all the facilities proposed for demolition and removal would not exceed approximately 50 curies. This amount is not sufficient, either by itself or in comparison to the total on-site radiological profile,[2] to affect whether any Decommissioning EIS alternative meets the NRC criteria.

1.3 Purpose and Need for Agency Action

Under the West Valley Demonstration Project Act, DOE is responsible for, among other things, decontaminating and decommissioning the facilities used to store HLW, the facilities used to solidify the HLW waste, and any material or hardware used in connection with the Project in accordance with NRC requirements. Although some of the facilities are currently in use, DOE needs to eliminate or significantly reduce the functions that are undertaken in the facilities in the near term. For the purposes of analysis, DOE assumed a 4-year period in which to complete the action. DOE has identified 42 facilities for decontamination, dismantlement, removal, and disposal. These facilities are, or within the next 4 years will be, no longer needed to safely monitor and maintain or support future removal of the vitrified HLW or facilities that are under consideration in the Decommissioning EIS. Leaving the unneeded structures and facilities in place would require continuing maintenance and monitoring, resulting in unnecessary expense. DOE needs to remove these facilities for cost-efficiency and to facilitate the eventual closure of the WVDP site.

[2] Approximately 1 million curies, assuming the vitrified HLW is shipped off-site for disposal.

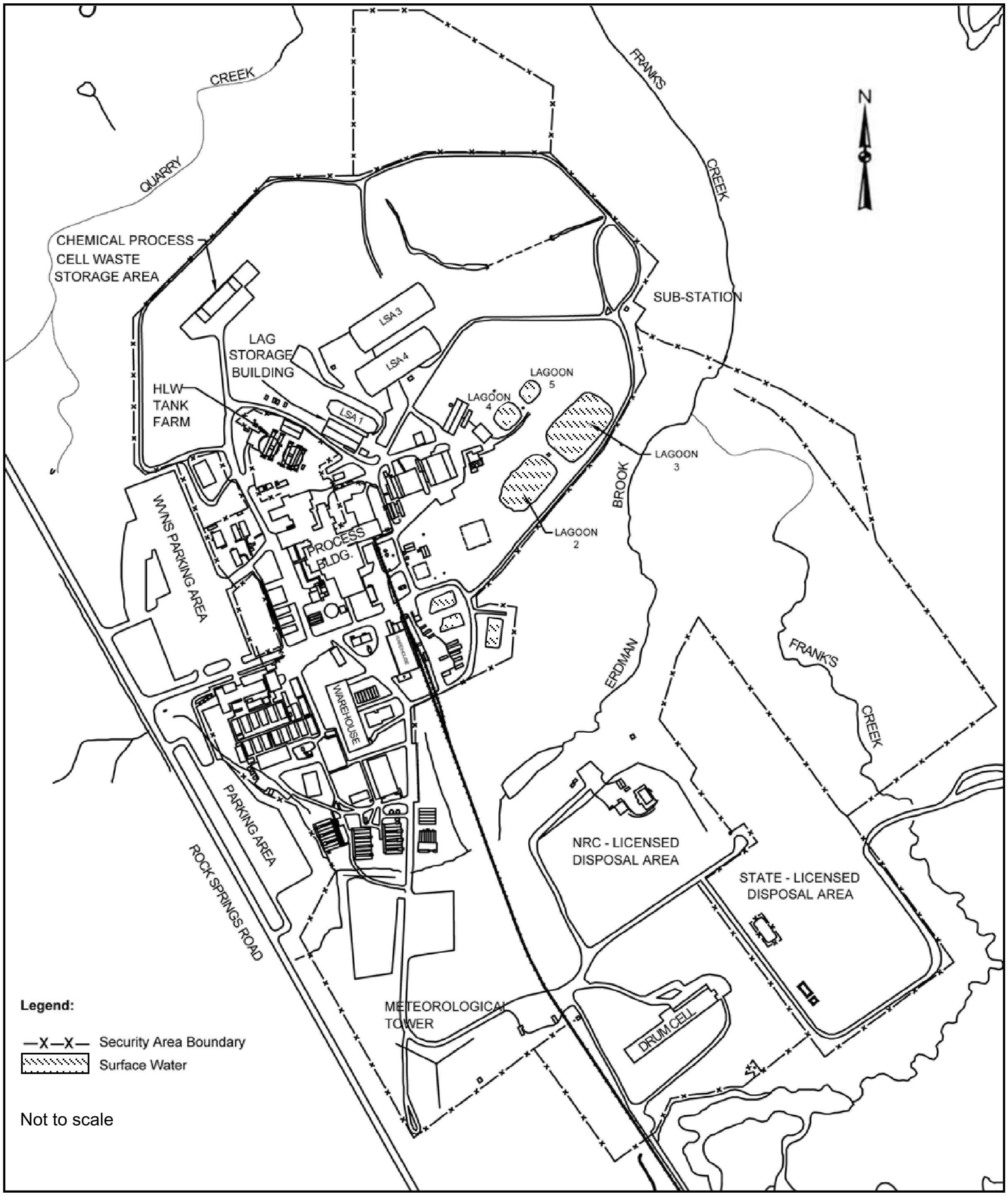

Figure 2. WVDP Site Map (Project Premises)

CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES

This section describes DOE's Proposed Action, which would, for purposes of analysis, occur over an estimated 4-year period (through December 31, 2010). It also discusses the No Action Alternative and alternatives considered but not analyzed.

2.1 Proposed Action

Under the Proposed Action, DOE would demolish and remove the 42 facilities (buildings and other structures) at WVDP listed in Table 1. Although some of the facilities are currently in use, DOE needs 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. Other functions would be taken over by off-site vendors or facilities with adequate capacity. Once the on-site functions were replaced or were no longer needed by WVDP, DOE would demolish and remove the facilities from the site. DOE would develop a logically sequenced dismantlement plan to ensure that site services and functions remained available until no longer needed. Table 2 identifies the facilities for which functions would need to be replaced. Facilities that remain at the end of the 4-year period would be safely maintained, operated, and monitored, as appropriate.

Some of the facilities proposed for demolition and removal are permitted under the Resource Conservation and Recovery Act (RCRA) or have interim status under RCRA as Hazardous Waste Management Units. Many are Solid Waste Management Units. For those facilities that contain residual radioactive contamination, DOE would decontaminate them as needed in accordance with site procedures.[3] Industrial waste (including concrete), asbestos, hazardous waste, Class A low-level radioactive waste (LLW), and mixed LLW (radioactive waste that also contains hazardous components) would be generated as a result of decontamination and demolition. No other waste types would be generated. As noted above, these waste volumes were not included in the *West Valley Demonstration Project Waste Management Environmental Impact Statement* (WVDP WM EIS) (DOE/EIS-0337) (DOE 2003) or in the *Supplement Analysis for the West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE/EIS-0337-SA-01) (DOE 2006).

Table 1 lists the facilities proposed for demolition and removal and provides information regarding their Waste Management Area (WMA) location, construction type, size, regulatory status, and the estimated volume of waste that would be generated. Waste volume estimates in Table 1 are based on prior radiological characterization, process knowledge, screening data, and DOE's 25 years of experience at the WVDP. The waste volume estimates include radioactive waste that would be generated as a result of decontamination activities; the waste volumes for Class A, hazardous, and industrial waste also include any contaminated soil that would be removed (e.g., live fire range soil). Appendix A contains a general description of the facilities; Appendix B contains a detailed WVDP facility map and facility name crosswalk that includes the facilities covered by the Proposed Action. Figures 3 and 4 show the 12 WMAs in which the facilities are located.

[3] Removal of all foundations and pads of facilities located in areas where underground contamination is likely to be encountered will be considered as part of the Decommissioning EIS.

Table 1. Facilities Proposed for Demolition and Removal

Facility	WMA	Construction Type	Footprint (ft^2)	Stories	$Ft^2 \times$ Stories	Regulatory Status	Volume of Waste (ft^3)					
							Class A LLW	Mixed LLW	Asbestos	Hazardous	Industrial	Concrete Slab[a]
Administration Bldg.	**10**	Metal, Concrete, and Wood	5,200	1	5,200	NA	0	0	70	0	28,600	
Bulk Storage Warehouse	**11**	Metal and Steel	13,040	2	26,080	NA	0	0	0	0	0	3,800
CPC Waste Storage Area	**5**	Steel	14,000	3	42,000	HWMU SWMU	100	40	0	0	4,000	
Cold Chemical Facility	**3**	Metal and Steel	1,938	3	5,814	NA	0	0	0	0	46,442	
Contact Size Reduction Facility	**1**	Concrete	1,435	2	2,870	HWMU	10,000	2,435	0	0	0	
Diesel Fuel Oil Building	**10**	Metal	334	1	334	NA	0	0	0	20	3,000	
Emergency Vehicle Shelter	**1**	Metal	693	2	1,386	NA	0	0	0	0	9,000	
Equalization Basin	**6**	Lined basin	9,375	0	0	SWMU	0	0	0	0	5,000	
Equalization Tank	**6**	Concrete	9,500	0	0	NA	0	0	0	0	0	
Expanded (Environmental) Lab	**10**	Metal and Wood	4,600	1	4,600	NA	0	0	0	0	27,200	
Fabrication Shop	**10**	Metal	4,800	2	24,000	NA	0	0	1	20	40,040	
Haz Waste Storage Lockers	**5**	Metal	512	1	512	HWMU SWMU	0	0	0	0	1,500	
Hydrofracture Test Well Area	**11**	Steel and Soil	90,000	0	0	NA	0	0	0	0	0	(wells)
Interim Waste Storage Facility	**7**	Metal	1,296	2	2,592	HWMU SWMU	100	40	0	40	6,296	
Lag Storage Addition 1	**5**	Metal, Steel, and Vinyl Fabric	10,500	1	10,500	HWMU SWMU	100	40	0	0	5,000	
Lag Storage Addition 2 (hardstand)	**5**	Gravel pad	13,000	1	13,000	HWMU SWMU	100	40	0	0	100	
Lag Storage Addition 3	**5**	Steel	25,600	1	25,600	HWMU SWMU	100	40	0	0	50,000	
LSA 4 & Shipping Depot	**5**	Metal	33,300	1	33,300	HWMU SWMU	16,750	40	0	20	66,000	

Table 1. Facilities Proposed for Demolition and Removal (cont'd)

Facility	WMA	Construction Type	Footprint (ft^2)	Stories	$Ft^2 \times$ Stories	Regulatory Status	Volume of Waste (ft^3)					
							Class A LLW	Mixed LLW	Asbestos	Hazardous	Industrial	Concrete Slab[a]
Lag Storage Bldg.	**5**	Metal	8,400	1	8,400	HWMU SWMU	100	40	0	0	20,000	
Laundry Room	**1**	Concrete	1,456	2	2,912	NA	6,824	0	33	0	25,000	
Live Fire Range	**12**	Wood with Soil	40,000	1	40,000	NA	0	0	0	70,000	500	
Lube Storage Locker	**2**	Prefab	324	1	324	NA	0	0	0	0	1,000	
Maintenance Shop	**2**	Metal	6,000	2	12,000	SWMU	0	0	0	100	47,000	
Maintenance Storage Area	**2**	Metal	2,860	2	5,720	NA	0	0	0	0	11,500	
MSM Repair Shop	**1**	Concrete and Steel	3,195	1	3,195	NA	8,000	0	0	0	0	
NDA Hardstand	**7**	Cinder block and crushed rock	400	1	400	SWMU	1,100	0	0	0	0	
New Cooling Tower	**6**	Metal and concrete	1,000	1	1,000	NA		0	0	0	8,300	
Slab[b]							6,800					
New (Main-2) Warehouse	**10**	Steel	20,000	3	60,000	SWMU*	0	0	0	0	65,000	
O2 Bldg.	**2**	Concrete and Steel	9,600	3	28,800	SWMU	29,000	40	100	0	0	
Slab[b]							4,000					
Old Warehouse	**6**	Steel	12,150	2	24,300	NA	0	0	0	50	42,150	
Old Sewage Treatment Facility	**6**	Concrete pit	225	0	0	SWMU	0	0	0	0	0	600
Radwaste Process (Hittman) Bldg.	**1**	Steel	800	2	1,600	SWMU	5,160	0	0	0	0	
Slab[b]							3,000					
RTS Drum Cell	**9**	Metal and Concrete	22,500	3	67,500	SWMU	200	0	0	0	58,000	
Recirculation Vent System Bldg.	**1**	Metal	1,050	1	1,050	NA	520	0	100	10	6,000	

Table 1. Facilities Proposed for Demolition and Removal (cont'd)

Facility	WMA	Construction Type	Footprint (ft^2)	Stories	Ft^2 × Stories	Regulatory Status	Volume of Waste (ft^3)					
							Class A LLW	Mixed LLW	Asbestos	Hazardous	Industrial	Concrete Slab[a]
Road-Salt & Sand Shed	**6**	Steel and Wood	686	2	1,372	NA	0	0	0	0	1,000	
Schoolhouse	**12**	Wood	760	1	760	SWMU	0	0	0	20	5,380	200
Sewage Treatment Plant	**6**	Wood and Metal	1,640	1	1,640	SPDES	0	0	0	0	13,500	
Test & Storage Bldg.	**2**	Metal and Wood	9,600	2	19,200	SWMU	0	0	0	100	43,600	
Vehicle Repair Shop	**2**	Metal	1,410	2	2,820	NA	0	0	0	20	10,000	
Vitrification Test Facility	**2**	Metal	5,276	4	21,104	SWMU	0	0	0	0	71,104	
Warehouse Bulk Oil Storage Unit	**10**	Prefab	160	1	160	NA	0	0	0	0	500	
WTF Training Platforms	**6**	Steel and Fabric	512	8	4,096	NA	0	0	0	0	6,000	
TOTAL					506,141		91,954	2,755	304	70,400	727,712	4,600

a. Slabs for the Bulk Storage Warehouse, Old Sewage Treatment Facility, and Schoolhouse are in clean areas and would be removed under the Proposed Action.

b. Slabs for the New Cooling Tower, O2 Building, and Radwaste Process (Hittman) Building would be decontaminated if necessary but would not be removed under the Proposed Action. These slabs will be evaluated in the Decommissioning EIS.

Note: ft^2 = square foot; ft^3 = cubic foot
NA = not applicable; SWMU = Solid Waste Management Unit; HWMU = Hazardous Waste Management Unit; SPDES = State Pollutant Discharge Elimination System.
* Applies only to the Warehouse Extension Staging Area

Table 2. Facility Functions to be Replaced

WVDP Facility	Function	Replacement
Emergency Vehicle Shelter	Houses the site emergency vehicles	All emergency response functions would be provided by off-site agencies.
Equalization Basin	Used as an excess capacity settling pond for discharges from the Utility Room	If necessary, equipment in existing facilities would be used.
Equalization Tank	Serves as a replacement for the Equalization Basin	If necessary, equipment in existing facilities would be used.
Expanded Environmental Laboratory	Supports laboratory analysis and testing	This function would be replaced by quality-certified off-site laboratories.
Hazardous Waste Storage Lockers	Used for short-term storage of hazardous waste	Hazardous waste would be stored appropriately in existing facilities until shipped off-site for disposal..
Laundry Room	Used for laundering contaminated protective clothing	Services would be provided by off-site vendors if necessary.
Live Fire Range	Used for weapons practice and qualification courses	A firing range is available locally.
Lube Storage Locker	Used for lubrication materials storage	Lubrication materials would be stored appropriately in existing facilities, if necessary.
Maintenance Shop	Used for metal-working activities	Quality-certified machine shops are available locally.
New Cooling Tower	Provides cooling water to selected systems and equipment	Cooling function would be provided through equipment modification or replacement to eliminate need for Cooling Tower.
New Warehouse	Supported the storage of spare parts, equipment, and chemicals associated with the HLW treatment activities	Warehouse capacity is available locally, if required.
Old Warehouse	Supports the storage of spare parts, equipment, and chemicals associated with conduct of the WVDP; formerly used by NFS for the same purpose; a portion houses a radiological counting facility	Warehouse capacity is available locally, if required.
Road Salt and Sand Shed	Stores road salt and sand used for treating roadways in the winter	An off-site contractor would be used to maintain walkways and roadways.
Sewage Treatment Plant	Treats sanitary sewage	Portable sanitary facilities would be used, serviced by an off-site contractor once a week.
Vehicle Repair Shop	Used to maintain and repair vehicles used on-site	Vehicle maintenance and repair would be provided by local vendors.
Warehouse Bulk Oil Storage Unit	Used for the storage of combustible materials	Combustible materials would be stored appropriately in existing facilities, if necessary.

