

1 **6.4 Hazardous Waste Management**

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3 Hazardous waste management (including the management of hazardous components of radioactive
4 mixed waste) at the Hanford Site is regulated by Ecology and EPA pursuant to RCRA and the
5 Washington State Hazardous Waste Management Act. Hazardous waste activities at Hanford are subject
6 to regulation under RCRA by virtue of Section 6001 of RCRA. Washington received authority from EPA
7 to operate the RCRA corrective action program in 1994 (59 FR 55322) and additional RCRA authority in
8 1996 (61 FR 7736).

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10 Ecology’s regulations are consistent with, and at least as stringent as, the EPA regulations
11 implementing RCRA. Under RCRA, *hazardous wastes* are regulated. The waste categories defined in
12 the Ecology regulations (WAC 170-303) are *dangerous wastes*, *acutely hazardous waste*, *extremely*
13 *hazardous wastes*, and *special wastes*.

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15 Hazardous waste treatment, storage, and/or disposal (TSD) facilities are regulated under Section 3004
16 of RCRA and are required to have a permit by Section 3005 of RCRA. The Hanford Site’s RCRA permit
17 is in two portions, one portion issued by EPA Region 10 and the other portion issued by Ecology. The
18 EPA portion of the RCRA permit covers the Hazardous and Solid Waste Amendments portion of the
19 RCRA permit (EPA 1994). The second portion of the Hanford Site RCRA permit covers the dangerous
20 waste provisions and was most recently modified by Ecology in February 2001 (Ecology 2001a). The
21 Ecology portion of the RCRA permit includes standard conditions, general facility conditions, and
22 specific conditions for individual operating TSD units, TSD units undergoing corrective action, and TSD
23 units undergoing closure. The RCRA permits, along with other environmental permits covering the
24 Hanford Site, are described in the *Annual Hanford Site Environmental Permitting Status Report*
25 (DOE 2002a).

26
27 For all alternatives, the non-radioactive hazardous components of mixed waste would be stored at the
28 Hanford Site in accordance with applicable EPA and Ecology regulations. Ultimate treatment and
29 disposal would be conducted in accordance with applicable standards and regulations at the Hanford Site
30 or offsite locations.

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32 Storage and disposal of waste containing polychlorinated biphenyls (PCBs) would meet the EPA
33 requirements in 40 CFR 761. These regulations are issued under the Toxic Substances Control Act
34 (TSCA; 15 USC 2601 et seq.). DOE, EPA, and Ecology signed a “Framework Agreement for
35 Management of Polychlorinated Biphenyls in Hanford Tank Waste” in August 2000 (EPA 2000). DOE
36 issued a *Toxic Substances Control Act Polychlorinated Biphenyls Hanford Site Users Guide* in 2001
37 (DOE 2001f).

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39 **6.5 Radioactive Waste Management**

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41 DOE facilities used for the management, storage, treatment, and disposal of radioactive waste and
42 radioactive mixed waste are constructed and operated under the authority of the AEA. DOE directives
43 are issued under the authority of Section 161(i)(3) of the AEA that permits DOE to govern activities
44 authorized by the act to protect health and to minimize danger to life or property.

1 The principal DOE directive covering radioactive waste management is DOE Order 435.1,
2 *Radioactive Waste Management* (DOE 2001d). This Order states that DOE radioactive waste shall be
3 managed to accomplish the following:
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- 5 1. Protect the public from exposure to radiation from radioactive materials. Requirements for public
6 radiation protection are in DOE Order 5400.5, *Radiation Protection of the Public and the*
7 *Environment* (DOE 1993b).
8
- 9 2. Protect the environment. Requirements for environmental protection are in DOE Order 450.1,
10 *Environmental Protection Program* (DOE 2003a), and DOE Order 5400.5, *Radiation Protection of*
11 *the Public and the Environment* (DOE 1993b).
12
- 13 3. Protect workers. Requirements for radiation protection of workers are in 10 CFR 835, “Occupational
14 Radiation Protection.” Requirements for industrial safety are in DOE Order 440.1A, *Worker*
15 *Protection Management for DOE Federal and Contractor Employees* (DOE 1998).
16
- 17 4. Comply with applicable federal, state, and local laws and regulations; applicable Executive Orders;
18 and other DOE directives.
19
- 20 5. Meet the requirements in DOE Manual 435.1-1, *Radioactive Waste Management Manual* (DOE
21 2001e). DOE Manual 435.1-1 has specific requirements applicable to management of high-level
22 waste in Chapter II, management of TRU waste in Chapter III, and management of low-level waste
23 (LLW) and mixed LLW (MLLW) in Chapter IV.
24

25 DOE recently issued DOE Order 450.1, “Environmental Management Program” (DOE 2003a). The
26 objective of the order is to implement sound stewardship practices that are protective of the air, water,
27 land, and other natural and cultural resources impacted by DOE operations and by which DOE meets or
28 exceeds compliance with applicable environmental, public health, and resource protection laws,
29 regulations, and DOE requirements. This objective will be accomplished by implementing
30 Environmental Management Systems (EMSs) at DOE sites. An EMS is a continuing cycle of planning,
31 implementing, evaluating, and improving processes and actions undertaken to achieve environmental
32 goals. These EMSs will be part of Integrated Safety Management Systems established pursuant to DOE’s
33 Safety Management System Policy (DOE 1996c).
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35 **6.6 Radiological Safety Oversight**

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37 Specific requirements in 10 CFR 830 apply to DOE contractors, DOE personnel, and other persons
38 conducting activities (including providing items and services) that affect, or may affect, the safety of
39 DOE nuclear facilities. The regulations in 10 CFR 830 include requirements for quality assurance
40 (10 CFR 830, Subpart A) and safety-basis requirements (10 CFR 830, Subpart B). The safety-basis
41 requirements require the contractor responsible for a DOE nuclear facility to analyze the facility, the work
42 to be performed, and the associated hazards; and to identify the conditions, the safe boundaries, and the
43 hazard controls necessary to protect workers, the public, and the environment from adverse consequences.