

# ***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/year) 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>
<b>H-3</b>	1E-07	2E-03	<b>Th-232</b>	7E-15	5E-08
<b>C-14</b>	6E-09	7E-05	<b>U-232</b>	2E-14	1E-07
<b>Fe-55</b>	5E-09	2E-04	<b>U-233</b>	9E-14	5E-07
<b>Co-60</b>	8E-11	5E-06	<b>U-234</b>	9E-14	5E-07
<b>Ni-63</b>	2E-09	3E-04	<b>U-235</b>	1E-13	6E-07
<b>Sr-90</b>	9E-12	1E-06	<b>U-236</b>	1E-13	5E-07
<b>Zr-93</b>	4E-11	9E-05	<b>U-238</b>	1E-13	6E-07
<b>Nb-93m</b>	4E-10	3E-04	<b>Np-239</b>	5E-09	5E-05
<b>Tc-99</b>	2E-09	1E-04	<b>Pu-238</b>	3E-14	4E-08
<b>Ru-106</b>	3E-11	6E-06	<b>Pu-239</b>	2E-14	3E-08
<b>Rh-106m</b>	6E-08	2E-04	<b>Pu-240</b>	2E-14	3E-08
<b>Sb-125</b>	1E-09	5E-05	<b>Pu-241</b>	1E-12	2E-06
<b>Te-125m</b>	2E-09	4E-05	<b>Am-241</b>	2E-14	3E-08
<b>I-129</b>	7E-11	5E-07	<b>Am-243</b>	2E-14	3E-08
<b>Cs-134</b>	2E-10	2E-06	<b>Cm-243</b>	3E-14	5E-08
<b>Cs-135</b>	3E-09	2E-05	<b>Cm-244</b>	4E-14	6E-08
<b>Cs-137</b>	4E-10	3E-06	<b>Gross Alpha</b>		
<b>Pm-147</b>	3E-10	1E-04	<b>(as Am-241)</b>	2E-14	3E-08
<b>Sm-151</b>	4E-10	4E-04	<b>Gross Beta</b>		
<b>Eu-152</b>	5E-11	2E-05	<b>(as Sr-90)</b>	9E-12	1E-06
<b>Eu-154</b>	5E-11	2E-05			
<b>Eu-155</b>	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 1988. *General Environmental Protection Program*, including Change 1 (June 29, 1990).

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*. 42 USC 1857 et seq., as amended, and implementing regulations.

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

*Resource Conservation and Recovery Act*. 42 USC 6905, as amended, and implementing regulations.

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

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

*Toxic Substances Control Act*. 15 USC 2610, 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, including Change 2 (January 7, 1993).

Ambient water quality standards contained in the State Pollutant Discharge Elimination System (SPDES) permit issued for the facility are listed in Table C-5.1 in Appendix C-5. Airborne discharges are also regulated by the Environmental Protection Agency under the National Emission Standards for Hazardous Air Pollutants, 40 CFR 61. 1984.

*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  
Calendar Year 1992**

<i>Type of Permit</i>	<i>Issued by</i>	<i>Expiration</i>	<i>Permit Number</i>
<b>Certificates to Operate Air Contamination Source</b>			
Boiler	NYSDEC	6/94	042200-0114-00002
Boiler	NYSDEC	6/94	042200-0114-00003
Incinerator <sup>1</sup>	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
Tank #35157 Vent	NYSDEC	6/94	042200-0114-35157
Tank #33154 Vent	NYSDEC	6/94	042200-0114-33154
Tank #14D-2 Vent	NYSDEC	6/94	042200-0114-14D-2
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
<b>State Pollutant Discharge Elimination System Permit <sup>2</sup></b>	NYSDEC		NY0000973
<b>Certificates to Operate Radioactive Air Source <sup>3</sup></b>			
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

**Table B - 3 (concluded)**

**West Valley Demonstration Project Environmental Permits  
Calendar Year 1992**

<b>Type of Permit</b>	<b>Issued by</b>	<b>Expiration</b>	<b>Permit Number</b>
<b>Permits to Construct</b>			
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 Air Emissions Sources	NYSDEC	6/93	042200-0114-SVS01
SVS Vessel Vent System	NYSDEC	6/93	042200-0114-SVS02
SVS Scale Melter	NYSDEC	6/93	042200-0114-SVS04
Vitrification Facility Exhaust Welding Fume Blower	NYSDEC	12/93	042200-0114-00013
Vitrification Melter Off-gas Treatment System	NYSDEC	4/94	9-0422-00005/00036
<b>Depredation Permit</b>	U.S. Dept. of the Interior, Fish & Wildlife Service and NYSDEC	12/93	PRT-747595
<b>Restricted Burning Permit</b> <sup>4</sup>	NYSDEC	11/92	#1027
<b>Hazardous Waste Treatment and Storage Interim Status Application (RCRA Part A)</b> <sup>5</sup>	NYSDEC		NA

<sup>1</sup> Nonradioactive waste is removed to a commercial landfill and is not incinerated. The permit became inactive in February 1990. The incinerator has been sealed.

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

<sup>3</sup> National Emission Standards for Hazardous Air Pollutants (NESHAPs) temporary permits are valid until the final permits are issued.

<sup>4</sup> Permit expired in November 1992.

<sup>5</sup> Will operate under RCRA interim status until NYSDEC requests Part B of the RCRA application.

NA - Not applicable.