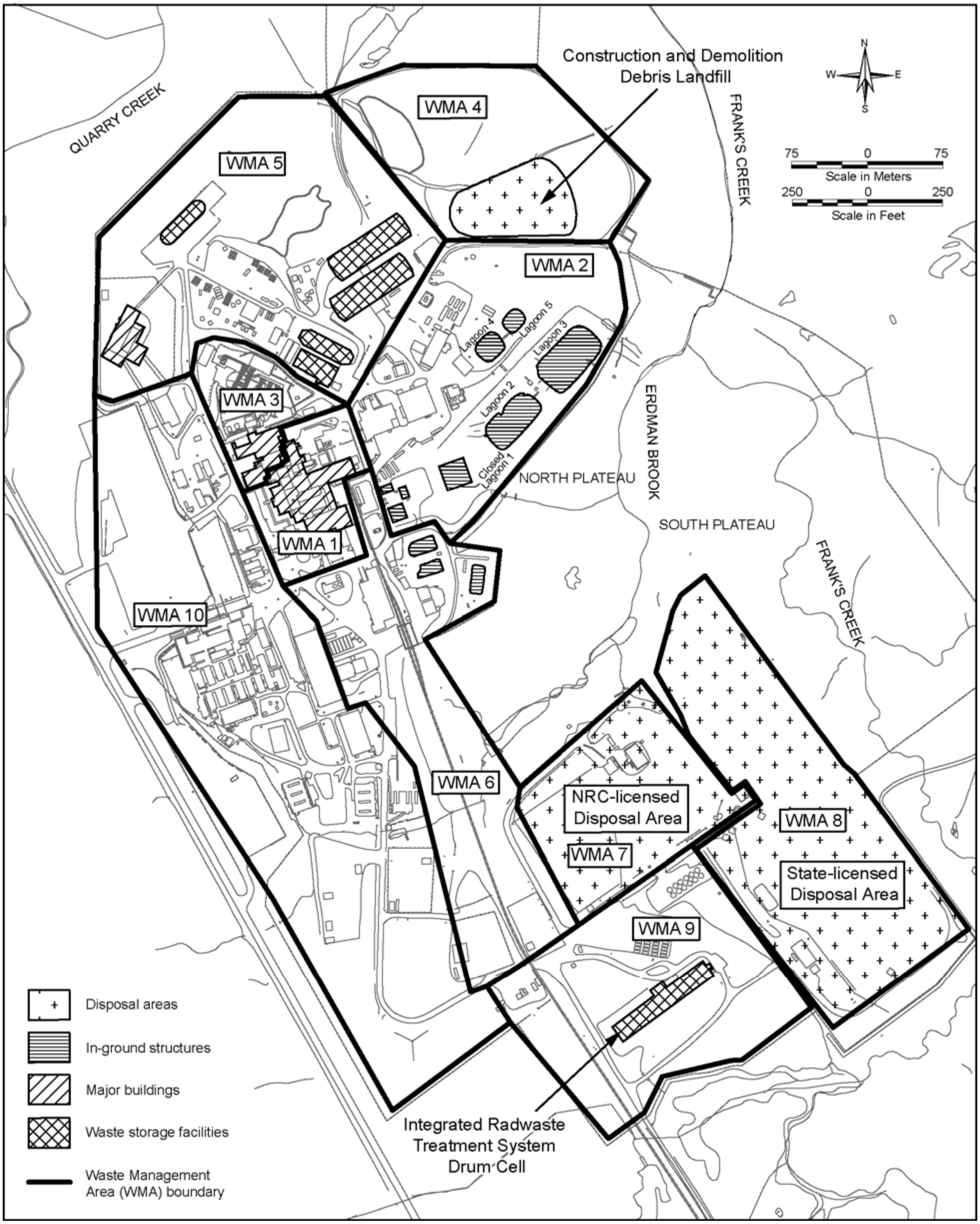

Figure 3. WMAs 1 – 10 at WVDP

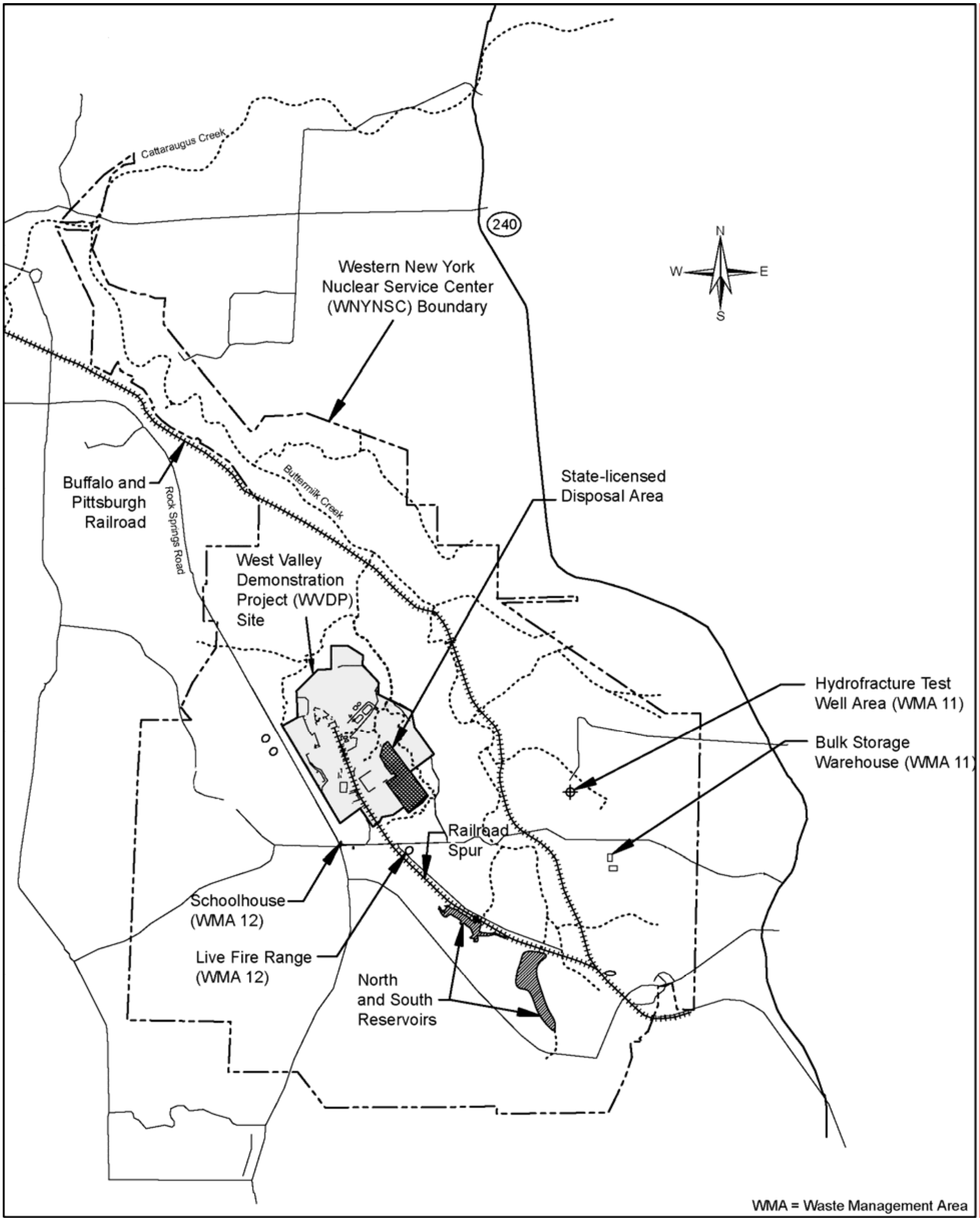

Figure 4. WMAs 11 – 12 at WVDP

DOE would package the generated wastes on-site and transport them to licensed commercial or DOE disposal facilities located off-site. Class A LLW and mixed LLW would be shipped to the Hanford Site in Washington, Envirocare in Utah, or the Nevada Test Site (NTS) for disposal. Industrial waste and building debris waste would be shipped to a landfill in Model City, New York, or Olean, New York, where this type of WVDP waste is currently shipped for disposal. Asbestos waste would be shipped to a landfill in Model City, New York. Hazardous waste would be shipped to a landfill in Indianapolis, Indiana, where this type of WVDP waste is currently shipped for disposal. Table 3 lists the types of waste packaging expected to be used for each waste type, the off-site disposal locations where the wastes would be sent, and the projected volumes. U.S. Environmental Protection Agency (EPA) and U.S. Department of Transportation (DOT) shipping regulations would be followed to ensure safe packaging, temporary on-site storage, and shipment. Figures 5 and 6 show proposed disposal locations for each waste type. With the exception of the Hanford Site, these are the sites to which WVDP LLW, mixed LLW, asbestos, hazardous waste, industrial waste, and concrete debris are currently shipped for disposal.[4]

Table 3. Waste Types, Packaging, Disposal Locations, and Estimated Volumes

Waste Type	Expected Waste Packaging[a]	Disposal Locations	Volume (ft^3)
Class A LLW	B-25 boxes	NTS (Mercury, NV), Hanford Site[b] (Richland, WA), or Envirocare (Clive, UT)	91,954
Mixed LLW	B-25 boxes	NTS (Mercury, NV), Hanford Site[b] (Richland, WA), or Envirocare (Clive, Utah)	2,755
Asbestos	Double bags (friable) Roll-offs (nonfriable)	Chemical Waste Management (Model City, NY)	304
Hazardous Waste	55-gallon drums	Heritage Environmental Services (Indianapolis, IN)	70,400
Industrial Waste	B-25 boxes	SDS (Olean, NY) or Chemical Waste Management (Model City, NY)	727,712
Concrete/ Debris	Single-body dump trucks	SDS (Olean, NY) or Chemical Waste Management (Model City, NY)	4,600

Note: NTS = Nevada Test Site.

a. This packaging was assumed for purposes of analysis. Although different packaging may be used, the impacts would be similar because the waste volume would be the same.

b. In accordance with the settlement agreement between DOE and the State of Washington of January 6, 2006, regarding the case *Washington v. Bodman*, DOE will not ship LLW and mixed LLW from WVDP to Hanford until DOE has satisfied the requirements of the settlement agreement.

[4] LLW and mixed LLW would be sent either to DOE radioactive disposal sites at Nevada Test Site (NTS) in Mercury, Nevada, or Hanford Site in Richland, Washington, or to Envirocare, a commercial waste disposal site in Clive, Utah. LLW and mixed LLW handling and disposal activities at NTS and Hanford are described in the *Final Environmental Impact Statement for the Nevada Test Site and Off-site Locations* (DOE 1996b) and the *Final Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement* (DOE 2004), respectively. Disposal of waste at commercial facilities would be conducted in accordance with existing licenses and permits.

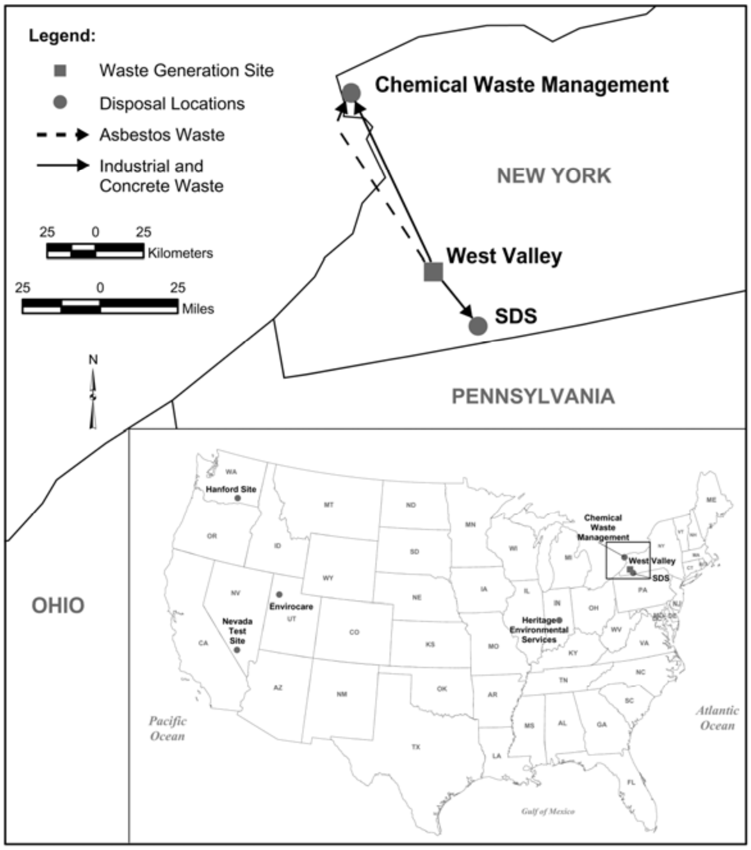

Figure 5. Waste Destinations for Asbestos, Industrial Waste, and Concrete

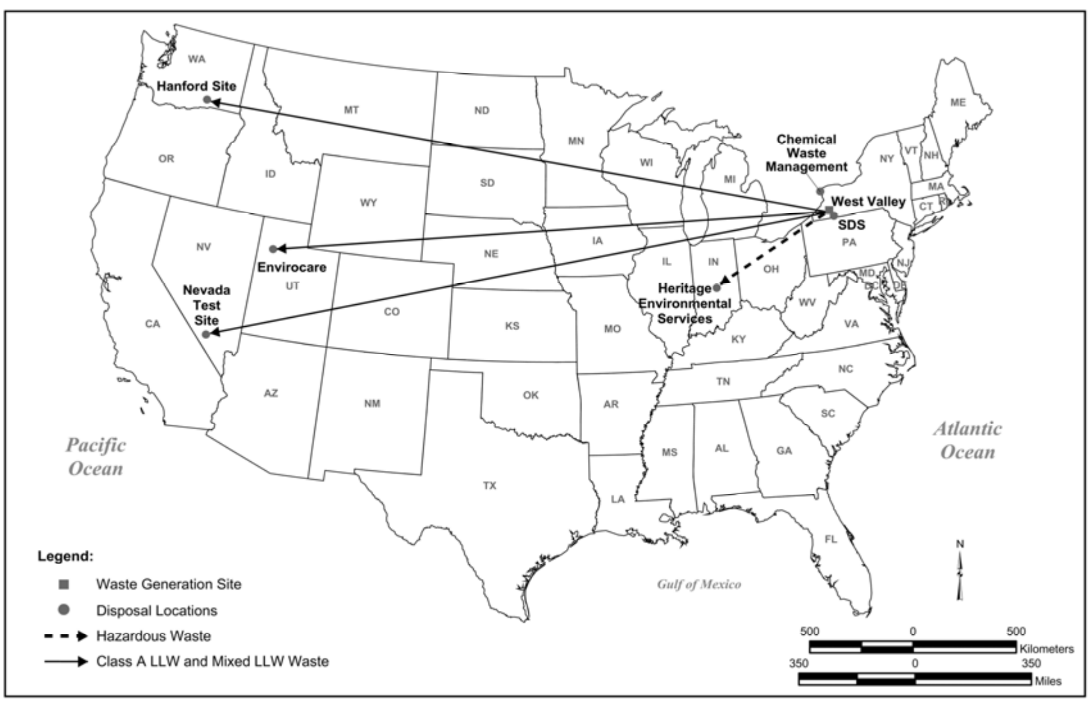

Figure 6. Destinations for LLW, Mixed LLW, and Hazardous Waste

DOE would undertake the following specific activities under the Proposed Action:

- Perform surveys of residual radioactivity prior to spraying or painting a sealant over facility surfaces.
- Remove radioactive contamination from facilities as appropriate. Depending on the amount and level of contamination, pre-demolition preparation could include debris removal, washing or wiping of surfaces, and application of sealants or fixatives. Contaminated water would be treated and released.
- Remove asbestos and hazardous waste.
- As appropriate, remove major equipment not directly involved in the vitrification process such as process tanks, vessels, and pumps and remove valves and piping.
- Demolish the building or structure, along with any appurtenant structures. Demolition methods would include, but not be limited to, grapples, masonry saws, ultra-high-pressure water jets, drilling and expansion cracking, and water-cooled track saws. Explosives would not be used in demolition.
- Excavate contaminated soils as necessary.
- Conduct post-decontamination radiation surveys and collect samples for radiological and hazardous waste characterization and other analyses as required.
- Remove and dispose of asphalt and concrete from parking lots, roadways, and walkways as needed. Areas would be regraded and seeded to match natural contours.
- Segregate and package the resultant wastes.
- Transport the wastes off-site using rail or truck, or a combination of both.
- Dispose of the debris and packaged waste at off-site locations.

All decontamination activities would 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 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).

The following steps would be taken to ensure compliance with the WVDP Radiological Protection Program and ALARA principles in the implementation of the Proposed Action:

- Post-decontamination radiation surveys would be conducted and samples would be collected for radiological and hazardous waste characterization and other analyses as required.
- Air monitoring during decontamination activities would be performed at removal sites and at the site boundary as necessary to verify that no threat to the public was present and that cumulative

emissions of radionuclides from excavation areas or from building removal activities would not result in members of the public receiving more than the DOE primary dose standard (an effective dose equivalent of 100 millirem [mrem] annually).

- Shielding would be provided commensurate with the particular radiological hazard and anticipated scope(s) of work to ensure that doses to workers would be below federally allowed limits.

- Airborne contamination controls would be provided to ensure that doses to workers would be below federally allowed limits. These controls would include barriers (e.g., structures and filters) and differential pressures between adjacent areas/rooms/cells, as appropriate for a particular radiological hazard.

- Personal protective equipment, such as respirators and anti-contamination clothing, would be used in contaminated areas as needed to ensure that doses to workers would be below federally allowed limits.

