

3.2.3 Work Scope Summary

The EM cleanup mission at the Hanford Site centers on the need to remedy the environmental contamination caused by decades of activities related to the production of plutonium. Having served as the nation's first full-sized plutonium production operation, Hanford's current projects are now specifically focused on minimizing, processing, and storing the backlog of radioactive and hazardous waste generated from 1943 through today; managing spent nuclear fuels and special nuclear material (SNM); decontaminating and decommissioning surplus facilities; and remediating the site.

The scope of work at the Hanford Site includes the management, cleanup, and disposition of soil, rubble, debris, and groundwater contaminated with radionuclides and hazardous substances as well as the management of high-level waste sludges, salts, and liquids. The sections below describe the major waste, material, and contaminated media volumes to be addressed by the Richland Operations Office. The volumes reported are approximate, and correspond to the major waste, material, and media flows, the potential treatment processes, and the off-site disposal destinations presented in Exhibit 3-10, the Richland Operations Office Conceptual Summary Disposition Map.

Transuranic Waste

- Approximately 16,000 cubic meters of legacy transuranic waste are currently in inventory and 6,500 cubic meters are expected to be generated over the life cycle of cleanup operations. After sorting and repackaging, approximately 17,000 cubic meters are planned to be disposed of at WIPP.

High-level Waste

- Approximately 220,000 cubic meters of high-level waste sludges, salts and liquids are currently contained in 149 single-shell and 28 double-shell holding tanks. After sludge washing, separation, and on-site vitrification, 14,000 cubic meters of waste are expected to be disposed of in an off-site geologic repository and 240,000 cubic meters are expected to be disposed of in an on-site low-level waste vault. Once empty, all holding tanks are expected to be stabilized and closed in place.

Other Waste

- Approximately 8,600 cubic meters of mixed low-level waste are currently in inventory and 64,000 cubic meters of mixed low-level waste are expected to be generated over the life cycle of cleanup operations. After treatment, 99,000 cubic meters of Hanford waste are expected to be disposed of on site.
- Approximately 180 cubic meters of low-level waste are currently in inventory and 130,000 cubic meters are expected to be generated over the life cycle of cleanup operations. An additional 32,000 cubic meters are expected to be received from DOE sites. After sorting, stabilization, and some commercial treatment, 230,000 cubic meters are expected to be disposed of on site.