

Project manages variety of waste in many facilities

Progress is the key word for the Fluor Hanford Waste Management Project. As Hanford's transuranic waste is shipped off-site, T Plant prepares to accept K Basins sludge and the burial grounds manage waste receipts from cleanup activity across the site, the Waste Management Project adds daily to its record of over 2.9 million work hours without a lost-time accident. In addition, the Waste Management Project finished fiscal year 2001 by completing all Tri-Party Agreement milestones on or ahead of schedule.

TRU shipments

During FY 2001, the Fluor Hanford TRU Program certified, packaged and sent more shipments of Hanford's transuranic waste to the Waste Isolation Pilot Plant near Carlsbad, N. M. Cost savings and efficient operation enabled the project to send seven shipments, two more than originally planned and funded. Ten shipments to WIPP have been made since the shipments began in the summer of 2000.

Last summer, the TRU Program was re-certified to continue shipping TRU waste to WIPP. The requirements for disposal of waste at the WIPP are expected to change as operating experience is gained and as discussions continue with regulatory agencies.

T Plant

T Plant began operation 57 years ago and will serve the nation again when it begins storing spent fuel sludge from the cleaning of the K Basins and supports other Hanford Site missions.

To support these future missions, T Plant personnel must first remove the Shippingport Atomic Power Plant spent nuclear fuel from protective cells in the massive canyon area. The assemblies from this decommissioned Pennsylvania power plant have been stored in water in two T Plant cells since the 1970s.



A grouted container bearing remote-handled waste is removed from a shipping cask for placement into a high-integrity container in the 200 Area Burial Grounds.

Upon successful completion in FY 2002 of a contractor and DOE Operational Readiness Review, work will begin to lift the fuel assemblies from the pool cells for placement into Shippingport spent fuel containers. These containers then go to the Canister Storage Building to be safely stored and monitored until the opening of a national repository for high-level waste.

A large amount of stored material and some large equipment have been removed from the deck to make room for the fuel removal equipment and to support spent fuel sludge storage. Up to eight T Plant canyon cells must be cleaned out to receive both wet and dry sludge from the K Basins.

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Burial grounds

The Low Level Burial Grounds provide storage and disposal services for various Hanford waste streams. The burial grounds have recently accepted 21 grouted containers of waste from the B Cell cleanout of the 324 Building. The 300 Area cleanup work spearheaded by the River Corridor Project has been closely and successfully coordinated with the disposal operations in the burial grounds.

The burial grounds accepted the first shipment of waste returning to Hanford under a thermal treatment contract with a local commercial vendor. Personnel disposed of over 7,500 cubic meters of low-level waste and 160 cubic meters of mixed waste during FY 2001.

The burial grounds received the 102nd reactor compartment from the U. S. Navy for disposal. Additional steel tracking was installed in the reactor trench to allow the massive compartments to be off-loaded safely and efficiently and placed to optimize the use of trench space.

The burial grounds also hold thousands of drums, which are stored on special pads to await future evaluation for retrieval and disposal at the WIPP. Retrieval operations are underway on the uncovered drums. During FY 2001, more than 250 drums were surveyed and classified to identify those that should go to WIPP for disposal. Challenges will increase as the operation moves to the covered drums.

Strong performance

The Waste Management Project has been busy in other areas as well. The Liquid Waste Processing Facility processed more than 26 million gallons of wastewater. The 242-A Evaporator processed more than 800,000 gallons of tank waste for the Office of River Protection, on an accelerated schedule without a safety issue and at a decreased cost because resources were shared with the Liquid Waste Processing Facility.

The Central Waste Complex serves as the staging area for transuranic and mixed waste receipts and operations. Its inventory is the equivalent of approximately 43,000 55-gallon drums. The CWC also received 355 pipe overpack containers from the Nuclear Material Stabilization Project in addition to a large number of routine shipments. The Waste Encapsulation and Storage Facility completed a significant electrical safety upgrade. ♦

Restoration contractor triples planned 233-S vessel cleanup in FY 2001

In fiscal year 2001, the Environmental Restoration Contractor team, led by Bechtel Hanford, Inc., removed six more process vessels than planned at the highly contaminated 233-S Plutonium Concentration Facility. Three process vessels were originally scheduled for removal, but efficiencies by the ERC team allowed for faster cleanup while maintaining an excellent safety record. The 233-S vessel cleanup comprised the following tasks:

- Removal of nine highly contaminated process vessels
- Removal of 1,613 feet of process-hood piping
- 3,382 entries into the 233-S facility without a radiological uptake
- Completion of nondestructive assay on 753 waste packages
- ERC team's first transuranic waste shipment to Hanford's Central Waste Complex. ♦