- Area radiation monitors, continuous air monitors, personal contamination monitors, friskers, and other radiation detection equipment would be used as appropriate to ensure that workers were made aware of any abnormal radiological conditions in a timely manner.

- ALARA reviews and other activities as appropriate would be performed to ensure that shielding and contamination control functions were adequately maintained when modifications were made to passive confinement or radiation shielding structures.

2.2 No Action Alternative

Under the No Action Alternative, current operations would continue and DOE would not decontaminate, demolish, or remove the 42 unused and unneeded facilities. Contaminated soil, equipment, and structures would remain in place. Funds would continue to be spent for routine maintenance and monitoring. 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 WM EIS (DOE/EIS-0337) (DOE 2003) and the *Supplement Analysis for the West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE/EIS-0337-SA-01) (DOE 2006). Failure to maintain the facilities would result in their deterioration, possibly posing physical, but not radiological, hazards.

2.3 Alternatives Considered but Not Analyzed

DOE considered whether to analyze the decontamination, demolition, and removal of a subset of the 42 buildings and structures included in the Proposed Action. Because the potential impacts of the decontamination, demolition, and removal of all 42 facilities would collectively be very small, it would be difficult to distinguish among alternatives if subsets of fewer facilities were analyzed. Moreover, the impacts described for the Proposed Action bound the impacts that would be expected if a smaller number of facilities were decontaminated, demolished, and removed from the WVDP.

CHAPTER 3 EXISTING ENVIRONMENT AND ENVIRONMENTAL IMPACTS

3.1 Introduction

The following sections provide a general description of the existing environment on and near the WVDP site for the affected resource areas. A more detailed description of these resource areas can be found in Chapter 3 of the WVDP WM EIS (DOE 2003) and other references cited in that document. Following the description of each resource area, a description of the adverse or beneficial impacts that would occur or could be reasonably expected to occur to this resource area if the Proposed Action were implemented is presented. For comparison purposes and as required under NEPA, Section 3.12 describes adverse or beneficial environmental impacts that would occur if the No Action Alternative were implemented.

3.2 Climate, Air Quality, and Visibility

3.2.1 Existing Environment

The climate of western New York is the moist continental climate typical of the northeast United States. The climate is seasonally diverse due to the influence of several atmospheric and geographic factors, most notably the "lake effect" which results in abundant snowfall.[5] Although there are recorded extremes of 98.6 degrees Fahrenheit (F) and -43.6 degrees F for western New York, the climate is moderate, with an average annual temperature (1971–2000) of 48 degrees F. Rainfall is relatively high, averaging about 104 centimeters (41 inches) per year. Precipitation is evenly distributed throughout the year and is markedly influenced by Lake Erie to the west and, to a lesser extent, by Lake Ontario to the north. The prevailing winds are southwesterly and average 4 meters per second (9 miles per hour) (WVNS 2004a). Severe summer thunderstorms occur in western New York, but tornadoes are rare.

New York is divided into nine regions for assessing state ambient air quality. The WVDP site is located in Region 9, which consists of Niagara, Erie, Wyoming, Chautauqua, Cattaraugus, and Allegany counties. Cattaraugus County, where the WVDP is located, is an attainment area for all National Primary and Secondary Ambient Air Quality Standards contained in 40 CFR Part 50 and New York State air quality standards contained in 6 NYCRR 257. Chautauqua and Erie counties, which border Cattaraugus County to the west and northwest, are nonattainment areas for ozone. However, the prevailing southwesterly winds would tend to disperse WVDP emissions away from these nonattainment counties. Because the Proposed Action would not be implemented in a criteria air pollutant nonattainment or maintenance area, and would not adversely impact a neighboring nonattainment or maintenance area, a full Clean Air Act Conformity determination is not required.

Air emissions of radionuclides from WVDP are regulated by EPA under the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, 40 CFR Part 61, Subpart H, *National Emissions of Radionuclides other than Radon from Department of Energy Facilities*. Emissions from the WVDP for the calendar year 2004 can be found in the WVDP *Annual Site Environmental Report*. In 2004, the estimated dose of radiation to a maximally exposed off-site individual from airborne emissions at the WVDP was 0.0015 mrem, which is about 0.02 percent of the 10-mrem EPA standard (WVNS 2005).

There are no mandatory Class I visibility areas either in New York State or in Pennsylvania (EPA 2005).

[5] "Lake effect" refers to the generation of sometimes spectacular snowfall amounts to the lee of (downwind of) the Great Lakes as cold air passes over the lake surface, extracting heat and moisture, resulting in cloud formation and snowfall downwind of the lake shore (AMS 2006).

3.2.2 Environmental Consequences of the Proposed Action

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.

During calendar year 2005, approximately 8,500 cubic meters (300,000 cubic feet) of LLW waste had been shipped off-site from the WVDP site. This is approximately three times the volume of LLW that would be shipped off-site under the Proposed Action. For at least the last decade, the radiological dose from air emissions received by the maximally exposed off-site individual has been less than 1 percent of the most stringent limit and in most years has been substantially lower. These were years when activities similar to those proposed under the Proposed Action were ongoing.[6] Consequently, similarly low levels of dispersed radioactive particulates are anticipated as a result of the Proposed Action. Potential human health impacts to workers and members of the public as a result of exposure to these emissions are specifically addressed in Section 3.10.

During excavation of contaminated soils and during other demolition activities as appropriate, all personnel within the work area would be protected, through the use of appropriate construction techniques, from airborne emissions by use of full-face respirators and other protective clothing or equipment as required by the WVDP Radiological Protection and Industrial Health and Safety Organizations. Constant air monitoring would provide a warning of release and help ensure that excavation activities did not cause releases in excess of DOE Order 5400.5 guidelines at the construction site or the WVDP site boundary. 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 (HEPA) filtration. Vehicle and equipment emissions would be minimized by keeping all equipment maintained to manufacturer specifications.

Because there are no mandatory Class I visibility areas in New York or Pennsylvania, there would be no adverse impacts to visibility to such resources.

3.3 Geology and Soils

3.3.1 Existing Environment

The geologic sediments beneath the WVDP site include a sequence of glacial sediments above shale bedrock. The site is divided by a stream valley into two areas: the north plateau and the south plateau. The uppermost layer on the south plateau is a silty clay till, the Lavery till. Weathering has fractured the nearsurface sediments. Within the Lavery till on the north plateau is a silty, sandy layer of limited extent, the Lavery tillsand. The Kent recessional sequence underlies the Lavery till beneath both the north and south plateaus and is composed of silt and silty sand with localized pockets of gravel (WVNS 2000).

With respect to the North Plateau portion of the site, geologic factors influencing groundwater flow sediments in the sand and gravel waterbearing zone can be divided into two depositional units: Surficial

[6] For more than 10 years, activities at WVDP have included decontamination and decommissioning of facilities, such as cleaning up hot cells. Radioactive waste has also been shipped offsite. These activities are similar to those that would occur under the Proposed Action. For that reason, DOE concluded that the maximally exposed off-site individual would receive radiological doses similar to what had been released in the last 10 years, or less than 1 percent of the most stringent limit. DOE assumed that any buildings to be demolished would be clean or decontaminated such that there would be no radiological air emissions.

Alluvium and Slack Water Sequence. The Surficial Alluvium blankets the entire North Plateau downgradient of the Process Building. Surficial Alluvium sediments are poorly sorted and occur in beds (separate depositional layers) that range in thickness from 10 centimeters (4 inches) to over 30 centimeters (12 inches). Most of the sediments in the Surficial Alluvium can be classified as muddy gravel or muddy sandy gravel. These sediments were deposited by streams that eroded and reworked glacial deposits and outwash.

Slack-Water Sequence sediments were deposited in a glacial lake/pond. Streams from Dutch Hill (southwest of the Main Plant) transported sediments into the still water of the lake. The sediments were also sorted by the lake water. Coarser sediments were deposited near the mouth of the streams and finer sediments dropped out further in the lake. Sediment layers in the Slack-Water Sequence are generally thin-bedded (less than 5 centimeters [2 inches] thick) and well sorted. In general, the well sorted, medium to coarse grained sediments of the Slack-Water Sequence are believed to be more permeable than the poorly sorted sediments of the Surficial Alluvium. The permeability of fine grained Slack-Water Sequence sediments may not be greater than the Surficial Alluvium. Permeability descriptions are based on geologic descriptions from borehole logs. Slack-Water Sequence sediments occur only within a northeast-trending channel-like depression on the Lavery till surface in the center of the North Plateau. This depression extends from the water cooling tower in the south to Frank's Creek valley opposite the closed, inactive Construction and Demolition Debris Landfill.

The WVDP is in a low seismic shaking hazard area (USGS 2005). From 1737 to 1999, there have been 119 recorded earthquakes within 480 kilometers (300 miles) of the WVDP with epicentral intensities of Modified Mercalli Intensities V to VII. Of the 119 recorded earthquakes, 25 occurred within 320 kilometers (200 miles) of the WVDP (WVNS 2000). The highest Modified Mercalli Intensity estimated to have occurred at the Center within the last 100 years was an intensity of IV, which is similar to vibrations from a heavy truck that might be felt by people indoors but does not cause damage (DOE 1996a).

3.3.2 Environmental Consequences of the Proposed Action

Environmental impacts to geological and soil resources would be limited to the removal of contaminated soil at the Live Fire Range and uncontaminated soil surrounding, and from up to 0.6 meters (2 feet) below, several uncontaminated building slabs. All topsoils and subsoils that would be disturbed under the Proposed Action have been previously disturbed—in some instances, profoundly disturbed. Because the Proposed Action would be of limited duration (4 years) and because the WVDP is in a low seismic shaking hazard area, the chance of a seismic event affecting the Proposed Action is considered to be extremely low.

3.4 Hydrology

3.4.1 Existing Environment

Surface water. The WVDP facilities and its two water supply reservoirs lie in separate watersheds, both of which are drained by Buttermilk Creek. Buttermilk Creek, which roughly bisects the WNYNSC, flows in a northwestward direction to its confluence with Cattaraugus Creek, at the northwest end of the Center. Several tributary streams flow into Buttermilk Creek at the Center. The flow length of Buttermilk Creek through the Center is about 7,600 meters (25,000 feet). About 2,700 meters (9,000 feet) of this is adjacent to the Project Facilities and the water supply reservoirs (WVNS 2000). Cattaraugus Creek flows westward from the Buttermilk Creek confluence to Lake Erie, 63 kilometers (39 miles) downstream.

The watershed on the Project Premises is drained by three named streams: Quarry Creek, Frank's Creek, and Erdman Brook (WVNS 2000). Erdman Brook and Quarry Creek are tributaries to Frank's Creek, which in turn flows into Buttermilk Creek. Erdman Brook, the smallest of the three streams, drains the central and largest fraction of the developed WVDP premises, including a large portion of the disposal areas and the areas surrounding the lagoon system; the plant, office, and warehouse areas; and a major part of the parking lots. Following treatment, WVDP wastewater is also discharged to this brook.

Cattaraugus Creek is used locally for swimming, canoeing, and fishing. Downstream from the WVDP, the Cattaraugus Indian Reservation is located along Cattaraugus Creek, from Gowanda, New York, downstream to the shore of Lake Erie. Although some water is taken from Cattaraugus Creek to irrigate nearby golf course greens and tree farms, no public potable water supply is drawn from the creek downstream of the WNYNSC before the creek flows into Lake Erie south of Buffalo, New York. Water from Lake Erie is used as a public drinking water supply.

Groundwater. The WVDP is located within the Cattaraugus Creek Basin Aquifer System, a system that has been designated by EPA as a sole or principal source of drinking water for the surrounding towns (52 Fed. Reg. 36102 (1987)). This means that all projects with federal financial assistance constructed in this basin are subject to EPA review to ensure that they are designed and constructed so as not to create a significant hazard to public health.

The WVDP site is underlain by two aquifer zones, neither of which can be considered highly permeable or productive. The groundwater flow patterns pertinent to the site relate to recharge and downgradient movement for these two aquifers. Groundwater in the surficial unit tends to move in an easterly or northeasterly direction from the western boundary of the site, close to Rock Springs Road. Most of the groundwater in this unit discharges via springs and seeps into Frank's Creek or into small tributaries of that creek (for example, Erdman Brook). Groundwater recharging the weathered shale and rubble zone tends to move eastward toward the thalweg of the buried valley (the locus of the lowest points in the cross-section of the buried valley), located about 300 to 350 meters (980 to 1,150 feet) west of Buttermilk Creek. Once attaining the thalweg, the direction of groundwater movement shifts to the direction of the thalweg, about 25 degrees west, and proceeds toward the northwest (WVNS 2000).

3.4.2 Environmental Consequences of the Proposed Action

The Proposed Action would not require any facility construction and is not expected to cause any impacts requiring EPA review on the surface water or groundwater resources.

Intermittently and for relatively short periods during the Proposed Action, suspended solids in stormwater runoff may increase during soil excavation activities that would occur for some facilities. This intermittent short-term impact would be mitigated by routine stabilization techniques and sediment-control systems. Such impacts would be temporary, occurring only during excavation activities. The amount of increase, if any, would be minor, and normal plant sediment-control systems would be capable of handling the resulting sediment along with normal sediment load. Stormwater runoff would comply with the existing State Pollutant Discharge Elimination System (SPDES) Permit No. NY 0000973. The Proposed Action would not have any adverse impacts on groundwater.

3.5 Ecological Resources

3.5.1 Existing Environment

Animals and Plants. The WNYNSC lies within the northern hardwood forest region. Its climax community forests are characterized by the dominance of sugar maple, beech, and Eastern hemlock. At present, the site is about equally divided between forestland and abandoned farm fields. Consequently, it provides habitat especially attractive to white-tailed deer, various indigenous migratory birds, reptiles, and small mammals. Plant communities found on the site have been categorized into five cover types: mixed hardwood forest, pine-spruce community, successional creek bank communities, late oldfield successional areas, and fields-meadows. The plant communities found on the site are characteristic of western New York. The relatively undisturbed nature of large portions of the WNYNSC has allowed for natural succession of previous agricultural areas within its boundaries. Because neither the setting nor the former agriculture land use is unique, the forest communities that will eventually develop in the abandoned fields will be similar to others in the region (WVNS 2000).

Federally Listed Species. In comments submitted on the draft version of the WVDP WM EIS (DOE 2003), the U.S. Fish and Wildlife Service concurred in DOE's determination that no federally listed or proposed endangered or threatened species are known to exist in the project impact area and that no habitat in the project impact area is currently designated or proposed critical habitat in accordance with the provisions of the Endangered Species Act, 16 U.S.C. 1531 *et seq*.

State-Listed Species. State of New York "special concern species" are species of fish and wildlife found to be at risk of becoming endangered or threatened in New York (New York Code of Rules and Regulations Title 6, part 182.2(i)). Typically, species of special concern are those whose populations are declining, often in association with critical habitat loss. Field investigations at the Western New York Nuclear Services Center in 1990 and 1991 recorded one species (Northern harrier) on the state list of threatened species and six state species of special concern (Cooper's hawk, upland sandpiper, common raven, Eastern bluebird, Henson's sparrow, and vesper sparrow). However, all of the noted species were observed in areas of the Western New York Nuclear Services Center outside of the WVDP Project Premises. Moreover, none of these threatened species or species of special concern depend on habitat within the WVDP Project Premises for any aspect of their life cycles (DOE 2003).

Wetlands. The WNYNSC has meadows, marshes, lakes, ponds, bogs, and other areas that are considered functional wetlands. Fifty-one such areas have been identified as "jurisdictional" wetlands, or wetlands that are constrained from dredging or filling actions by Section 404 of the Clean Water Act and by the state Freshwater Wetland Act (WVNS 1992). These wetlands range in size from 100 square meters (1,100 square feet) to more than 37,000 square meters (398,000 square feet). The total wetlands area is approximately 0.14 square kilometers (0.05 square miles). Eighteen wetlands with a total area of approximately 37,000 square meters (398,000 square feet) were delineated within the Project Premises. The New York State Department of Environmental Conservation has determined that eight wetlands encompassing 81,000 square meters (872,000 square feet) on the south and east sides of the Project Premises and SDA are linked and meet the criteria for a single wetland.

Floodplains. The site's topographic setting renders major flooding unlikely; local runoff and flooding is adequately accommodated by natural and man-made drainage systems in and around the WVDP (WVNS 2000). Flood levels for the 100-year and the 500-year storms show that no facilities on the Project Premises are in either the 100- or 500-year floodplain (FEMA 1984).

3.5.2 Environmental Consequences of the Proposed Action

No federally or state-listed threatened or endangered species and no critical habitat for any federally or state-listed threatened or endangered species would 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 and the proposed backfilling, regrading, and revegetation of their foundation areas would enhance the quality of the WVDP habitat for local indigenous or migratory species.

