



**Keeping Up with Regulatory Changes**

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

| <i>Radionuclide:</i> | <i>In Air</i> | <i>In Water</i> | <i>Radionuclide:</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          |               |                 |
| Pm-147               | 3E-10         | 1E-04           | (as Am-241)          | 2E-14         | 3E-08           |
| Sm-151               | 4E-10         | 4E-04           | Gross Beta           |               |                 |
| Eu-152               | 5E-11         | 2E-05           | (as Sr-90)           | 9E-12         | 1E-06           |
| 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 1988. *General Environmental Protection Program.*

DOE Order 5480.1B. September 1986. *Environment, Safety, and Health Program for DOE Operations.*

DOE Order 5484.1. February 1981. *Environmental Protection, Safety, and Health Protection Information Reporting Requirements.*

*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.

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 1991**

| <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 & 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    |
| Paint Booth <sup>2</sup>   | NYSDEC           | 6/94              | 042200-0114-MS002    |
| Nitric Acid Tank (250-gal.) Vent                                       | NYSDEC           | 6/94              | 042200-0114-MDB07    |
| <b>State Pollutant Discharge Elimination System Permit<sup>3</sup></b> | NYSDEC           |                   | NY0000973            |
| <b>Certificates to Operate Radioactive Air Source<sup>4</sup></b>      |                  |                   |                      |
| Building 01-14 Ventilation System                                      | EPA              |                   | WVDP-187-01          |
| Contact Size-reduction & Decontamination Facility                      | EPA              |                   | WVDP-287-01          |

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| <b>Type of Permit</b>  | <b>Issued by</b>  | <b>Expiration</b> | <b>Permit Number</b> |
|--|---|-------------------|----------------------|
| <b>Certificate to Operate Radioactive Air Source <sup>4</sup></b>                                      |   |                   |                      |
| 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          |
| <b>Depredation Permit <sup>5</sup></b>   |   |                   |                      |
|  | US Dept.of the Interior,<br>Fish & Wildlife Service<br>and NYSDEC |                   | PRT-747595           |
| <b>Restricted Burning Permit</b>   |   |                   |                      |
|  | NYSDEC  | 1991              | #1027                |
| <b>Hazardous Waste Treatment and Storage<br/>Interim Status Application (RCRA Part A) <sup>6</sup></b> |   |                   |                      |
|  | 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> Permit was terminated during 1991.

<sup>3</sup> Renewal application was submitted to the New York State Department of Environmental Conservation in May 1990.

<sup>4</sup> National Emission Standards for Hazardous Air Pollutants (NESHAP) temporary permits are valid until the final permits are issued.

<sup>5</sup> Permit renewal request submitted to the Fish and Wildlife Service in January 1991.

<sup>6</sup> Will operate under RCRA interim status until NYSDEC requests Part B of the RCRA application.