
3.0 Facility-Related Monitoring, Waste Management, and Chemical Inventory Information

The following sections include information about facility-related environmental monitoring programs at the Hanford Site, including effluent monitoring (Section 3.1), near-facility environmental monitoring (Section 3.2) and vadose zone monitoring (Section 3.3). The management of radioactive and nonradioactive solid and liquid wastes stored or disposed of at Hanford and the types and quantities of hazardous chemicals stored on the site are also discussed (Section 3.4).

The monitoring of effluents and contaminants and the management of wastes and chemical inventories at Hanford Site facilities are necessary to determine the effects these materials may have on the public, workers at the site, and the surrounding environment. Effluent monitoring is conducted by the various site contractors at their facilities pursuant to requirements in DOE Order 5400.1. At Hanford, effluent monitoring includes the collection of samples for analyses, or measurements, of liquid and gaseous effluents for the purposes of characterizing and quantifying contaminants released to the environment, providing source terms for assessing potential exposures of the public, providing a means to control effluents at or near the point of discharge, and determining compliance with applicable standards and permit requirements.

Near-facility environmental monitoring consists of the routine monitoring of environmental media near facilities

that have the potential to discharge or have discharged, stored, or disposed of radioactive or hazardous contaminants. Monitoring locations are generally associated with major nuclear-related installations and waste storage and disposal units.

Vadose zone monitoring is conducted near selected current or historical waste storage or disposal sites to characterize and establish baseline concentrations of radioactive contaminants in the vadose zone sediments near the sites. Gamma-spectral logging equipment is used within new and existing boreholes to detect, identify, and quantify gamma-emitting radionuclides.

Wastes stored on the site are categorized and managed in accordance with applicable state and federal regulations. Inventories of hazardous chemicals are tracked and reported annually as required by law.

More detailed program, sampling, and waste management information is contained in *Hanford Site Near-Facility Environmental Monitoring Annual Report, Calendar Year 1996* (Perkins et al. 1997), *Hanford Tier Two Emergency and Hazardous Chemical Inventory, Emergency Planning and Community Right-to-Know Act, Section 312* (DOE 1996h), the *Hanford Site Annual Dangerous Waste Report, Calendar Year 1996* (DOE 1997c), and *Summary of Radioactive Solid Waste Received in the 200 Areas During Calendar Year 1996* (Hagel 1997).