Because the Proposed Action would not entail any new construction activities or any planned disturbance to or discharge into any delineated wetlands, no impacts to wetland resources are expected. However, during demolition and removal operations, any potential adverse impacts to delineated wetlands would be avoided to the fullest extent possible. Prior to work performance, activity- and task-level work would be assessed by qualified environmental professionals to identify the potential for adverse impacts to nearby wetlands and to prescribe appropriate controls into the work process to minimize and mitigate such impacts. To minimize adverse impacts to nearby wetlands, administrative controls (such as delineating work area limits and erecting exclusion fencing) and physical controls (for stormwater runoff) would be implemented. Sediment and erosion controls for runoff from the work area (including filtration or diversion techniques, such as fabric siltation fences, diversion channels, straw bale dikes, and check dams) would be specified, installed, and maintained.

There would be no impact to the existing stormwater drainage infrastructure, and the Proposed Action would not occur in a 100- or 500-year floodplain.

3.6 Historical and Cultural Resources

3.6.1 Existing Environment

Cultural resource materials have been found and 11 cultural resource sites have been identified at the WNYNSC. The resources consist of eight historic archaeological sites, two standing structures, and one prehistoric lithic findspot (WVNS 1994). However, no sites of historical or cultural interest have been found on the Project Premises. The New York State Office of Parks, Recreation, and Historic Preservation has determined that facilities on the Project Premises, including those proposed for demolition and removal, are not eligible for inclusion in the *National Register of Historic Places* (SHPO 1995).

3.6.2 Environmental Consequences of the Proposed Action

The Proposed Action would not affect any known historical or cultural resources. If an historical or cultural resource were discovered during the Proposed Action, activities at that location would be suspended pending an opinion by the State Historic Preservation Officer or a qualified anthropologist.

3.7 Socioeconomics and Environmental Justice

3.7.1 Existing Environment

The WVDP site lies within the town of Ashford in Cattaraugus County. The nearby population, approximately 9,200 residents within 10 kilometers (6 miles) of the Project, relies largely on an agricultural economy. No major industries are located within this area. The WVDP is among the largest employers in Cattaraugus County. Section 3.8 of the WVDP WM EIS (DOE 2003) describes low-income and minority populations near the WVDP.

3.7.2 Environmental Consequences of the Proposed Action

Under the Proposed Action, no significant changes to the existing workforce at WVDP would be anticipated. Functions that were still needed by site operations would be taken over by off-site vendors or facilities with adequate capacity. For that reason, there would be no impact to socioeconomic resources such as housing, schools, and other public facilities. The existing tax base would 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 would be the short increase in suspended solids in stormwater runoff during soil excavation (described in Section 3.4.2). If planned surface water impact mitigation techniques and normal plant sediment-control systems failed, there could be a disproportionate adverse impact to residents of the Cattaraugus Reservation because Cattaraugus Creek runs along the reservation for several miles. No such failures have occurred in the past, and such failures are unlikely in the future.

3.8 Noise

3.8.1 Existing Environment

Noise can be defined as any sound that is undesirable because it interferes with speech, communication, or hearing; is intense enough to damage hearing; or is otherwise loud, discordant, or disagreeable to some receptors. Depending upon the loudness and the duration of a noise, its effects can range from temporary annoyance to permanent hearing impairment or loss. Ambient noise is the collective sound resulting from the omnipresent background noise associated with a given environment. It is usually a composite of many sounds from many sources. An environment's ambient noise serves as a point of departure and comparison for analyzing the impact of a new or additional noise on a sensitive environment.

Noise is generally considered to be low when its ambient levels are below 45 A-weighted decibels (dBA), moderate in the 45- to 60-dBA range, and high above 60 dBA. Typical wilderness area ambient sound is about 35 dBA, typical rural residential levels are about 40 dBA, and typical urban residential sound levels on a busy street are about 68 dBA (outdoor day-night average sound levels) (Suter 1991). Noise levels above 45 dBA at night can result in the onset of sleep interference; above 70 dBA, sleep interference effects become considerable. Different environments can be characterized by noise levels that are generally considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than would be expected for commercial, industrial, or construction zones.

The Proposed Action would occur on a small former industrial complex surrounded by undisturbed forested areas and agricultural areas. The nearest off-site noise receptor is approximately 0.95 kilometer (0.6 mile) from the WVDP fenceline. Ambient noise levels in the surrounding area would be typical of average outdoor noise levels in rural areas. Background sounds are produced mostly by natural phenomena (wind, rain, and common wildlife) and by light to moderate traffic on SR-240. In the immediate vicinity of the Proposed Action, there are no sustained outdoor ambient noise levels above 85 dBA, the level considered harmful by the Occupational Safety and Health Administration (OSHA) (OSHA 2004). Noise from ongoing site activities includes that from the Buffalo & Pittsburgh Railroad line, which runs within 800 meters (2,600 feet) of the Project Premises.

3.8.2 Environmental Consequences of the Proposed Action

The Proposed Action includes the demolition and removal of 42 facilities and, as necessary removal of underlying contaminated (e.g., Live Fire Range) soil. The specific pieces of heavy equipment that would be required at each of these 42 facilities and the duration for which they would be used are not known and probably would not be known until operations were underway. However, it is likely that activities performed under the Proposed Action would result in a short-term increase in noise at the WVDP. Noise would 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 would also contribute to the noise impact.

Table 4 shows typical heavy equipment noise levels at 15 meters (50 feet) from the source. Based on DOE's prior experience, the types of equipment shown in the table are illustrative of what would be used for decontamination, demolition, excavation, grading scraping, and removal operations. The overall noise impact would vary daily, depending on the type of activity, duration of the activity, distance between the activity and noise-sensitive receptors, and any shielding effects provided by local barriers and topography.

Table 4. Noise Levels of Typical Heavy Equipment

Equipment	Typical Noise Level (dBA) 50 Feet from Source
Backhoe	80
Grader	85
Loader	85
Roller	75
Bulldozer	85
Truck	88
Scraper	80

Source: FTA 1995.

The loudest removal activity that would be undertaken for a sustained period would probably be the demolition of buildings with a bulldozer. As seen in Table 4, at 15 meters (50 feet) from the bulldozer, this activity would generate noise levels of about 85 dB. [7] The day-long average noise exposure level would be approximately 85 dB, which would meet OSHA requirements.

A basic noise drop rate of 6.0 dBA per doubling of the distance to a receptor is a commonly applied noise attenuation factor. The nearest residence is approximately 0.95 kilometer (3,200 feet) from the WVDP. Applying the 6.0-dBA reduction (as distance doubles) to a receptor, at 3,200 feet the noise from a bulldozer would be approximately 49 dBA. This is a conservative estimate because it does not include attenuation factors other than distance—for example, trees or buildings between the noise source and the nearest residence that would act as buffers. A noise level of 50 dBA is approximately the outdoor noise level of a wooded residential area. This would be a short-term impact lasting only for the duration of the Proposed Action. There would be no long-term noise impacts.

3.9 Land Use and Visual Surroundings

3.9.1 Existing Environment

The WVDP is a formerly active, but now inactive, heavy industrial site. Current land use on the premises is primarily for waste storage and for stewardship of inactive facilities pending final disposition. It is a controlled access security area surrounded by a high chain-link fence. Depending on vantage point and season of the year, the site can be either unnoticeable or clearly visible on the ground from several miles away. It is well-lit at night. Visually, it stands in marked contrast to the wooded hills and agricultural lands that surround it on all sides.

[7] As shown in the table, the noise levels at 15 meters (50 feet) for typical heavy equipment range from 75 to 88 dBA; thus, the 85-dBA level from a bulldozer is typical of heavy equipment noise. Noise from a bulldozer was used to illustrate the impact because it is likely to be the loudest sustained equipment noise during the Proposed Action.

Land within 8 kilometers (5 miles) of the site is used mainly for agricultural (active and inactive) and forestry activities. The major exception is the Village of Springville, where residential/commercial and industrial land uses are found (WVNS 2000).

The industries nearest the site are light-industrial and commercial (either retail- or service-oriented). A field review of an 8-kilometer (5-mile) radius did not indicate the presence of any industrial facilities that would present a hazard in terms of safe operation of the site.

A similar field review of the Village of Springville and the Town of Concord did not indicate the presence of any significant industrial facilities. Industrial facilities near the WNYNSC include Winsmith-Peerless Winsmith, Inc., a gear reducer manufacturing facility, and Springville Manufacturing, a fabricating facility for air cylinders (WVNS 2000). The industries within the Village of Springville and the Town of Concord, Erie County, are located in a valley approximately 6 kilometers (4 miles) to the north and east of the WVDP.

3.9.2 Environmental Consequences of the Proposed Action

The Proposed Action would 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 would 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 would be caused by the Proposed Action, although there would be no long-term or permanent adverse impacts on the topography or physiography of the WVDP.

3.10 Health and Safety

3.10.1 Existing Environment

As noted in Section 3.2.1, Cattaraugus County, where the WVDP is located, is an attainment area for all National Primary and Secondary Ambient Air Quality Standards contained in 40 CFR 50 and New York State air quality standards contained in 6 NYCRR 257. Chautauqua and Erie counties, which border Cattaraugus County to the west and northwest, are nonattainment areas for ozone. However, the prevailing southwesterly winds would tend to disperse WVDP emissions away from these nonattainment counties. With respect to radiological air emissions, in 2004, the estimated dose of radiation to a maximally exposed off-site individual from airborne emissions at the WVDP was 0.0015 mrem, which is about 0.02 percent of the 10-mrem EPA standard (WVNS 2005).

3.10.2 Environmental Consequences of the Proposed Action

Worker Impacts. Under the Proposed Action, waste management activities would involve the generation of Class A LLW, mixed LLW, asbestos waste, hazardous waste, industrial waste, and building debris waste. Table 5 presents the radiological impacts for these activities for involved and noninvolved workers. These radiological impacts were based on the data contained in *West Valley Demonstration Project Decontamination and Waste Management Environmental Impact Statement Engineering Report, Revision 1* (Marschke 2001) and are specific to the volume and type of waste, the type of activity, and the duration of the activity.

During the 4-year time period for the Proposed Action, the collective radiation dose to involved workers was estimated to be about 400 person-rem, or about 100 person-rem per year, from activities under the Proposed Action. This is equivalent to a latent cancer fatality risk of 0.20 over 4 years, or 0.050 per year.

Table 5. Radiation Doses for Involved and Noninvolved Workers

Worker Population	Activity	Time Period (years)	Collective Dose		Latent Cancer Fatalities	
			Annual (person-rem/yr)	Total (person-rem)	Annual	Total
Involved workers[a]	Proposed Action	4	100	400	0.050	0.20
Noninvolved workers[b]	Ongoing operations of WVDP[b]	4	23	92	0.012	0.046
All workers	Total	4	120	490	0.062	0.25
Worker Population	**Activity**	**Time Period (years)**	**Individual Dose**		**Latent Cancer Fatalities**	
			Annual (mrem/yr)	**Total (mrem)**	**Annual**	**Total**
Involved workers[a]	Proposed Action	4	120	480	6.0E-5	2.4E-4
Noninvolved workers[b]	Ongoing operations of WVDP[b]	4	320	1,300	1.6E-4	6.4E-4

a. Involved workers would be those individuals that actively participate in the Proposed Action.
b. Noninvolved workers would be those individuals that would be on-site but would not actively participate in the Proposed Action.

Over this same time period, the individual radiation dose to the average involved worker would be about 120 mrem per year. This radiation dose is well below the limit in 10 CFR 835 of 5 rem (5,000 mrem) per year and the WVDP administrative control level of 500 mrem per year (WVNS 2001), and would result in less than 1 (6.0×10^{-5}) latent cancer fatality, or a chance of about 6 in 100,000 per year.

In addition to radiation doses from the Proposed Action activities, workers would 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 was estimated to be about 490 person-rem over the duration of the Proposed Action, or about 120 person-rem per year (Table 5). This radiation dose is equivalent to less than 1 (0.25) latent cancer fatality within the worker population, or 0.062 per year.[8]

Precautions taken to protect workers against nonradioactive hazardous materials would be similar to the precautions taken to minimize exposure to radiation and radioactive material. Therefore, the impacts to workers from exposure to nonradioactive hazardous materials are expected to be minimal.

In over 20 years of operations, there has never been a work-related worker fatality at West Valley. Over the past 4 years, there has not been a lost time work accident or injury. Based on these data, the expected number of nonradiological worker fatalities for the Proposed Action is zero. Using DOE-wide data from the DOE Computerized Accident/Incident Reporting System (CAIRS) for 2000 through 2004, it is

[8] For the noninvolved workers in the EA, DOE used the sum of the Involved and Noninvolved Workers from the *West Valley Demonstration Project Waste Management Environmental Impact Statement* (see Table 4-7, page 4-17), or 320 mrem/yr (260+59=320). These workers are considered to be the noninvolved workers for purposes of this EA. The involved workers for the Proposed Action are estimated to receive 77 mrem/yr. Based on data for 1995-1999, the average radiation dose for West Valley workers was 59 mrem/yr (see Table 4-7, page 4-17).

estimated that there would be less than 1 (0.07) nonradiological worker fatality under the Proposed Action.

Public Impacts. Under the Proposed Action, people near the WVDP site would be exposed to airborne and liquid releases of radionuclides during normal operations. Table 6 presents the radiological impacts of these airborne and liquid releases. These radiological impacts were based on the data contained in Marschke (2001).

Table 6. Radiation Doses to the Public Under the Proposed Action[a]

Activity	Maximally Exposed Individual				Population Around WVDP Site			
	Individual Radiation Dose[b]		Probability of Latent Cancer Fatality		Collective Radiation Dose[c]		Probability of Latent Cancer Fatality	
	Annual (mrem/yr)	Total (mrem)	Annual	Total	Annual (person-rem/yr)	Total (person-rem)	Annual	Total
Proposed Action[d]	16	65	9.7×10^{-6}	3.9×10^{-5}	19	74	0.011	0.045
Continued Operations[d]	0.062	0.25	3.7×10^{-8}	1.5×10^{-7}	0.25	1.0	1.5×10^{-4}	6.0×10^{-4}
Total	16	65	9.7×10^{-6}	3.9×10^{-5}	19	75	0.011	0.046

a. The time period for the Proposed Action is 4 years.
b. Individual background radiation doses are about 300 mrem per year.
c. The collective radiation dose to the 1.5-million-person population that surrounds the WVDP site from natural background is about 380,000 person-rem per year.
d. Includes the radiation doses from airborne and liquid releases.

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 16 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 (9.7×10^{-6}) latent cancer fatality per year, or a chance of about 1 in 100,000 for the maximally exposed individual. When combined with the impacts of continued operations at the WVDP site, these impacts would be about the same (see Table 6).

Over this same time period, the collective radiation dose to people living within 80 kilometers (50 miles) of the site would be 74 person-rem, or about 19 person-rem per year. This is equivalent to a latent cancer fatality risk of 0.045 over 4 years, or 0.011 per year. When combined with the impacts of continued operations at the WVDP site, these impacts would be about the same (see Table 6).

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.

Facility Accidents. DOE evaluated the potential impacts that could occur as a result of accidents at the WVDP site during the implementation of the Proposed Action. One accident involved a breach of the building ventilation system during decontamination activities. The suspended particulate activity generated by mechanical cleaning, cutting, or other decontamination activity could stress the HEPA filters in the ventilation system. If the filters were compromised or if the ventilation duct failed, exhaust air could be released unfiltered to the environment. The frequency of this accident was estimated to be in the range of 10^{-6} to 10^{-8} per year. The consequences of this accident using 50-percent atmospheric conditions are presented in Table 7. For a worker located on the site, this accident could result in a radiation dose of 0.013 rem. This accident could result in a radiation dose of 0.0045 rem to the maximally exposed individual living near the site. For the population living within 80 kilometers (50 miles) of the WVDP site, this accident could result in a collective radiation dose of 14 person-rem; this is equivalent to less than 1 (0.0084) latent cancer fatality. Using 95-percent atmospheric conditions, this accident could result in about 0.13 latent cancer fatalities for the population living within 80 kilometers (50 miles) of the WVDP site (Table 8).

Table 7. Radiological Consequences of Accidents under the Proposed Action Using 50-Percent Atmospheric Conditions

Accident	Frequency (per year)	Worker		Maximally Exposed Individual		Population[a]	
		Radiation Dose (rem)	Latent Cancer Fatality	Radiation Dose (rem)	Latent Cancer Fatality	Radiation Dose (person-rem)	Latent Cancer Fatality
Breach of building ventilation system during decontamination	$10^{-6} – 10^{-8}$	0.013	6.5×10^{-6}	0.0045	2.7×10^{-6}	14	0.0084
Class A box puncture	0.1 – 0.01	8.5×10^{-5}	4.3×10^{-8}	2.9×10^{-5}	1.7×10^{-8}	0.090	5.4×10^{-5}
Fire in building during decontamination	$10^{-4} – 10^{-6}$	0.14	7.0×10^{-5}	0.047	2.8×10^{-5}	150	0.090

a. Collective dose to the 1.5 million people living within 80 kilometers (50 miles) of the WVDP site.

