



# T Plant

*U.S. Department of Energy • Richland Operations Office*

The T Plant Complex consists of the 221-T Canyon, 2706-T Facility and several support structures. The T Plant canyon, built in 1944, was the original bismuth phosphate separations facility. The plant was shut down in 1956 and converted to a decontamination facility. The 2706-T facility, constructed in

1959 was upgraded in 1999 to provide compliant storage of hazardous liquid wastes. Current activities at the facility include verification, treatment, and repackaging of contact-handled waste; and sampling of transuranic waste drum headspace gas. Irradiated fuel assemblies from the



*The T Plant Complex is located in the central plateau of the Hanford Site, in the 200 West Area.*

## Quick Facts

The T Plant Canyon was the original bismuth phosphate separations facility, built in 1944. The plant was shut down in 1956 and converted to a decontamination facility.

T Plant facilities include the 221-T Canyon Building (850 feet in length), the 2706-T facility, and several support structures, such as 214-T Chemical/Waste Storage Building.

Services include treatment, verification, and repackaging of contact-handled waste; sampling of waste drum headspace gas, and decontamination of equipment. Irradiated fuel assemblies from the Shippingport pressurized water reactor are also stored in 221-T.

The Canyon Building is currently being prepared for receipt and storage of radioactive sludge from the K Basins.

Shippingport PWR 2 Fuel Blanket Fuel Assemblies are stored underwater in one of the canyon cells. 221-T is being prepared for future receipt and storage of K Basin sludge in support of the Spent Nuclear Fuel Project. Preparations include cleaning of the canyon deck and planning for transfer of the PWR 2 fuel to a different Hanford site location.



*T Plant Canyon Deck.*

Services performed in the 2706-T Facility include segregation, treatment, repackaging, verification, and storage of contact-handled waste in boxes and drums. Treatment processes consist of adding sorbent or grout material to the waste matrix, neutralization, or amalgamation of mercury with other metals. T Plant also has capability for macroencapsulation of equipment and debris.

Additional services are sampling of drum headspace gas to support the transuranic waste program and management of analytical samples

#### **Historical Note**

The U. S. Department of Energy's Richland Operations Office owns the Hanford Site in southeastern Washington State. Hanford was established during World War II as part of the top secret Manhattan Project to produce plutonium for nuclear weapons. Weapons material production was halted in the late 1980's. The Hanford Site is now engaged in the world's largest cleanup effort to deal with the legacy of radioactive and hazardous wastes that resulted from the plutonium production era. Hanford's cleanup program is regulated by the U. S. Environmental Protection Agency and the Washington Department of Ecology under a long term compliance contract called the Tri-Party Agreement. This agreement sets the framework and timelines on the cleanup work so that Hanford meets current environmental standards. The T Plant Complex has an important role in meeting those environmental laws and standards.



*Waste Verification at 2706-T.*

returned from commercial laboratories. The facility can also provide low-level decontamination services for the Hanford site using steam or chemical sprays, abrasives, or immersion. When dose rate permits, hand cleaning can be used to remove loose contaminants from equipment surfaces.



*Testing headspace gas sampling apparatus.*

