

Appendix B

Regulations and Standards

Table B - 1

**Department of Energy Radiation Protection Standards
and Concentration Guides***

Effective Dose Equivalent Radiation Standard for Protection of the Public
Continuous exposure of any member of the public from routine activities:
100 mrem/year (1 mSv/yr) from all exposure pathways

**Department of Energy Concentration Guides (DCGs) for
Ingestion of Drinking Water and Inhaled Air ($\mu\text{Ci/mL}$)**

<i>Radionuclides:</i>	<i>In Air</i>	<i>In Water</i>	<i>Radionuclides:</i>	<i>In Air</i>	<i>In Water</i>
H-3	1E-07	2E-03	Th-232	7E-15	5E-08
C-14	6E-09	7E-05	U-232	2E-14	1E-07
Fe-55	5E-09	2E-04	U-233	9E-14	5E-07
Co-60	8E-11	5E-06	U-234	9E-14	5E-07
Ni-63	2E-09	3E-04	U-235	1E-13	6E-07
Sr-90	9E-12	1E-06	U-236	1E-13	5E-07
Zr-93	4E-11	9E-05	U-238	1E-13	6E-07
Nb-93m	4E-10	3E-04	Np-239	5E-09	5E-05
Tc-99	2E-09	1E-04	Pu-238	3E-14	4E-08
Ru-106	3E-11	6E-06	Pu-239	2E-14	3E-08
Rh-106m	6E-08	2E-04	Pu-240	2E-14	3E-08
Sb-125	1E-09	5E-05	Pu-241	1E-12	2E-06
Te-125m	2E-09	4E-05	Am-241	2E-14	3E-08
I-129	7E-11	5E-07	Am-243	2E-14	3E-08
Cs-134	2E-10	2E-06	Cm-243	3E-14	5E-08
Cs-135	3E-09	2E-05	Cm-244	4E-14	6E-08
Cs-137	4E-10	3E-06	Gross Alpha (as Am-241)	2E-14	3E-08
Pm-147	3E-10	1E-04	Gross Beta (as Sr-90)	9E-12	1E-06
Sm-151	4E-10	4E-04			
Eu-152	5E-11	2E-05			
Eu-154	5E-11	2E-05			
Eu-155	3E-10	1E-04			

* Ref: DOE Order 5400.5 (February 8, 1990). Effective May 8, 1990.

Table B - 2

Environmental Standards and Regulations

The following environmental standards and laws are applicable, in whole or in part, to the West Valley Demonstration Project:

DOE Order 5400.1. November 9, 1988. *General Environmental Protection Program*, including Change 1 (June 29, 1990).

DOE Order 5400.5. February 8, 1990. *Radiation Protection of the Public and the Environment*, including Change 2 (January 7, 1993).

DOE Order 5480.1B. September 1986. *Environment, Safety, and Health Program for DOE Operations*, including Change 4 (March 27, 1990).

DOE Order 5484.1. February 1981. *Environmental Protection, Safety, and Health Protection Information Reporting Requirements*, including Change 7 (October 17, 1990).

Clean Air Act (CAA) . 42 USC 1857 et seq., as amended, and implementing regulations.

Federal Water Pollution Control Act [Clean Water Act (CWA)]. 33 USC 1251, as amended, and implementing regulations.

Resource Conservation and Recovery Act (RCRA). 42 USC 6905, as amended, and implementing regulations.

National Environmental Policy Act (NEPA). PL 911-190. 42 USC 4321-4347, January 1, 1970, as amended, and implementing regulations.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). 42 USC 960 (including Superfund Amendments and Reauthorization Act of 1986), and implementing regulations.

Toxic Substances Control Act (TSCA). 15 USC 2610, as amended, and implementing regulations.

Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, Title 3, 40 CFR Part 302, 350, 355, 370, and 372.

Safe Drinking Water Act (SDWA). 40 CFR Part 141-149, as amended, and implementing regulations.

Environmental Conservation Law of New York State.

The standards and guidelines applicable to releases of radionuclides from the West Valley Demonstration Project are found in DOE Order 5400.5.

Ambient water quality standards contained in the State Pollutant Discharge Elimination System (SPDES) permit issued for the facility are listed in *Appendix C-5* in each annual Site Environmental Report.

Airborne discharges are also regulated by the Environmental Protection Agency under the National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61 Subpart H. December 15, 1985.

The above list covers the major activities at the West Valley Demonstration Project but does not constitute a comprehensive enumeration.