Table 8. Radiological Consequences of Accidents under the Proposed Action Using 95-Percent Atmospheric Conditions

Accident	Frequency (per year)	Worker		Maximally Exposed Individual		Population[a]	
		Radiation Dose (rem)	Latent Cancer Fatality	Radiation Dose (rem)	Latent Cancer Fatality	Radiation Dose (person-rem)	Latent Cancer Fatality
Breach of building ventilation system during decontamination	$10^{-6} – 10^{-8}$	0.13	6.5×10^{-5}	0.049	2.9×10^{-5}	220	0.13
Class A box puncture	0.1 – 0.01	8.4×10^{-4}	4.2×10^{-7}	3.2×10^{-4}	1.9×10^{-7}	1.4	8.4×10^{-4}
Fire in building during decontamination	$10^{-4} – 10^{-6}$	1.4	7.0×10^{-4}	0.51	3.1×10^{-4}	2,300	1.4

a. Collective dose to the 1.5 million people living within 80 kilometers (50 miles) of the WVDP site.

A second potential accident involved the puncture of a box containing Class A LLW. The frequency of this accident was estimated to be in the range of 0.1 to 0.01 per year. The consequences of this accident using 50-percent atmospheric conditions are presented in Table 7. For a worker located at the site, this accident could result in a radiation dose of 8.5×10^{-5} rem. This accident could result in a radiation dose of 2.9×10^{-5} rem to the maximally exposed individual living near the WVDP site. For the population living within 80 kilometers (50 miles) of the site, this accident could result in a radiation dose of 0.090 person-rem; this is equivalent to a probability of a latent cancer fatality of 5.4×10^{-5}. Using 95-percent atmospheric conditions, this accident could result in a probability of a latent cancer fatality of 8.4×10^{-4} for the population living within 80 kilometers (50 miles) of the WVDP site (see Table 8).

A third potential accident involved a fire inside a building during decontamination. The frequency of this accident was estimated to be in the range of 10^{-4} to 10^{-6} per year. The consequences of this accident using 50-percent atmospheric conditions are presented in Table 7. For a worker located on the site, this accident could result in a radiation dose of 0.14 rem. This accident could result in a radiation dose of 0.047 rem to the maximally exposed individual living near the site. For the population living within 80 kilometers (50 miles) of the WVDP site, this accident could result in a collective radiation dose of 150 person-rem; this is equivalent to less than 1 (0.090) latent cancer fatality. Using 95-percent atmospheric conditions, this accident could result in about 1.4 latent cancer fatalities for the population living within 80 kilometers (50 miles) of the WVDP site (see Table 8).

In the *Safety Analysis Report for Waste Processing and Support Activities* (WVNS 2004b), two accidents involving releases of nonradioactive hazardous material were evaluated: an accident involving the release of hydrogen peroxide and an accident involving the release of polychlorinated biphenyl (PCB)-contaminated oil. In both cases, the concentration of the hazardous material at the maximally exposed individual did not exceed the Emergency Response Planning Guideline-2 (ERPG-2) concentration, and no life-threatening health effects would be expected.

Impacts at Other Sites. Impacts of radioactive waste management activities at off-site locations that would be used to dispose of radioactive wastes under the Proposed Action (Envirocare, Hanford, and the NTS) have been addressed in earlier NEPA documents (DOE 2003).[9] 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 would be very minor (substantially less than 1 latent cancer fatality).

3.11 Transportation

3.11.1 Existing Environment

Transportation infrastructure near the WVDP includes highways, rural roads, a rail line, and aviation facilities. The primary method of transportation in the site vicinity is motor vehicle traffic on the highway system (Figure 7).

All roads in Cattaraugus County, with the exception of those within the cities of Olean and Salamanca, are considered rural roads. Rural principal arterial highways are connectors of population and industrial centers. This category includes U.S. Route 219, located 4.2 kilometers (2.6 miles) west of the site; Interstate 86, the Southern Tier Expressway located approximately 35 kilometers (22 miles) south of the site; and the New York State Thruway (I-90), approximately 35 kilometers (22 miles) north of the site. Traffic volume along U.S. 219 between the intersection with NY Route 39 at Springville and the intersection with Cattaraugus County Route 12 (East Otto Road) ranges from a low average annual daily traffic volume of 6,100 to a high volume of 7,500. Seasonal holiday traffic is as much as 128 percent of the average annual daily volume. Approximately 18 percent of the traffic consists of trucks. This route operates at a level of service B, which indicates a stable traffic flow, an operating speed of 80 kilometers per hour (50 miles per hour), and reasonable driver freedom to maneuver (WVNS 2000).

[9] As noted above, in accordance with the settlement agreement between DOE and the State of Washington of January 6, 2006, regarding the case *Washington v. Bodman*, DOE will not ship LLW and mixed LLW from WVDP to Hanford until DOE has satisfied the requirements of the settlement agreement.

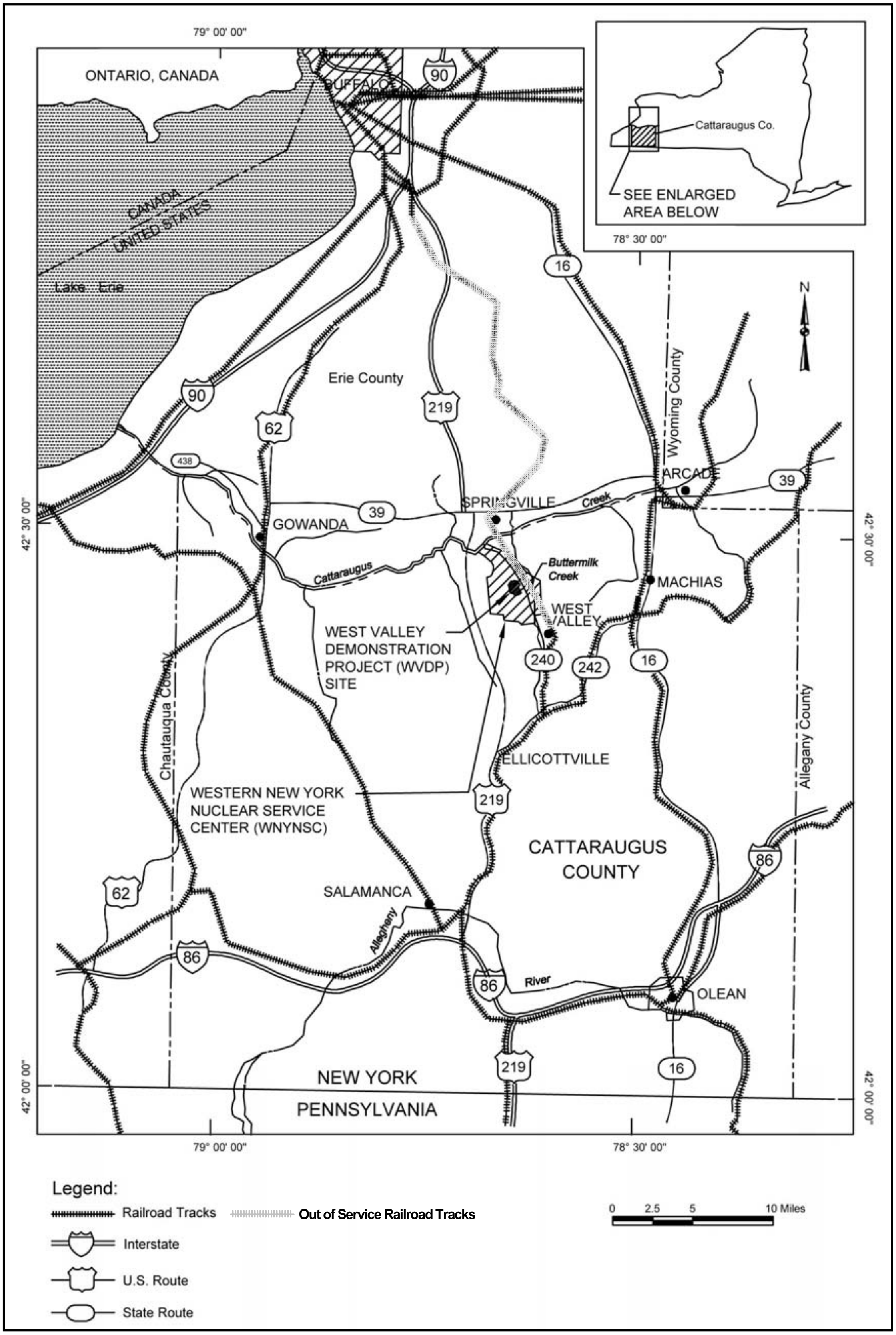

Figure 7. Transportation Routes in the Vicinity of WNYNSC

Rock Springs Road, adjacent to the site on the west, serves as the principal site access road. The portion of this road between Edies Road and U.S. 219 is known as Schwartz Road. Along this road, between the site and the intersection of U.S. 219, are fewer than 24 residences. State Route 240, also identified as County Route 32, is 2 kilometers (1.2 miles) northeast of the site. Average annual daily traffic on the portion of NY Route 240 that is proximate to the site (between County Route 16 - Rosick Hill Road and NY Route 39) ranges from a low of 440 to a high of 2,250 (WVNS 2000).

The Buffalo & Pittsburgh Railroad line is located within 800 meters (2,600 feet) of the Project Premises. The rail line runs from Salamanca, New York to the site, but has been abandoned north of the site. In 1999, the railroad completed connection of track between Ashford Junction and Machias, New York. Service by the Buffalo & Pittsburgh Railroad on the rail line from the WVDP to Ashford Junction and then to Machias now provides the WVDP rail access (WVNS 2000). No credible accidents or abnormal operations at off-site transportation facilities (i.e., the branch rail line) were identified that would contribute to an accident at the West Valley site (WVNS 2004b).

There are no commercial airports in the site vicinity. The nearest major airport is Buffalo Niagara International Airport, 55 kilometers (34 miles) north of the site (WVNS 2000).

3.11.2 Environmental Consequences of the Proposed Action

During the Proposed Action, there would be a small increase in the number of daily truck trips on roads servicing the WVDP, including the estimated one truck-trip per week to service portable sanitary facilities. DOE estimates that removal of the wastes generated by the Proposed Action to a licensed off-site disposal facility would require approximately 800 truck shipments during an estimated 4-year period. Over 90 percent of these shipments would be shipments of non-nuclear/non-hazardous material, mostly industrial waste, concrete, and debris. It is not possible at this time to develop a precise schedule for these shipments. However, if the currently projected approximate total number of truck shipments (800) were to occur at a fairly constant rate over the projected 4-year period, there would be approximately 4 truck shipments per week. Doubling this to account for round trips would result in approximately 8 weekly truck trips (about 2 per day assuming 5-day-per-week operations). If some of the projected shipments were to be by rail, the impact on roads infrastructure would be commensurately less. The road infrastructure that currently services the WVDP would be adequate to accommodate this small projected increase in daily truck traffic without upgrades.

Under the Proposed Action, about 25,400 cubic meters (898,000 cubic feet) of Class A LLW, mixed LLW, asbestos waste, hazardous waste, industrial waste, and building debris waste would be shipped for disposal. These shipments would take place over 4 years. Class A LLW and mixed LLW would be shipped to Hanford, Envirocare, or the NTS for disposal. Industrial waste and building debris waste would be shipped to a landfill in Model City, New York, or Olean, New York where this type of WVDP waste is currently shipped for disposal. Asbestos waste would be shipped to a landfill in Model City, New York. Hazardous waste would be shipped to a landfill in Indianapolis, Indiana where this type of WVDP waste is currently shipped for disposal.

Transportation impacts were estimated assuming that 100 percent of the waste would be shipped by truck and 100 percent of the waste would be shipped by rail. Table 9 lists the volumes and shipments associated with the Proposed Action.

Table 9. Waste Shipped Under the Proposed Action

Waste Type	Container Type[a]	Waste Shipped (ft^3)[b]	Number of Containers	Number of Shipments
LLW, Class A	B-25 boxes	91,954	1,021	73 (Truck) 37 (Rail)
MLLW, Class A	B-25 boxes	2,755	31	3 (Truck) 2 (Rail)
Asbestos	20 cubic yard intermodal container	304	1	1 (Truck) 1 (Rail)
Hazardous waste	55-gallon drums	70,400	9,576	114 (Truck) 57 (Rail)
Industrial waste	B-25 boxes	727,712	8,079	578 (Truck) 289 (Rail)
Concrete/ Debris	10 cubic yard dump truck or intermodal container	4,600	18	18 (Truck) 9 (Rail)

a. These packages were assumed for purposes of analysis. Actual packaging may vary.
b. To convert cubic feet to cubic meters, multiply by 0.028.

The transportation impacts of shipping the Class A LLW, mixed LLW, asbestos waste, hazardous waste, industrial waste, and building debris waste would be from two sources: incident-free transportation and transportation accidents. Both radiological impacts and nonradiological impacts are included in the analysis. The total impacts from transportation would be the sum of the impacts from incident-free transportation and transportation accidents.

Table 10 lists the total transportation impacts by waste type and destination under the Proposed Action. If either trucks or trains were used to ship the waste, essentially no additional fatalities are anticipated. When the transportation impacts of the Proposed Action are combined with the transportation impacts of continued operations at West Valley, after adding the impacts of the Proposed Action to those anticipated from continued operations, about 1 fatality might occur. For perspective, during the 4-year period of the Proposed Action, there would be about 160,000 traffic fatalities in the United States (U.S. Bureau of the Census 1997).

As shown in Table 10, the estimated fatalities associated with the Proposed Action are 0.02 for truck transport and 0.03 for rail transport. Table 10 also shows that these estimated fatalities are a small fraction of the fatalities associated with continued operations. Whether the estimated number of fatalities when using the rail alternative is greater or less than the estimated fatalities from truck transport is a function of several factors. The fatal nonradiological accident rate per kilometer traveled is state-specific and overall tends to be higher for rail. However, the greater capacity of the railcars means fewer kilometers traveled. In many cases, the higher capacity cancels out the higher accident rate, and the impacts for rail are smaller. This is true for the continued operations, but in the case of the Proposed Action, the accident rate dominates.

3.11.2.1 Incident-Free Transportation Impacts

Worker Impacts. If trucks were used to ship the waste, the maximally exposed worker would be a driver who would receive a radiation dose of about 280 mrem per year based on driving a truck containing radioactive waste for about 770 hours per year. This is equivalent to a probability of a latent cancer fatality of about 1.4×10^{-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 0.89 mrem per year. This is equivalent to a probability of a latent cancer fatality of about 4.5×10^{-7}.

Table 10. Transportation Impacts Under the Proposed Action

Waste Type	Destination	Incident-Free Public (LCFs)	Incident-Free Worker (LCFs)	Radiological Accident Risk (LCFs)	Pollution Health Effects (Fatalities)	Traffic Fatalities	Total Fatalities
Proposed Action Truck							
LLW, Class A	Envirocare	4.0×10^{-3}	5.0×10^{-3}	6.4×10^{-6}	9.2×10^{-4}	4.8×10^{-3}	1.5×10^{-2}
	Hanford[a]	4.8×10^{-3}	5.9×10^{-3}	6.9×10^{-6}	1.0×10^{-3}	6.0×10^{-3}	1.8×10^{-2}
	NTS	4.6×10^{-3}	5.9×10^{-3}	6.5×10^{-6}	9.3×10^{-4}	5.6×10^{-3}	1.7×10^{-2}
MLLW, Class A	Envirocare	1.6×10^{-4}	2.0×10^{-4}	2.3×10^{-8}	3.8×10^{-5}	2.0×10^{-4}	6.0×10^{-4}
	Hanford[a]	2.0×10^{-4}	2.4×10^{-4}	2.6×10^{-8}	4.1×10^{-5}	2.5×10^{-4}	7.3×10^{-4}
	NTS	1.9×10^{-4}	2.4×10^{-4}	2.4×10^{-8}	3.8×10^{-5}	2.3×10^{-4}	7.0×10^{-4}
Asbestos	Model City, NY	0.0	0.0	0.0	2.5×10^{-6}	3.0×10^{-6}	5.5×10^{-6}
Hazardous Waste	Indianapolis, IN	0.0	0.0	0.0	6.4×10^{-4}	1.3×10^{-3}	1.9×10^{-3}
Industrial Waste	Model City, NY	0.0	0.0	0.0	1.4×10^{-3}	1.7×10^{-3}	3.2×10^{-3}
	Olean, NY	0.0	0.0	0.0	2.1×10^{-4}	1.9×10^{-3}	2.1×10^{-3}
Building Debris	Model City, NY	0.0	0.0	0.0	4.5×10^{-5}	5.4×10^{-5}	9.9×10^{-5}
	Olean, NY	0.0	0.0	0.0	6.4×10^{-6}	5.9×10^{-5}	6.5×10^{-5}
							Total Truck Fatalities: 0.019-0.024
Continued Operations Truck							Total Truck Fatalities: 1.0-1.1
Total Truck (Proposed Action + Continued Operations)							Total Truck Fatalities: 1.0-1.1
Proposed Action Rail							
LLW, Class A	Envirocare	6.7×10^{-3}	5.3×10^{-3}	2.5×10^{-5}	1.3×10^{-3}	4.1×10^{-3}	1.7×10^{-2}
	Hanford[a]	6.9×10^{-3}	5.7×10^{-3}	2.8×10^{-5}	1.3×10^{-3}	5.4×10^{-3}	1.9×10^{-2}
	NTS	7.2×10^{-3}	7.8×10^{-3}	2.5×10^{-5}	1.3×10^{-3}	5.4×10^{-3}	2.2×10^{-2}
MLLW, Class A	Envirocare	3.6×10^{-4}	2.8×10^{-4}	1.3×10^{-7}	7.0×10^{-5}	2.2×10^{-4}	9.4×10^{-4}
	Hanford[a]	3.7×10^{-4}	3.1×10^{-4}	1.5×10^{-7}	7.2×10^{-5}	2.9×10^{-4}	1.0×10^{-3}
	NTS	3.9×10^{-4}	4.0×10^{-4}	1.4×10^{-7}	7.1×10^{-5}	2.8×10^{-4}	1.1×10^{-3}
Asbestos	Model City, NY	0.0	0.0	0.0	4.9×10^{-6}	1.8×10^{-5}	2.3×10^{-5}
Hazardous Waste	Indianapolis, IN	0.0	0.0	0.0	1.0×10^{-3}	3.1×10^{-3}	4.1×10^{-3}
Industrial Waste	Model City, NY	0.0	0.0	0.0	1.5×10^{-3}	5.3×10^{-3}	6.8×10^{-3}
	Olean, NY	0.0	0.0	0.0	2.7×10^{-4}	3.9×10^{-3}	4.2×10^{-3}
Building Debris	Model City, NY	0.0	0.0	0.0	4.8×10^{-5}	1.6×10^{-4}	2.1×10^{-4}
	Olean, NY	0.0	0.0	0.0	8.5×10^{-6}	1.2×10^{-4}	1.3×10^{-4}
							Total Rail Fatalities: 0.027-0.034
Continued Operations Rail							Total Rail Fatalities: 0.75-0.89
Total Rail (Proposed Action + Continued Operations)							Total Rail Fatalities: 0.78-0.93

Note: LCFs = latent cancer fatalities.

a. In accordance with the settlement agreement between DOE and the State of Washington of January 6, 2006, regarding the case *Washington v. Bodman*, DOE will not ship LLW and mixed LLW from WVDP to Hanford until DOE has satisfied the requirements of the settlement agreement.

