WASHINGTON STATE DEPARTMENT OF ECOLOGY

Focus

200 Area Treated Effluent Disposal Facility

Background

Throughout Hanford's nearly 50 years of operation, the common method of wastewater disposal has been to discharge it directly to the soil. The intent was to allow the soil to act as a filter for the discharges, which frequently contained low levels of hazardous chemical and radioactive contaminants. More than 440 billion gallons of wastewater were discharged to the soil. Soil disposal sites included 139 surface sites such as ponds, ditches, and trenches and 202 subsurface sites such as cribs, reverse wells, and french drains. An estimated 85 square mile area beneath the Hanford Site contains groundwater contamination which exceeds various national drinking water standards.

In 1987, the U.S. Department of Energy (USDOE) outlined to Congress a plan to eliminate or address contaminated groundwater at Hanford. The program was incorporated into the 1989 *Hanford Federal Facility Agreement and Consent Order*, the Tri-Party Agreement or TPA, as a series of specified milestones (major Milestone 17) to manage wastewater discharges.

The plan identified 33 existing major wastewater streams. The TPA requires these Phase I or high priority wastewater streams to be treated or stopped by June 1995. All Phase II or lesser priority streams must be treated or stopped by October 1997. A third group of small, relatively clean waste streams are to be addressed by the state of Washington's wastewater discharge permits under terms of agreement between USDOE and the Washington State Department of Ecology (Ecology).

Considerable progress has been made towards those wastewater cleanup deadlines. Discharges from the 33 major waste streams have been reduced from an estimated 6.2 billion gallons in 1987 to 1.9 billion gallons in 1992.

The 200 Area Treated Effluent Disposal Facility

The 200 Area Treated Effluent Disposal Facility (Project W-049H) will collect and dispose of treated wastewater from the Hanford Site's 200 East and 200 West areas about 25 miles northwest of Richland. The facility will consist of two rock-lined ponds, about five acres each in size. The ponds will receive up to 550 gallons per minute of treated effluent from five Phase I Streams and two Phase II streams that are generated at seven existing facilities. A new 11 mile pipeline will carry the wastewater to the ponds, located about 1.5 miles east of the 200 East area. The depth to groundwater at the discharge site is approximately 150 to 200 feet.

The facilities discharging to the ponds are the Plutonium Finishing Plant, 222-S Laboratory, T Plant, 284-W Power Plant, Purex Plant, B Plant, and the 242-A-81 Water Services Building. The majority of the wastewater is derived from uses of water that do not involve direct contact with chemical or radiological processes. Typical sources include condensate from steam heating systems, once-through cooling water, blowdown from cooling and heating systems, and floor drains. The disposal facility currently is under construction and is projected to cost about $20 million. It is scheduled to begin operation in June 1995.

October 1994

F-NW-94-119

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The TPA requires that the Best Available Technology (BAT) that is economically achievable be applied to these waste streams. Washington State law requires that All Known, Available and Reasonable methods of prevention, control and Treatment (AKART) be applied to Hanford wastewater discharges. Streams which require treatment are treated at individual facilities before they are sent to the disposal ponds. As a result of these efforts, the toxic mass of the effluent to be discharged to the ponds has been reduced by approximately 87 percent. Waste streams from four facilities have been eliminated. Many chemical constituents in the wastewater are projected to be below detection levels.

The TPA directs that the regulation of the facility be administered by the state of Washington under Chapter 173-216 of the Washington Administrative Code (WAC), the State Waste Discharge Permit Program. A state wastewater discharge permit must be issued by Ecology before USDOE can discharge from the facility. Ecology has tentatively proposed to issue the permit and proceed with permit development. Ecology is accepting public comments now on the issues to be considered in the USDOE's draft wastewater discharge permit for the 200 Treated Effluent Disposal Facility. Interested persons may request to be added to a list to receive subsequent mailings regarding this permit. Comments received during the permit development period will be addressed in a fact sheet. The draft permit and fact sheet are scheduled to be finished in early 1995. Public hearings and a formal public comment period will be held after completion of the draft permit and fact sheet.

Inquiries, requests for information, and comments should be directed to:

Joanne Chance	Department of Ecology P. O. Box 47600 Olympia, WA 98504-7600	(206) 407-7139 or Hanford Cleanup toll-free, 1-800-321-2008

If you have special accommodation needs, please contact Michelle Davis, Department of Ecology, (206) 407-7126 or 407-7155 TDD (Telecommunications device for the deaf)

Where Can You Get More Information?

The permit application and related information are available for reading and copying in the following Hanford Information Repositories:

Gonzaga University	Foley Center, E. 502 Boone Spokane, WA 99258	(509) 328-4220 ext. 3125
University of Washington	Suzzallo Library Government Publications Room Seattle, WA 99195	(206) 543-4664
U.S. Dept. of Energy Reading Room	Washington State University 100 Sprout Road Room 130 Richland, WA 99352	(509) 376-8583
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