



HANFORD SITE

(Hanford 100 Area, Hanford 200 Area, Hanford 300 Area)

Richland, Benton County, Washington

Office: Richland Operations Office

Size: 359,680 acres (562 square miles)

NPL Status: Four areas were placed on the NPL on October 4, 1989 (Areas 100, 200, 300, and 1100). Area 1100 was deleted from the NPL on September 30, 1996.

Mission: Chosen in 1943 for the Manhattan Project, the Hanford Site was used to produce plutonium for the world's first nuclear weapons. Today the focus of activities is site cleanup and environmental restoration; scientific and environmental research; development and application of radioactive waste and hazardous waste management technology; and design, construction, and operation of major energy-related test and development facilities.

Overview of Environmental

Conditions: Onsite soil, groundwater, vadose zone and sediment contamination by various hazardous and radioactive substances. Various levels of radionuclides are also routinely identified in the Columbia River.

CERCLA/RCRA Remediation

Funding in FY 98: \$62,158,000 (PBS's 01, 02, 03, 04, and 08) NOT including Decommissioning and Program Management

Progress in Reaching Interagency Agreement

DOE, EPA Region X, and the State of Washington negotiated and signed the Hanford Federal Facility Agreement/Consent Order (hereafter referred to as the Tri-Party Agreement) on May 15, 1989. This Tri-Party Agreement provides the framework for effective investigation of waste sites and subsequent remediation of hazardous and mixed waste contamination at Hanford. An update is prepared to address additional problems and to incorporate schedules agreed to in approved RI/FS Work Plans or other work scopes agreed to by the three parties.

The last annual update, revision 5, was signed December 1998. This revision incorporated all the changes approved since February 1996. The CERCLA changes in this document fall into these broad categories:

- Approved 35 change requests during this period resulting in 70 additional CERCLA milestones and 21 additional CERCLA target dates. Ten milestones and four targets were deleted. Twenty milestones and eight target dates were revised.
- Changed the remedial investigation basis from geographic boundaries to representative sites from groups with similar history.
- Established milestones and targets governing decommissioning/disposition of DOE's 100 Area surplus reactors.
- Established new enforceable baseline commitments for removal of spent nuclear fuel along the Columbia River.

For detailed information regarding the Tri-Party Agreement, see the FY 91 CERCLA 120 *Fifth Annual Report to Congress* specific cost estimates and budgetary proposals involved in each Interagency Agreement.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for CERCLA activities in the Environmental Restoration Program under the Tri-Party Agreement total \$80.9 million of appropriated funding for FY 99 and \$67.8 million for FY 00 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Amendments and updates to the Tri-Party Agreement are subject to public comment periods prior to signatures by the three parties. The current update was signed by the three parties in December 1998. For detailed information regarding the Tri-Party Agreement comment process, see the FY 91 CERCLA 120 *Fifth Annual Report to Congress*. All future changes to the Tri-Party Agreement will also be subject to public review and comment.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Hanford Site includes a broad range of waste units that contain either radioactive, hazardous, mixed (both radioactive and hazardous), or nonradioactive/nonhazardous solid waste. Certain hazardous substances and hazardous wastes remain on and under the Hanford Site and have been detected in groundwater and surface water. An estimated five billion cubic yards of solid and dilute liquid waste, including hazardous substances, mixed waste, and hazardous waste and constituents, have been disposed of into the soil column at the Hanford Site.

All remediation work at the Hanford Site was originally included within four NPL sites (the 100, 200, 300, and 1100 Areas), 74 source OUs containing 1,249 identified hazardous waste sites (985 past-practice sites), and four groundwater OUs. After cleanup was completed, the 1100 Area was deleted from the NPL in September 1996. OUs were prioritized by the EPA and the State of Washington in 1989 for investigation based on an initial assessment of environmental risk.

The following RI/FS activities were accomplished during FY 98:

100 Area

- Initiated 100 Area Burial Ground feasibility study in first quarter FY 98;
- Initiated 100 Area Remaining Sites Proposed Plan; and
- Initiated work on 100 Area Remaining Sites ROD.

200 Area

- CERCLA & RCRA assessment activities at six waste groups in the 200 Areas were performed, including preparation of Limited Field Investigation Work Plans defining field investigation and initiation of field characterization activities; and

- Issued 200 Area RI/FS Strategy Implementation Plan.

300 Area

- RI/FS activities are complete or underway at all three OUs.

Progress in Conducting Remedial Actions

Under the Hanford Site Past Practice Strategy, sites that pose a threat to human health and the environment are identified. These sites are considered for Expedited Response Actions (ERAs).

The following ERA activities were accomplished in FY 98:

200 Area

- The 200 West Area carbon tetrachloride treatment site (located in the 200-ZP-2 OU) vapor extraction continues. The system is now automated. Through FY 98, more than 1,993.9 million kilograms of carbon tetrachloride have been removed.

300 Area

There were no ERAs done during FY 98.

Other Remedial Action (RA) accomplishments include:

100 Area

- 1,024 million liters of groundwater have been pumped and treated.
- Seven waste sites were fully remediated.
- An estimated 534 thousand tons of contaminated soil were removed.

200 Area

- Pump and treat is continuing as remediation in the 200-ZP-1 and 200-UP-1 OUs. Treated 270,540,000 gallons of groundwater sitewide.

300 Area

- RA for 300-FF-1 Operable Unit began July 1997; 147 thousand tons of soil were removed by September 30, 1998;
- Remediation began in FY 97; an estimated 117 thousand tons of contaminated soil were removed from 300 Area; and
- Completed removal of two waste sites.

Environmental Restoration Disposal Facility

- Disposed of 669 thousand tons of contaminated soil from CERCLA projects (534 thousand tons and 117 thousand tons from 300 Area); and
- Began facility expansion in FY 98; cells 3 & 4 are scheduled for completion in FY 99.