Public Impacts. 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 0.047 mrem per year. This is equivalent to a probability of a latent cancer fatality of about 2.8×10^{-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 0.16 mrem per year. This is equivalent to a probability of a latent cancer fatality of about 9.6×10^{-8}.

3.11.2.2 Reasonably Foreseeable Transportation Accident Impacts

The maximally exposed individual would receive a radiation dose of 1.0 rem from the maximum reasonably foreseeable transportation accident involving a truck shipment of Class A LLW or mixed LLW. This is equivalent to a probability of a latent cancer fatality 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 latent cancer fatality.

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 a latent cancer fatality 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 latent cancer fatality.

Transportation accidents involving releases of hazardous materials were evaluated in the *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement* (DOE 1997a) and the *Final Waste Management Programmatic Environmental Impact Statement* (DOE 1997b). In DOE (1997a), no human health impacts would be expected from acute exposure to hazardous materials released during a severe transportation accident. In DOE (1997b), no potential for increased cancer incidence and no potential adverse health effects were found for transportation accidents involving solid low-level mixed waste.

Using the screening procedure in *A Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota* (DOE 2002), the sum of fractions of the biota concentration guides for the Class A LLW or mixed LLW accidents was less than 1. Therefore, the radioactive releases from the Class A LLW or mixed LLW accidents would not be likely to cause persistent, measurable deleterious changes in populations or communities of terrestrial or aquatic plants or animals.

3.12 Consequences of the No Action Alternative

As described in Section 2.2, under the No Action Alternative, DOE would not demolish and remove the 42 unused and unneeded facilities at WVDP. Under this alternative, there would be no short-term increase in the mobilization or emission of small amounts of particulates. There would be no short-term increase in emissions of hydrocarbons and carbon monoxide from the exhaust of a small number of gasoline or diesel engines. The condition of unused and unneeded facilities would continue to deteriorate. The short-term intermittent increase in suspended solids in stormwater runoff during soil excavation activities would not occur, nor would the increase in noise at the WVDP due to demolition activities. The very minor increase in latent cancer fatalities among workers and the public would not occur.

3.13 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, soil 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 42 unused and unneeded facilities and the removal, consolidation, and appropriate disposal of hazardous and radioactive wastes.

3.14 Irreversible and Irretrievable Commitment of Resources

The Proposed Action would require the use of natural resources such as vehicle fuel and electric power; the quantities involved would be small. The land involved in the action is already dedicated to use by the WVDP. The disposal of both radioactive and other wastes generated during the Proposed Action would occur at licensed facilities already dedicated to that purpose.

CHAPTER 4 PERSONS AND AGENCIES CONSULTED

The following agencies were consulted in the preparation of this EA:

New York State Energy Research and Development Authority (NYSERDA)
West Valley Site Management Program

The Seneca Nation of Indians

CHAPTER 5 REFERENCES

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APPENDIX A DESCRIPTION OF FACILITIES PROPOSED FOR DECONTAMINATION, DEMOLITION, AND REMOVAL

This appendix describes each of the West Valley Demonstration Project facilities that are proposed for decontamination (if needed), demolition, and removal for off-site disposal. Table 1 in Chapter 1 of the environmental assessment (EA) contains a list of these facilities, including information regarding size, expected waste volume, and construction type.

The ***Administration Building*** is a single-story structure. The concrete base is 9 inches thick. Construction materials include a concrete foundation, wood frame, metal siding, and metal roofing. This facility is not radiologically contaminated. The Administration Building was used as office space. Personnel from DOE and NYSERDA have relocated off the project premises. DOE would dismantle the building and dispose of the rubble in a sanitary landfill.

The ***Bulk Storage Warehouse*** (BSW) is approximately 2.5 miles southeast of the Process Building. It was built in 1969 as the Plutonium Storage Facility. An inspection was conducted by the NRC during January 1975 to verify that radiation levels did not exceed background, then it was released for unrestricted use. At the request of NYSDEC, another radiation survey was conducted during 1984 and additional decontamination was performed in a few areas. It is used by the WVDP to store office furniture, supplies, computers, and electrical equipment. No radiological or hazardous chemical contamination has been identified at the BSW.

The BSW is a steel-frame, metal-clad building. The floor is 4-inch-thick concrete that rests on a concrete foundation. The warehouse area is serviced by a 6,000-pound-capacity steel crane. An interior concrete block wall 8 inches thick separates an office area from the Main Warehouse. The office area is subdivided into three rooms: a switch gear room, a computer storage room, and an office area. A loading dock is located on the east side of the BSW. A nearby well supplies water to the BSW bathroom. The bathroom waste is discharged to a septic tank.

The ***Chemical Process Cell Waste Storage Area*** (CPC-WSA) is a structure used to temporarily store equipment removed from the decontamination of the CPC. It is a 12-gauge, galvanized steel-panel enclosure with a gravel pad floor. Approximately 42 steel boxes containing radioactively contaminated equipment are currently stored in the CPC-WSA. This facility is not radiologically contaminated; however, contamination may be found in the dirt based on container integrity issues.

The ***Cold Chemical Facility*** (CCF) is a structural steel frame and sheet-metal building located immediately west of and adjacent to the Vitrification Facility. The floor of the CCF is poured concrete and has curbs that provide secondary containment for storage tanks housed in the building. The CCF was used to prepare nonradioactive feed materials, such as nitric acid and glass formers, which were used in the vitrification process. The CCF contains 10 process tanks and associated pumps that were used to store and mix the nitric acid and glass formers. All tanks are currently empty. Because the CCF is not used to manage or treat radioactive materials, the structure is expected to be radiologically clean.

The ***Contact Size-Reduction Facility*** (CSRF), located in the northeastern corner of the Main Plant at ground level, is an enclosed structure constructed of concrete block. It is divided into four work rooms (cutting area, decontamination and survey area, small item decontamination area, and the large item decontamination and survey area), two personnel entry airlock rooms, and one equipment airlock room. Adjacent to the CSRF is the MSM repair shop with another personnel entry airlock. The MSM repair shop and associated airlock is not included in the CSRF permitted area.

CSRF is primarily used for volume reduction of nonhazardous low-level radioactive waste (LLW). Volume reduction may include various mechanical processes, such as abrasive cutting, band saw cutting, or plasma arc cutting. In addition, the CSRF may be used for staging, sampling, sorting, consolidating, and repackaging mixed waste and LLW containers. These activities will not include size-reduction processes which would be comparable to containment building activities. Typically, wastes are stored less than 2 weeks; however, the CSRF could be used for longer-term container storage if necessary. Before the CSRF was set up and the floors lined, floor drains in the MSM Repair Shop (including the section in the CSRF) were plugged. The floors, walls, and ceilings of the cutting room and large item decontamination room are lined with stainless steel. The remaining rooms do not have any liners or coatings for secondary-containment purposes. During operational activities, the walls and floors are lined with herculite. The slope of the pavement surrounding the CSRF directs water away from the area and controls run-on from precipitation.

This facility is radiologically contaminated. It has a relatively small footprint compared with other facilities, but because concrete was used in its construction, it is conservatively assumed that the concrete has been contaminated and that decontamination, demolition, and removal activities would therefore generate a higher volume of LLW than larger facilities constructed of metal and steel.

The ***Diesel Fuel Oil Building*** is a metal building used for diesel fuel oil storage for the Vitrification Facility diesel generator and houses a 7,450-gallon tank located in a below-grade concrete vault. This facility is not radiologically contaminated. DOE proposes to remove this building and the concrete vault. During decommissioning activities, power would be provided by the generators in the Utility Room Extension.

The ***Emergency Vehicle Shelter*** is a steel-framed structure with corrugated metal siding and a metal roof used for the emergency vehicle. This facility has never been radiologically contaminated, and DOE plans to use off-site agencies for emergency response functions once this structure is removed. DOE plans to use off-site agencies for emergency response functions once this structure was removed.

The ***Equalization Basin*** is a lined basin that is excavated into the sand and gravel layer and underlain with a sand drain. Originally, the basin was called the Effluent Mixing Basin when it received effluents from the sanitary Sewage Treatment Plant, some Utility Room discharge, and cooling water blowdown. Later, it received effluents from the sludge ponds. Having been bypassed by installation of the Equalization Tank, the basin currently is used as an excess capacity settling pond for discharges from the Utility Room. No known hazardous or radiological contamination is present in the Equalization Basin.

The ***Equalization Tank*** is a covered, 20,000-gallon underground concrete tank immediately north of the Equalization Basin that serves as a replacement for the Equalization Basin. This facility is not radiologically contaminated.

The ***Expanded Environmental Laboratory*** is located south of the Administration Building and annex trailer complex. It was constructed during the early 1990s. The laboratory has two sections: the Expanded Environmental Laboratory and the Expanded Analytical Annex. The laboratory consists of eight one-story modular units supported by 72 concrete piers. It was manufactured from light wood framing, metal roofing, and siding. An addition was built on the east side of the laboratory. This facility is not radiologically contaminated; however, there is a potential of low-level activity in the fume hoods.

The function provided by this facility would be substantially reduced or eliminated and replaced by an off-site contract laboratory. When the facility function is replaced or is no longer needed by the WVDP, the facility would be removed.

The ***Fabrication Shop*** lies west of the WTF. It was recently erected on a concrete pad from metal modular components. It consists of two fabrication bays that are two stories high, and a storage area one story high. This facility contained a sanitary wastewater storage tank and a satellite accumulation area for the storage of Resource Conservation and Recovery Act (RCRA) hazardous wastes. Minor chemical spills in this shop were cleaned up in accordance with site procedures. This facility is not radiologically contaminated.

The ***Hazardous Waste Storage Lockers*** are located east of the Remote-Handled Waste Facility (RHWF). The four lockers are used for short-term storage of hazardous waste. This facility is not radiologically contaminated.

The ***Hydrofracture Test Well Area*** consists of four observation wells and one injection well. During 1969, the Oak Ridge National Laboratory (ORNL) installed these wells northwest of the BSW. The wells were installed to perform hydraulic fracturing experiments as part of a pilot study to assess the suitability of this method for the underground disposal of LLW. The wells were drilled to depths of 1,500 feet and were cased with steel risers along their entire length. The injection well was centrally located and the four observation wells were located approximately 150 feet north, south, east, and west of the injection well.

Six hydraulic fracturing tests were performed from 1969 through 1971 at depths of 500 to 1,450 feet. Each of the injections consisted of water mixed with clay. Four of the injections used zirconium-95 as a radioactive tracer in the water.

The injection well is a 4.5-inch-diameter steel casing, which was placed in an 8-inch-diameter core hole that extended to a depth of 1,520 feet. The well annulus was cemented down to a depth of 1,520 feet. During an injection test, the well was plugged with cement below the desired injection depth, and a 360-degree horizontal slot was made in the well for the injection. Because the injection tests were in sequence from the bottom of the well upward, the injection well is currently filled with grout at depths of 500 to 1,520 feet.

The north, south, and west observation wells are composed of 2-inch-diameter steel casings that were placed in 6-inch-diameter core holes that extended to a depth of 1,520 feet. The east observation well is a 1.25-inch-diameter steel tube that was placed in a 3-inch-diameter core hole drilled to a depth of 1,520 feet. The annulus of each observation well was filled with cement down to a depth of 1,520 feet. The observation wells were used for gamma-ray logging after each injection.

During the hydraulic fracturing program, the east observation well was found plugged with cement at 495 feet and the casing ruptured at 1,226 feet. The south observation well was found plugged with cement at a depth of 1,445 feet, but it was later cleaned out.

Hazardous waste is not expected to be present in the surface soil or subsurface at the Hydrofracture Test Well Area, because such waste was not used in the area during or anytime after the hydraulic fracturing experiments. Although zirconium-95 was used as a radioactive tracer during four of the five injection tests, this radionuclide would no longer be present in the subsurface due to its short half-life of only 65 days. Zirconium-95 decays to the stable nonradioactive isotope molybdenum-95. At no time was waste injected into the test wells. The wells would be closed in accordance with State requirements.

The facility is expected to be radiologically clean; however, operational components may be contaminated.

The ***Interim Waste Storage Facility*** (IWSF) is a pre-engineered metal structure located on the north side of the NRC-Licensed Disposal Area (NDA). The building is anchored to a concrete slab with a curbed perimeter. The IWSF has a storage capacity of about 1,500 cubic feet (ft^3) and is used to store mixed LLW.

This facility is not radiologically contaminated, nor is there known hazardous waste contamination. However, soils beneath the foundation may be contaminated, given the facility is located on the NDA. Once the metal shell is removed, DOE would place the foundation in a safe condition, pending completion of the Decommissioning EIS, in which disposition of the foundation and any related soil contamination will be evaluated. Based on the type of foundation and extent of any removable contamination, DOE would determine the need for decontaminating the foundation and whether to paint, apply fixative, or cover in order to prevent migration of any non-removable contamination from the foundation surface.

The ***Lag Storage Addition (LSA) 1*** is a pre-engineered steel frame and fabric structure built in 1987 to store containerized LLW and protect it from wind and precipitation. The frame consists of 15 tons of galvanized steel and aluminum, including the doors. The fabric consists of approximately 13,800 square feet (ft^2) of fire-retardant and self-extinguishing vinyl. The floor is compacted gravel. LSA 1 has never been used to store mixed waste; it currently stores LLW.

This facility is radiologically clean at grade. Once the waste boxes were removed, the hardstand would be surveyed and RCRA sampled to ensure that no contamination had resulted due to potential, but undetected, container integrity issues. If spot contamination was found, the affected gravel would be removed and disposed of as LLW, or mixed LLW, if appropriate.

The ***Lag Storage Addition (LSA) 2 Hardstand*** was a tent structure that was dismantled after it was damaged by high winds. The foundation of LSA 2 is 8 inches of crushed stone covering an area 65 feet by 200 feet. Ten concrete footings reach a total depth of 4 feet. Six footings have cross-sections of 5 ft^2 and four have cross-sections of 3 ft^2.

An area of the old foundation, measuring 40 feet by 65 feet, is radiologically contaminated. The estimated volume of the contaminated soil is 2,600 ft^3. No hazardous chemical contamination has been identified. The LSA 2 Hardstand is used to store LLW and mixed waste.

This facility is radiologically clean at grade. Once the waste boxes are removed, the hardstand will be surveyed and RCRA sampled to ensure that no contamination has resulted due to potential, but undetected, container integrity issues. If spot contamination is found, the affected gravel would be removed and disposed of as LLW, or mixed LLW, if appropriate.

The ***Lag Storage Addition (LSA) 3*** is a clear-span structure with a pre-engineered frame and steel sheathing on a 7-inch concrete slab with curbs 6 inches high around the inside perimeter. The floor consists of approximately 20,000 ft^3 of concrete. LSA 3 is used to store LLW and mixed waste.

This facility is not radiologically contaminated, nor are there known hazardous constituents in the facility. The structure (including the floor) would be surveyed and RCRA sampled (swipe samples) to ensure that no contamination had resulted due to potential, but undetected, container integrity issues. If spot contamination was found in the floor, the affected surfaces would be secured appropriately or removed and disposed of as LLW or mixed LLW. Spot contamination found on the structure would be cleaned, and the waste handled appropriately.