Table B - 3

**West Valley Demonstration Project Environmental Permits
(as of December 31, 1993)**

Type of Permit	Issued by	Expiration	Permit Number
Certificates to Operate Air Contamination Source			
Boiler	NYSDEC	6/94	042200-0114-00002
Boiler	NYSDEC	6/94	042200-0114-00003
Incinerator (closed) ¹	NYSDEC	6/94	042200-0114-00004
Low-level Waste Treatment Facility Nitric Acid Storage Tank	NYSDEC	6/94	042200-0114-0010
Cement Storage Silo Ventilation System	NYSDEC	6/94	042200-0114-CSS01
Analytical and Process Chemistry Laboratory Equipment	NYSDEC	6/94	042200-0114-15F-1
Sulfuric Acid Tank #35157 Vent	NYSDEC	6/94	042200-0114-35157
Nitric Acid Tank #33154 Vent	NYSDEC	6/94	042200-0114-33154
Sodium Hydroxide Tank #14D-2 Vent	NYSDEC	6/94	042200-0114-14D-2
Sodium Hydroxide Tank #14D-2A Vent	NYSDEC	6/94	042200-0114-14D2-A
Source-capture Welding System	NYSDEC	6/94	042200-0114-MS001
Nitric Acid Tank (250-gal) Vent	NYSDEC	6/94	042200-0114-MDB07
Blueprinter Ventilation System	NYSDEC	6/94	042200-0114-00012
State Pollutant Discharge Elimination System Permit ²	NYSDEC		NY0000973
Certificates to Operate Radioactive Air Source ³			
Building 01-14 Ventilation System	EPA		WVDP-187-01
Contact Size-reduction and Decontamination Facility	EPA		WVDP-287-01
Supernatant Treatment Ventilation System	EPA		WVDP-387-01
Low-level Waste Supercompactor Ventilation System	EPA		WVDP-487-01
Outdoor Ventilation System	EPA		WVDP-587-01
Process Building Ventilation System	EPA		WVDP-687-01
Vitrification Melter Off-gas System	EPA		Under review by the EPA
Vitrification HVAC System	EPA		Under review by the EPA

¹ Source and/or permit to be deleted in 1994.

² Renewal application was submitted to the New York State Department of Environmental Conservation in May 1990.

³ National Emissions Standards for Hazardous Air Pollutants (NESHAP) temporary permits are valid until the final permits are issued.

⁴ Applications filed to extend expiration dates to June 1994.

⁵ Certificate to Operate pending.

⁶ Permit to Construct to be extended in 1994.

⁷ To be converted to Certificate to Operate in 1994.

⁸ Permit renewed December 1994.

⁹ Will operate under RCRA interim status until NYSDEC requests Part B of the RCRA application.

N/A - Not applicable.

Table B - 3 (concluded)

**West Valley Demonstration Project Environmental Permits
(as of December 31, 1993)**

Type of Permit	Issued by	Expiration	Permit Number
Permits to Construct			
CTS Solids Transfer System	NYSDEC	12/94	042200-0114-CTS02
CTS Vessel Vent System	NYSDEC	12/94	042200-0114-CTS03
CTS Dust Collection Hood	NYSDEC	12/94	042200-0114-CTS04
SVS Solids Transfer System	NYSDEC	6/93 ⁴	042200-0114-SVS01
SVS Vessel Vent System	NYSDEC	6/93 ⁴	042200-0114-SVS02
SVS Melter Off-gas	NYSDEC	6/93 ⁴	042200-0114-SVS04
Vitrification Facility Exhaust Welding Fume Blower	NYSDEC	12/93 ⁵	042200-0114-00013
Vitrification Melter Off-gas Treatment System	NYSDEC	4/94 ⁶	9-0422-00005/00036
Vitrification Facility Painting and Welding Blower	NYSDEC	4/94 ⁷	042200-0114-00014
Vitrification Facility Painting Blower	NYSDEC	5/94 ⁷	042200-0114-00015
Vitrification Facility HVAC System (Canister Welding)	NYSDEC		Under review by NYSDEC
Environmental Analytical Annex	NYSDEC	5/94	042200-0114-00016 to 26
Analytical Cell Mock-up Unit	NYSDEC	5/94	042200-0114-00027
Depredation Permit	U.S. Dept. of the Interior, Fish & Wildlife Service	12/93 ⁸	PRT-747595
Depredation License	NYSDEC, Division of Fish & Wildlife	12/93 ⁸	DWP93-035
Hazardous Waste Treatment and Storage Interim Status Application (RCRA Part A) ⁹	NYSDEC		N/A

¹ Source and/or permit to be deleted in 1994.

² Renewal application was submitted to the New York State Department of Environmental Conservation in May 1990.

³ National Emissions Standards for Hazardous Air Pollutants (NESHAP) temporary permits are valid until the final permits are issued.

⁴ Applications filed to extend expiration dates to June 1994.

⁵ Certificate to Operate pending.

⁶ Permit to Construct to be extended in 1994.

⁷ To be converted to Certificate to Operate in 1994.

⁸ Permit renewed December 1994.

⁹ Will operate under RCRA interim status until NYSDEC requests Part B of the RCRA application.

N/A - Not applicable.