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Transition the Plateau

The plateau, which lies near the center of the Hanford Site, includes the 200 and the 400 Areas and is the location of Hanford's longer-term missions of waste treatment, storage and disposal operations.

Fast Flux Test Facility

The Fast Flux Test Facility (FFTF) Project continued to prepare to drain sodium and remove fuel to shut down FFTF. Personnel disconnected reactor control rod drive lines so that in-vessel instrumentation and component-handling equipment could be positioned properly in preparation to install the immersion heaters. The heaters are used to keep the sodium molten during the draining process. Site Fabrication Services and off-site vendors are manufacturing components required to repair the Solid Waste Cask, which will be used in removing fuel from the FFTF to dry storage.

FFTF staff members continued to repair the equipment used to remove sodium from the Interim Examination and Maintenance Cell. This system will be used to remove residual sodium from the fuel before it is placed in dry storage.

Fluor Hanford operator Steve Vehaun (top) prepares the control rod drive mechanisms while radiation-control technologist Bernie St. George, also of Fluor Hanford, provides radiation monitoring.

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Nuclear Material Stabilization

The purpose of the Nuclear Material Stabilization Project is to stabilize and package all remaining plutonium inventory, ship that inventory off site, and ultimately demolish the Z-Plant, also known as the Plutonium Finishing Plant (PFP), to a slab-on-grade.

The Nuclear Material Stabilization Project completed converting nearly 4,500 liters of plutonium-bearing solutions to a more stable, dry oxide form, allowing for safe, long-term storage in 2736-Z vaults.

Plutonium-bearing solutions were stabilized ahead of schedule.

Project personnel are about 4 months ahead of schedule in processing contaminated, unusable materials that were generated during the fabrication of plutonium metal. The processed material is repacked, assayed and packed into pipe overpack containers. The pipe overpack containers are shipped to the Central Waste Complex. After final characterization, the pipe overpack containers will be shipped to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Efficiencies in processing solutions have freed personnel to work a second shift to process, for safe storage, the unusable materials left over from the fabrication of plutonium metal.

A large gas cylinder storage dock, 2734-Z, was dismantled. Originally scheduled for FY 2014, the demolition was accelerated to meet several decommissioning objectives, consistent with DOE's plan to accelerate decommissioning of the PFP complex.

The Nuclear Material Stabilization Project submitted its application for DOE's Voluntary Protection Program (VPP) Star status.

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Waste Management

The 242-A Evaporator EC-1 Condenser that was replaced several years ago was shipped to Duratek's Bear Creek Facility at Oak Ridge, Tennessee for recycling. The condenser, which had been stored at T Plant awaiting treatment as mixed low-level waste, will now be recycled; its metal will be melted down and recast into blocks to shield workers from radiation in other DOE operations. This recycling program saved the costs of treating and disposing of the condenser.

Upgrades to process systems and building infrastructure of the 242-A Evaporator began. This effort supports DOE's Office of River Protection long-term needs.

Nuclear Material Stabilization Support

The project continues to receive the processed material left over from plutonium-metal fabrication from PFP for safe, interim storage at the Central Waste Complex.

The Hanford Waste Management Program supports the restoration of the Columbia River corridor and transition of the Hanford Site central plateau to a long-term operation by managing programmatic Hanford activities related to radioactive solid waste, liquid waste, and cesium and strontium capsules. Activities include retrieval, storage, treatment/processing and disposal.

The EC-1 Condenser is loaded for shipment to Tennessee to be recycled.

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Spent Nuclear Fuel Support

Project personnel completed cleaning the fourth T Plant cell to prepare for storing spent-nuclear-fuel sludge. Liner systems have been placed in 3 of the cells to allow storage of K-Basin sludge. T Plant personnel successfully completed the Contractor Readiness Review for removing Shippingport reactor fuel. Shippingport reactor fuel must be moved to make room for storing the sludge.

Liner system being installed at T Plant.

Transuranic Waste Program

The requirements for both transportation and WIPP acceptance have been significantly revised. The Hanford Transuranic Waste Program completed its annual audit. A recommendation for recertifying the Hanford program is expected. Recertification will allow the program to continue shipping transuranic waste to WIPP.

In both the non-destructive examination and non-destructive assays of transuranic waste drums destined for WIPP, the Transuranic Waste Program exceeded the planned goals for FY 2002 by 40 drums each.

Construction of a mock-up facility for training in the retrieval of buried transuranic waste containers is under way.

The program is preparing to retrieve covered transuranic waste containers from retrievable storage modules in the 200 Area burial grounds. Part of the preparation includes building a mock-up facility for training personnel and validating processes and procedures. This facility will be located in the 200 Area, near the Central Waste Complex.

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Environmental Restoration on the Plateau

Bechtel Hanford, Inc. has successfully transferred its environmental restoration work scope on the central plateau to Fluor Hanford. Working together, the Bechtel Hanford, Inc. and Fluor Hanford transition teams met all associated milestones and completed the transition on June 30 as scheduled. This transition is part of DOE's plan to geographically consolidate its cleanup activities at Hanford.

Many of the inactive facilities at Hanford must be maintained in an acceptable condition to prevent the release of radioactive contaminants. Personnel such as Bechtel Hanford, Inc. millwright Rick Ennis assist in the routine surveillance and maintenance of several central-plateau facilities transferred from the Environmental Restoration Project to Fluor Hanford.

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What's Next in Transitioning the Plateau?

- Complete testing of the Closed Loop Ex-vessel Machine at FFTF, required for processing fuel.
- Install the immersion heaters that will help keep the molten sodium flowing during the drain process.
- Initiate testing of the upgrades to the Interim Examination and Maintenance Cell sodium removal system, which washes the residual sodium from the fuel assemblies before they are packaged for dry storage.
- Develop a schedule to accomplish the FFTF deactivation and integrate the deactivation with the other Hanford Site activities. The definitive cost and schedule will be provided to DOE-RL following a review by an outside panel of reactor decommissioning experts.
- Resume the polycube stabilization process campaign. Problems with the process were resolved in the third quarter.
- Continue processing the magnesium hydroxide precipitation material in both 234-5Z and 2736-ZB at the PFP complex.
- Safely discard over 500 items of oxides originally thought to require thermal stabilization and packaging as a result of investigation into their plutonium content. These items are the subject of a Safeguards Termination Limit request that is awaiting approval by DOE.
- Complete the 242-A Evaporator run on tank waste scheduled for late August.
- Complete the Hanford Transuranic Waste Program Certification audit.
- Begin accepting and storing Shippingport reactor spent nuclear fuel at the Canister Storage Building.
- Complete negotiations on the M-91 series of milestones that deal with schedules for facilities necessary for storage, treatment/processing and disposal of Hanford Site transuranic, mixed low-level and low-level wastes.