The ***Lag Storage Addition (LSA) 4 and Shipping Depot*** is similar to LSA 3, except that it includes a Shipping Depot, a Container Sorting and Packaging Facility (CSPF), and a covered passageway between LSA 3 and LSA 4. The Shipping Depot is connected to LSA 4 and is a metal frame structure. LSA 4 and the CSPF are used to store, sort and repackage LLW and mixed waste. The Shipping Depot, CSPF, and WPA are radiologically contaminated.

The LSA 4 structure (including the floor) would be RCRA sampled and surveyed to ensure that no contamination had resulted due to potential, but undetected, container integrity issues. If spot contamination was found in the floor, the affected surfaces would be secured appropriately or removed and disposed of as LLW or mixed LLW. Spot contamination found on the structure would be cleaned, and the waste handled appropriately.

The ***Lag Storage Building*** (LSB) is an engineered metal structure that was built in 1984 to store radioactive and mixed waste; it is currently empty. It is supported by a clear-span frame and anchored to a concrete slab foundation. The slab is 10 inches thick at its highest point, and it slopes downward on all sides to a thickness of 8 inches. A 6-inch-high concrete curb encloses the inner perimeter. The slab surface was coated with an acid-resistant, two-coat application of epoxy sealer.

The roof is sloped. Seven continuous ventilators with chain-operated dampers are located on top of the building. The siding, roofing, gutters, and downspout are constructed from 26-gauge steel.

Three 18-gauge steel personnel doors are located around the building. Metal (22-gauge) roll-up doors are located at the south and east ends of the building. A manually adjusted louver door is located on the north and south walls of the building. The interior walls and ceiling are equipped with 4-inch-thick fiberglass insulation. This facility is radiologically contaminated; however, it can be removed in the WCA (former supercompactor area).

The ***Laundry Room*** is located southeast of the Utility Room. It is a small concrete block structure. The roof is metal decking with insulation and asphalt roofing. The floor is a concrete slab 6 inches thick. The floor contains a sump that is radiologically contaminated. It contains a commercial-size washer, a commercial-size dryer, and sorting tables and racks for laundering contaminated protective clothing, including shoe rubbers, boots, face masks, and coveralls. Chemical disinfectants and detergents are used in this building.

A wooden wall separates the laundry into a radiologically contaminated side and a clean side. In the contaminated side, fixed radiological contamination exists in the floor and may exist in the washer, dryer, and ventilation system. Removable contamination exists in the MCC panels. The Laundry Room has a relatively small footprint compared with other facilities, but because concrete was used in its construction, it is conservatively assumed that the concrete has been contaminated and that decontamination, demolition, and removal activities would therefore generate a higher volume of LLW than larger facilities constructed of metal and steel.

DOE would use off-site vendors for laundry services if necessary.

The ***Live Fire Range*** was constructed about 1.5 miles southeast of the Process Building during 1986. It is a fenced-in area with earth-mounded backstops, or berm, and fixed targets used by West Valley Demonstration Project (WVDP) Security and local law enforcement agencies for weapons practice and qualification courses. A shelter is located against the berm to provide non-shooters with cover from inclement weather. Weapons and ammunition used in exercises include 0.38-caliber handguns, 12-gauge shotguns, and 0.223-caliber semi-automatic and fully automatic assault rifles. The firing range is expected to contain unknown quantities of lead from spent bullets generated during its use as a weapons training facility. Removal of lead-contaminated soils may be required under RCRA. The firing range is not radioactively contaminated.

Three trailers and two small wood-frame buildings are located just outside the firing range perimeter on the south side. The range house was used to store safety and first aid equipment, spent casings, and wood. It is constructed of a concrete slab floor, light wood frame, wood siding, and asphalt roofing. The other building was used to simulate hostage rescue operations. It has a light wood frame, waferboard siding and roofing, and crushed stone flooring. Neither building has furniture, plumbing, or electrical facilities.

The ***Lube Storage Locker*** is a metal locker used to store lubrication materials and located on a gravel pad area referred to as the Industrial Waste Storage Area. This structure was never radiologically contaminated.

The ***Maintenance Shop*** is a metal building with steel supports. It houses locker rooms, lavatories, instrument shops, work areas, and a finished office area. Metal-working activities in the Maintenance Shop generated wastes containing metal constituents. The concrete floor is supported by a concrete foundation wall and concrete piers. This building is potentially radiologically contaminated in the concrete and in the overheads.

The ***Maintenance Storage Area*** is a sheet-metal storage area used to store raw materials for use in the Maintenance Shop. This facility was never radiologically contaminated.

The ***Master Slave Manipulator (MSM) Repair Shop*** was constructed around 1971 to allow repair of contaminated MSMs close to their point of use, particularly those in the Process Mechanical Cell, General Purpose Cell, Scrap Removal Room, and laboratories. It is concrete block with structural steel framing, a concrete slab floor, and metal roof deck with sloped built-up roofing. The facility has controlled ventilation, utilities, lighting, an overhead monorail, and decontamination facilities. The floors and tanks were designed to drain to a buried 1,500-gallon tank (15D-6) east of the MSM Shop. The ventilation has been upgraded, a new floor poured, and a stainless steel pan added. Temporary shielding was installed in the southeast corner for additional protection from the HEV filter plenum. The facility contains one lead glass shield window in the north wall that looks in on the Contact Size Reduction Facility. The MSM Repair Shop has low levels of radiological contamination not thought to be significant and a requirement for decontamination would be minimal.

The ***NDA Hardstand***, located near the southeast corner of the NDA, was an interim storage area where radioactive waste was staged before being disposed. The hardstand contains a three-sided structure with cinder-block walls that is located on a sloped pad of crushed rock. The hardstand is radiologically contaminated in the soils from material that was staged for burial.

The ***New Cooling Tower*** provides cooling water to selected systems and equipment. It stands on a concrete basin. The floor of the basin is an 8-inch-thick concrete slab. The basin floor is supported by a retaining wall 4 feet deep. The concrete basin is radiologically contaminated and chemically contaminated with water treatment chemicals, such as corrosion inhibitors and biocides, which have been used as part of normal operations in the cooling tower. Only the above-grade uncontaminated structure would be removed. The basin would be covered to prevent water accumulation. The contaminated basin, including the slab, will be evaluated in the Decommissioning EIS.

The ***New Warehouse*** was built during the 1980s and is located east of the Administration Building and Annex Trailer Complex. It is a pre-engineered steel building resting on about 40 concrete piers and a poured concrete foundation wall. The concrete piers rest on concrete footings. The concrete floor is underlain with a gravel base. The average thickness of the concrete floor is 6 inches. A concrete block firewall divides the warehouse into two sections. Historically, this facility was used to store spare parts, equipment, and chemicals associated with the HLW treatment activities. It is currently empty and is not radiologically contaminated.

The ***O2 Building*** is a steel-framed concrete building with a concrete slab located outside the building. The LLW Treatment Facility in the O2 Building was replaced by an LLW Treatment Facility in the

LLW2. All equipment has been removed from the building and slab. The O2 Building has been significantly decontaminated. Remaining radiological contamination is in both fixed and removable form. Only the above-grade structure would be removed. The removal of the contaminated slab will be evaluated in the Decommissioning EIS. The O2 Building has a relatively small footprint compared with other facilities, but because concrete was used in its construction, it is conservatively assumed that the concrete has been contaminated and that decontamination, demolition, and removal activities would therefore generate a higher volume of LLW than larger facilities constructed of metal and steel.

The ***Old Warehouse*** is a pre-engineered steel building with three sections. The facility supports the storage of spare parts, equipment, and chemicals associated with conduct of the WVDP; in the past, NFS used the facility for the same purpose. The room attached to the north end of the building formerly housed the blueprint facility and currently houses a radiological counting facility. A concrete ramp with an asphalt cover is located at the north cargo door. This facility is potentially radiologically contaminated due to rodent issues. There is no removable contamination.

The ***Old Sewage Treatment Plant*** provided primary and secondary treatment of sanitary wastewater generated at the WVDP from 1966 to 1985. The unit consisted of a concrete basin (5,000 gallons per day capacity), control boxes, a surge tank, an aeration tank, and a clarifier. Effluent from the facility was monitored under the State Pollutant Discharge Elimination System (SPDES) regulatory program since 1978. The treatment plant received wastewater from the Main Plant locker room floor drains, sinks and toilets, and other on-site sanitary waste streams. Low levels of radioactivity were documented in this facility. A piping source was identified and pipes were replaced, eliminating the radioactivity occurrences.

The ***Radwaste Process (Hittman) Building*** is located in the yard area north of the FRS Building. The building is steel-framed, with steel siding and roofing. The center section of the roof is removable to allow access to steel and concrete shields that house high-integrity containers (HICs) used to store loaded resins from the fuel pool Submerged Water Filtration System. The Radwaste Process Building is equipped with provisions for the confinement of radioactive materials. The foundation perimeter is curbed, and a sump located in the southwest corner of the building provides spill collection. This facility is radiologically contaminated with elevated contamination levels in the facility sump and low-level removable and fixed contamination in the posted contamination area used to support resin transfers. Only the above-grade structure would be removed. The removal of the contaminated slab will be evaluated in the Decommissioning EIS.

The ***Radwaste Treatment System (RTS) Drum Cell*** was built by the WVDP during 1986 and 1987 to receive and store radioactive waste solidified in cement and packaged in square 71-gallon drums. The Drum Cell is enclosed by a temporary weather structure, which is a pre-engineered metal building. The facility consists of a base pad, shield walls, remote waste handling equipment, container storage areas, and a control room within the weather structure. The base pad consists of concrete blocks set on a layer of compacted crushed stone, underlain by geotextile fabric and compacted clay, which is designed to enhance water drainage. Concrete curbs to support the drum stacks are on top of the base pad. The Drum Cell can hold up to 21,000 drums. This facility is radiologically contaminated with low-level fixed contamination in the Load In facility and a possible very low level in the Load In roller area.

The ***Recirculation Vent System Building*** is fabricated from sheet metal and is located in the north FRS yard. This building contains the equipment that provides the majority of the heating, ventilation, and air conditioning (HVAC) for the FRS Building. This facility is radiologically contaminated in the ventilation system components.

The ***Road Salt and Sand Shed*** consists of a storage bin and a sand stall on 5-inch-thick blacktop. The blacktop is underlain with 10 inches of stone. This structure was used to store road salt and sand and is not radiologically contaminated. DOE proposes to remove the storage bin and sand stall within the next 4 years. During decommissioning of the site, DOE would contract with a commercial firm for road maintenance as needed.

The ***Schoolhouse***, located south of the WVDP on Rock Springs Road, is a two-room, one-story wood building with clapboard siding. It has asphalt shingles over the original wood shingles and a brick chimney. It has a fieldstone foundation. It was previously used as an environmental laboratory and as a training center, but it is currently being used as a deer check facility during restricted deer hunting at the Western New York Nuclear Service Center (WNYNSC). The schoolhouse was never radiologically contaminated.

The ***Sewage Treatment Plant*** is a wood frame structure with metal siding and roofing. The base of the facility is concrete and crushed stone. Eight tanks are associated with the plant: six in-ground concrete tanks, one aboveground polyethylene tank, and one aboveground stainless steel tank.

Only sanitary waste is treated at the plant. Water treatment chemicals, such as sulfuric acid, sodium hypochlorite, sodium bisulfite, and sodium bicarbonate, have been used at the plant. No hazardous or radiological contamination is known to exist there. Treated wastewater from the Sewage Treatment Plant is discharged to Erdman Brook through a SPDES-permitted discharge.

During decommissioning, of the site, DOE would arrange for portable sanitary facilities for workers involved in decommissioning activities.

The ***Test and Storage Building*** (TSB), located northeast of the Process Building, has a timber frame, metal siding, and steel beams. The building was initially used to test glass recipes and store glass samples. It currently has office space, the tool crib, and garage space. A concrete block addition houses Radiation and Safety Operations. This building is potentially radiologically contaminated by a low-level fixed contamination.

The ***Vehicle Repair Shop*** is a steel I-beam framed structure with corrugated metal siding and a metal roof. This facility was never radiologically contaminated.

The ***Vitrification Test Facility*** is a metal building with a concrete floor. It is equipped with three large, motor-operated roll-up doors and a 16-ton overhead bridge crane. It housed, among other things, a small-scale vitrification facility. The refractory in the scale vitrification system melter might contain some metal constituents such as chromium and thorium.

A "speed-space" was added to the south side of the Vitrification Test Facility to simulate a control room for operator training.

Eleven wood utility poles are located between the Electrical Switching Station and the northeast area of the Vitrification Test Facility. These poles are 1.5 feet in diameter and approximately 30 feet tall. They have been treated with creosote. One cross arm with ceramic insulators is mounted on each pole. This building is not radiologically contaminated.

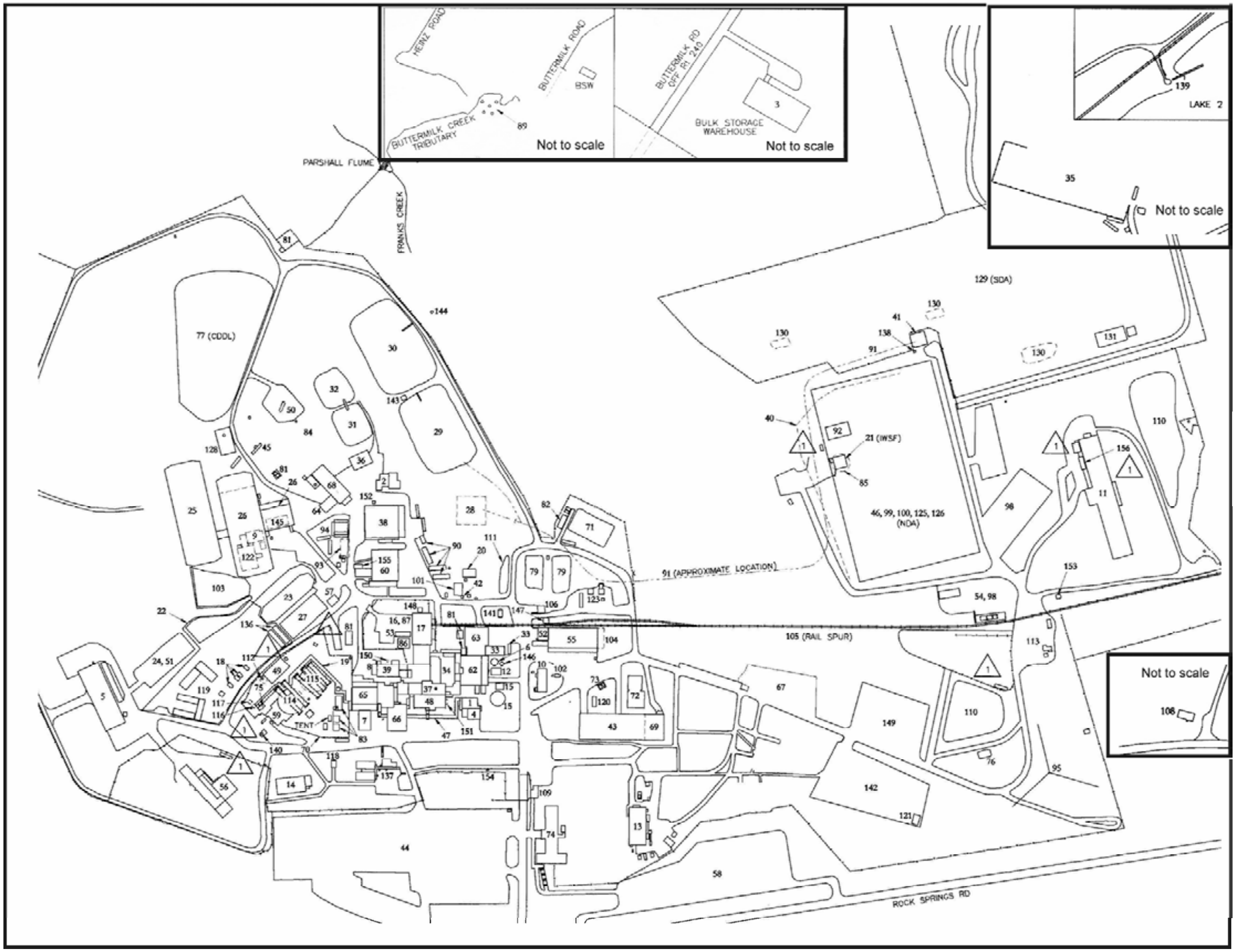
The ***Warehouse Bulk Oil Storage Unit*** is a metal, insulated-wall structure insulated with 2-hour fire rating. The floor is a removable fiberglass grating located 6 inches above a catch basin with a sump. It is located east of the New Warehouse. It has been used for the storage of combustibles (i.e., grease, oils, antifreeze, etc.) in 1 gallon to 55 gallon containers. This facility is not radiologically contaminated.

Within the next 4 years, the need for combustible materials storage will have been eliminated or substantially reduced. When the facility function is replaced or is no longer needed by the WVDP, the facility would be removed.

The ***Waste Tank Farm (WTF) Training Platforms*** consist of two training platforms. WTF Training Platform 1, the decant pump and heat exchanger platform, is a pre-engineered structure erected as a stack of six modules including ladders, handrails, and grating. Structural shapes and plates are carbon steel. The grating is galvanized. The modules, ladders, and handrails are bolted together. The exterior “skin” is fabric.

WTF Training Platform 2, the mobilization pump repair platform, is a pre-engineered structure similar to Training Platform 1, but it includes only four modules. These platforms are not radiologically or chemically contaminated. These platforms were constructed as mock-ups to support the replacement of pumps in the Waste Tank Farm. The platforms were above-ground training and practice areas designed to facilitate full-scale mockup of pump replacement activities.

APPENDIX B WVDP FACILITY MAP AND FACILITY NAME CROSSWALK



WVDP Facility Name Crosswalk							
Facility/ System #	GOAT/EIS	WVDP-227/SAR	Site Map	RCRA	ORPS	RFP	SUMP
1	01-14 Building Including Cement Solidification System	01-14 Building Off-Gas				01-14 Building	
2	Low-Level Waste Treatment Facility (02 Building)	02 Building				Low-Level Waste Treatment Facility (02 Building)	
3	Bulk Storage Warehouse (BSW)	Bulk Storage Warehouse	Bulk Storage Warehouse			Bulk Storage Warehouse	
4	Cement Solidification System (CSS)	Cement Solidification System (CSS)	01-14 Building Including Cement Solidification System	Integrated Radioactive Waste Treatment Facility	Cement Solidification System	Cement Solidification System	
5	Chemical Process Cell-Waste Storage Area (CPC-WSA)	Chemical Process Cell-Waste Storage Area (CPC-WSA)	--	Chemical Process Cell Waste Storage Area		-	
6	Clarifier	Clarifier					
7	Cold Chemical Facility (Cold Chem)	Cold Chemical Building				Cold Chemical Facility	
8	Contact Size Reduction Facility (CSRF)	Contact Size Reduction Facility (CSRF)		Contact Size Reduction Facility	Contact Size Reduction	Contact Size Reduction Facility (formerly MSM Decontamination Room)	
9	Container Sorting and Packaging Facility (CSPF)	Container Sorting and Packaging Facility (CSPF)				Container Sorting and Packaging Facility (CSPF)	
10	Cooling Tower	Cooling Tower				New Cooling Tower	
11	RTS Drum Cell	Drum Cell			Low-Level Storage (Drum Cell)	Radwaste Treatment System (RTS) Drum Cell	
12	Emergency Vehicle Shelter	Emergency Vehicle Shelter				Emergency Vehicle Shelter	
13	Expanded (Environmental) Lab	Expanded (Environmental) Lab	Includes Vit Cold Lab		Analytical and Environmental Lab	Expanded (Environmental) Lab Complex	
14	Construction Fab Shop (Vitrification Fab Shop)	Fabrication Shop					
15	Fire Pumphouse & Storage Tank	Fire Pump House	Storage Tank 32D P			Fire Pumphouse & Storage Tank	
16	FRS North Yard Hardstand	FRS North Yard Hardstand					
17	Fuel Receiving and Storage (FRS) Building	Fuel Receiving and Storage (FRS)			Fuel Receiving and Storage		
18	Hazardous Waste Storage Lockers	Hazardous Waste Waste Storage		Hazardous Waste Storage	Hazardous Waste Storage	Hazardous Waste Storage	
19	High-Level Waste Transfer Trench	High-Level Waste Transfer Trench				High-Level Waste Transfer Trench	
20	New Interceptor (North and South)	Interceptor				New Interceptors (North and South)	
21	Interim Waste Storage Facility (IWSF) or Kerosene Tanks & NDA Container Storage Area	Inerim Waste Storage Facility (IWSF)	IWSF	Inerim Waste Storage Facility	Inerim Waste Storage Facility	Inerim Waste Storage Facility (IWSF) or Kerosene Tanks & NDA Container Storage Area	
22	Lag Hardstand	Lag Hardstand					
23	Lag Storage Area 1	Lag Storage Area 1 (LSA 1)		Lag Storage Annex 1 and 2	Low-Level Storage (Lag System)	Lag Storage Area 1 (LSA_1)	
24	Lag Storage Area 2 (hardstand)	Lag Storage Area 2 (LSA 2)		Lag Storage Annex 1 and 2	Low-Level Storage (Lag System)	Lag Storage Area 2 (hardstand) (LSA_2)	
25	Lag Storage Area 3	Lag Storage Area 3 (LSA 3)		Lag Storage Annex 3	Low-Level Storage (Lag System)	Lag Storage Area 3 (LSA_3)	
26	Lag Storage Area 4 (LSA 4) Including Shipping Depot	Lag Storage Area 4 (LSA 4)		Lag Storage Annex 4	Low-Level Storage (Lag System)	Lag Storage Area 4 (LSA_4)	
27	Lag Storage Building (LSB)	Lag Storage Building (LSB)		Lag Storage Building	Low-Level Storage (Lag System)	Lag Storage Building (LSB)	
28	Lagoon 1	Lagoon 1				Lagoon 1	Lagoons
29	Lagoon 2	Lagoon 2				Lagoon 2	Lagoons
30	Lagoon 3 (includes nearby french drain)	Lagoon 3				Lagoon 3 (includes nearby french drain)	Lagoons
31	Lagoon 4	Lagoon 4				Lagoon 4	Lagoons
32	Lagoon 5	Lagoon 5				Lagoon 5	Lagoons
33	Laundry Room	Laundry	Includes Laundry Storage Trailer		Laundry	Laundry Room	
34	Liquid Waste Treatment System (LWTS)	Liquid Waste Treatment System	Main Plant Process Building	Integrated Radioactive Waste Treatment System	Liquid Waste Treatment System	Liquid Waste Treatment System	Waste Water Treatment System
35	Live Fire Range	Live Fire Range				Live Fire Range	
36	Low-Level Waste Treatment Building (LLW2)	Low-Level Waste Treatment Replacement Facility (LLW2) or Low-Level Waste Treatment System (LLWTS)			Low-Level Waste Treatment	Low-Level Waste Treatment Building (LLW2)	Waste Water Treatment System
37	Main Plant Process Building (MPPB)	Main Plant	Includes HLW Interim Storage (Chemical Process Cell (CPC)), Waste Reduction and Packaging Area (WRPA), Analytical and Process Chemistry Lab and LWTS			Process Building	

WVDP Facility Name Crosswalk							
Facility/ System #	GOAT/EIS	WVDP-227/SAR	Site Map	RCRA	ORPS	RFP	SUMP
38	Maintenance Shop	Maintenance Shop				Maintenance Shop	
39	Master Slave Manipulator (MSM) Shop	Master Slave Manipulator (MSM) Shop				MSM Repair Shop	
40	NDA Interceptor Trench	NDA Interceptor Trench Liquid Pretreatment System				Interceptor Trench	
41	NDA Hardstand/ Staging Area	--					
42	Neutralization Pit	Neutralization Pit				Neutralization Pit	
43	New Warehouse (Main 2)	New Warehouse				New Warehouse (Main-2)	
44	North Parking Lot	North Parking Lot					
45	North Plateau Groundwater Recovery System Pump & Treat	North Plateau Pump System (NPPS)	Includes Wells			North Plateau Groundwater Recovery System Pump & Treat	
46	Nuclear Regulatory Commission-Licensed Disposal Area (NDA)	NRC Licensed Disposal Area (NDA)	Includes NFS Deep Holes, NFS Special Holes, WVDP Caisons, WVDP Trenches			Nuclear Regulatory Commission-Licensed Disposal Area (NDA)	
47	Off-Gas Trench	Off-Gas Trench					
48	Plant Office Building	Office Areas				Plant Office Building	
49	Permanent Vent System Bldg (PVS)	Permanent Ventilation System (PVS)	Includes STS Support Building			Permanent Ventilation System Bldg (PVS)	
50	Permeable Treatment Wall	Permeable Treatment Wall					
51	PPC Box Storage Area	PPC Box Storage Area					
52	Radiation Protection Counting Lab	Radiation Protection Lab				Counting Lab	
53	Radwaste Process (Hittman) Bldg	Radwaste Process (Hittman) Bldg				Radwaste Process (Hittman) Bldg	
54	Rail Packaging and Staging Area	Rail Packaging and Staging Area				Rail Packaging and Staging Area	
55	Old (Main) Warehouse	Receiving Warehouse				Old Warehouse	
56	Remote Handled Waste Facility (RHWF)	Remote Handled Waste Facility (RHWF)		Remote Handled Waste Facility	Remote Handled Waste Facility	Remote Handled Waste Facility (RHWF)	Remote Handled Waste Facility
57	Sample Sorting and Packaging Area	Sample Sorting and Packaging Area				Sample Storage and Packaging Facility (SSPF)	
58	South Parking Lot	South Parking Lot					
59	Supernatant Treatment System (STS)	Supernatant Treatment System (STS)		Integrated Radioactive Waste Treatment System	Supernatant Treatment System		
60	Test and Storage Building (TSB)	Test and Storage Building (TSB)				Test and Storage Building (TSB)	
61	Trailers (3)	Trailers	Shown but not labled				
62	Utility Room	Utility Room			Utility Room		
63	Utility Room Expansion	Utility Room Expansion					
64	Vehicle Maintenance Shop	Vehicle Maintenance Shop				Vehicle Repair Shop	
65	Vitrification Facility Bldg	Vitrification Facility (VF)	Includes Canister Transfer Tunnel	Vitrification Treatment and Storage Facility	Vitrification Facility System	Vitrification Facility Bldg	
66	Load-In/Load-Out Facility	Vitrification Load-In Facility					Load-out facility
67	Vitrification Hardstand	Vitrification Storage Area				Vitrification Hardstand	
68	Vitrification Test Facility (VTF)	Vitrification Test Facility (VTF)			Vitrification Test Facility	Vitrification Test Facility (VTF)	
69	(Former) Waste Management Staging Area (WMSA)	Waste Management Staging Area (WMSA)			Waste Management Staging Area	Warehouse Extention Staging Area or Waste Management Staging Area (WMSA)	
70	Waste Tank Farm (WTF)	Waste Tank Farm (WTF)				High-Level Waste (HLW) Tank Farm	
71	Equalization (EQ) Basin	Waste-Water Equalization Basin				Equalization (EQ) Basin or Effluent Mixing Basin	
72	Waste-Water Treatment Facility or Sewage Treatment Plant	Waste-Water Treatment Facility				Waste-Water Treatment Facility (WWTF) or Sewage Treatment Plant (STP)	
73	Above-ground Petroleum Tanks (41-D-021, 41-D-022)					Above-ground Petroleum Tanks (41-D-021, 41-D-022)	
74	Administration Building		Includes Dosimetry Lab			Administration Building	
75	Con-Ed Building					Con-Ed Building	
76	Construction and Demolition Area or Concrete Washdown Area					Construction and Demolition Area or Concrete Washdown Area	
77	Construction and Demolition Debris Landfill (CDDL)		CCDL			Construction and Demolition Debris Landfill (CDDL)	
78	Dams and Reservoirs		Not shown			Dams and Reservoirs (Lakes)	

WVDP Facility Name Crosswalk

Facility/ System #	GOAT/EIS	WVDP-227/SAR	Site Map	RCRA	ORPS	RFP	SUMP
79	Demineralizer Sludge Ponds					Demineralizer Sludge Ponds	Sludge Ponds
80	Designated Roadways		Shown but not labled			Designated Roadways	
81	Electrical Substations					Electrical Substation	
82	Equalization (EQ) Tank					Equallization (EQ) Tank	
83	Waste Tank Farm Equipment Shelter and Condenser					Equipment Shelter and Condenser	
84	Fire Brigade Training Area					Fire Brigade Training Area	
85	Former NDA Lagoon (also called "Pete's Pond")					Former NDA Lagoon (also called "Pete's Pond")	
86	FRS Ventilation Building (Recirculation Ventilation System Building)					FRS Ventilation Building	
87	Fuel Receiving & Storage Area's High Integrity Container (HIC) & SUREPAK Staging Area			High Integrity Container Storage Area		Fuel Receiving & Storage Area's High Integrity Container (HIC) & SUREPAK Staging Area	
88	HLW Tanks Pumps		Not shown, Installed in Tank 8D-1 and Tank 8D-2				
89	Hydrofracture Test Well Area					Hydrofracture Test Well Area	
90	Industrial Waste Storage Area Lube Storage Lockers and 2 Metal Lockers					Industrial Waste Storage Area	
91	SDA Leachate Transfer Line					Leachate Transfer Line	
92	Liquid Pretreatment System		NDA Liquid Pretreatment System			Liquid Pretreatment System (LPS) for NDA Leachate Pretreatment System or Trench Interceptor Project Groundwater Treatment System	
93	Maintenance Shop Leach Field					Maintenance Shop Leach Field	
94	Maintenance Storage Area					Maintenance Storage Area	
95	Meteorological Tower					Meterological Tower	
96	Miscellaneous Facilities and Storage Areas		Approximately 30 Storage Sheds and Cargo Containers Shown but not labled			Miscellaneous Facilities and Storage Areas	
97	Monitoring Wells/Stations		Not shown			Monitoring Wells/Stations	
98	NDA Trench Soil Container Area		NDA Rolloff Area Hardstand			NDA Trench Soil Container Area	
99	NFS Deep Holes		NDA			NFS Deep Holes	
100	NFS Special Holes		NDA			NFS Special Holes	
101	Old Interceptor					Old Interceptor	
102	Old Sewage Treatment Facility					Old Sewage Treatment Plant Facility	
103	Old/New Hardstand Storage Area					Old/New Hardstand Storage Area	
104	Product Storage Area					Product Storage Area	
105	Rail Spur					Rail Spur	
106	Road-Salt & Sand Storage Shed					Road-Salt & Sand Storage Shed	
107	Satellite Accumulation and 90-Day Storage Areas		Not shown			Satellite Accumulation and 90-Day Storage Areas	
108	Schoolhouse					Schoolhouse	
109	Security Gatehouse and Fences		Fences shown but not labled			Security Gatehouse and Fences	
110	Soil Piles					Soil Piles	
111	Solvent Dike					Solvent Dike	
112	STS Bulk Underground Fuel Oil Tank (50D-09)					STS Bulk Underground Fuel Oil Tank (50D-09)	
113	Subcontractor Maintenance Area					Subcontractor Maintenance Area	
114	Tank 8D-1 (including in-tank STS Components)			Waste Tanks 8D-1 and 8D-2		Tank 8D-1 (including in-tank STS Components)	
115	Tank 8D-2			Waste Tanks 8D-1 and 8D-2		Tank 8D-2	HLW Tanks
116	Tank 8D-3			Waste Tanks 8D-3 and 8D-4		Tank 8D-3	HLW Tanks
117	Tank 8D-4			Waste Tanks 8D-3 and 8D-4		Tank 8D-4	HLW Tanks

WVDP Facility Name Crosswalk							
Facility/ System #	GOAT/EIS	WVDP-227/SAR	Site Map	RCRA	ORPS	RFP	SUMP
118	Vitrification Diesel Fuel Oil Storage Tank & Building (or Diesel Fuel Oil Building)(FOD-11)					Vitrification Diesel Fuel Oil Storage Tank & Building (or Diesel Fuel Oil Building)(FOD-11)	
119	Vitrification Vault and Empty Container Hardstand					Vitrification Vault and Empty Container Hardstand	
120	Warehouse Bulk Oil Storage Unit					Warehouse Bulk Oil Storage Unit	
121 *	Warehouse Hardstand Tents					Warehouse Hardstand Tents	
122	Waste Packaging Area					Waste Packaging Area (WPA)	
123	Waste Tank Farm Test Towers					Waste Tank Farm (WTF) Training/ Test Platforms	
124	Well purge water storage locations		Not shown			Well purge water storage locations	
125	WVDP Caissons		Not shown in NDA			WVDP Caissons	
126	WVDP Trenches		Not shown in NDA			WVDP Trenches	
127	Sealed Rooms		Not shown				
128	Cold Hardstand Near CDDL						
129	SDA-Disposal Trenches		SDA				
130	SDA-Former Lagoons		SDA				
131	SDA-Mixed Waste Storage Facility						
132	North Plateu Groundwater Plume		Not shown				
133	Stream Sediments		Not shown				
134	Cesium Prong		Not shown				
135	Contaminated Soils on Project Premises		Not shown				
136	High Level Waste Tank Pump Storage Vaults						
137	VH Series Trailers						
138	SDA Leachate Pumphouse						
139	Lakes Pumps						
140	Nitrogen Storage Tank						
141	Above-ground Diesel Fuel Tank 31D-01						
142	AA Hardstand						
143	Lagoon 2 Pumphouse						
144	Lagoon 3 Weir Shed						
145	Shipping Depot Containment						
146	Demineralized Water Tank						
147	Waste Paper Incinerator Pad						
148	FRS Pump Shed						
149	Empty Hardstand						
150	HEV & Decon Shop Waste Catch Tank 15D-6						
151	LLW Catch Tank from Lab Drains 7D-13						
152	New Communications Shed						
153	Drum Cell Instrumentation Monitoring Shed						
154	Communications Hub Shed						
155	Asbestos Decon Shower						
156	WVDP Road Show Trailer						