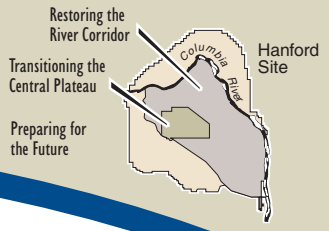
U.S. Department of Energy
Richland Operations Office
and Office of River Protection

Hanford Site



Strategic Initiative 4:

Accelerate Waste Disposal

Hanford has in excess of 40,000 drum equivalents of legacy (previously generated) "suspect" transuranic waste (TRU) and mixed low-level waste (MLLW) temporarily stored above ground awaiting permanent disposal. Hanford also has approximately 37,000 drums and 1,200 boxes of post-1970 suspect TRU buried in retrievable storage in the low-level burial grounds on the Central Plateau. Finally, a number of the 800 individual non-tank farm waste sites on the Central Plateau (burial grounds, cribs, trenches, and leak sites) may contain transuranic constituents that must be recovered and processed for disposal at Waste Isolation Pilot Plant (WIPP). As we proceed with Hanford cleanup (taking down buildings, remediating waste sites, and retrieving the suspect TRU), more of these wastes will be generated and will need to be characterized, possibly treated, and disposed.

The Environmental Restoration Disposal Facility contains nearly four million tons of contaminated material from Hanford cleanup operations.

Hanford disposes of low-level waste (LLW) and MLLW from various onsite and offsite generators. We also process and certify TRU for disposal at WIPP and are beginning to retrieve the suspect TRU waste buried in the Central Plateau low-level burial grounds. Our waste management operations also treat and dispose of liquid radioactive waste generated during cleanup, including large volumes of contaminated groundwater pumped from plumes beneath the site.

An operator performs packaging at the TRU glovebox.

Because our ability to treat MLLW is currently limited, and we do not have all the necessary environmental documents in place, we are currently treating and disposing of only small quantities of Hanford-generated MLLW, and are not accepting any MLLW from offsite DOE generators. This has impacted disposal of MLLW complex-wide, as Hanford is the only DOE site with a permitted MLLW disposal facility capable of accepting offsite waste. We have issued the draft Hanford Solid Waste Environmental Impact Statement to provide a suite of options to support accelerated waste disposal and look at things like the use of lined, monitored trenches for disposal of both MLLW and LLW and the need for new treatment facilities.

We will accelerate retrieval of the post-1970 suspect TRU, concentrating first on the areas that contain the highest amounts of plutonium, with the goal of completing retrieval operations for the contact-handled post-1970 TRU by 2010. In parallel with this initial retrieval of TRU, we will work with our regulators to develop scoping, risk and associated environmental documentation supporting decisions regarding the extent to which remaining post- and pre-1970 TRU must be retrieved. We intend to continue to focus our retrieval activities on buried wastes that pose the highest risk.

Dealing with our own TRU will also help pave the way for Hanford to assist in the packaging and shipment to WIPP of TRU from other sites with small quantities of TRU. In order to manage small quantity site transuranic waste, Hanford will

HIGHLIGHTS

Hanford has low-level, mixed low-level and transuranic waste requiring treatment and/or disposal.

Treated, mixed low-level waste is disposed of in RCRA-compliant landfills.

be designated as one of three "hubs" nationwide that will serve as transshipment points. We expect contact-handled TRU to be transferred to WIPP in a timely manner, but remote-handled TRU waste may stay for several years pending final waste acceptance approval at WIPP. By taking and temporarily storing TRU waste from small quantity sites, we allow those sites to shut down earlier and at less cost by avoiding the expensive facilities and certifications required to ship waste to WIPP. Hanford's state-of-the-art TRU processing facility and certification from WIPP, augmented by equipment from WIPP, will enable us to easily handle the limited quantities of TRU from these small sites at no net cost to Hanford. Their successful closure will make available additional funding for other cleanup sites, including Hanford.

At the same time, we will greatly accelerate Hanford's own solid waste operations. We will:

- Accelerate by four years (from 2012 to 2008) the treatment and disposal of about 14,000 cubic meters of MLLW (7,000 cubic meters currently in storage and 7,000 cubic meters we expect to generate during cleanup over the next six years), leaving essentially no MLLW in the Central Waste Complex storage facilities.

- Accelerate TRU waste operations by deploying mobile TRU waste processing systems, which can provide an additional capacity to certify for shipment up to 4,000 drums per year for disposal at WIPP. The systems will also allow us to accelerate retrieval of Hanford's CH TRU drums from 2013 to 2010 and their shipment to WIPP from 2027 to 2015.

Trucks carrying contaminated material pass through a weigh station enroute to the Environmental Restoration Disposal Facility. The daily average is 150 truckloads totaling 3,000 tons.

- Reduce risk on the Central Plateau more effectively and efficiently by accelerating to 2006 the retrieval of 15,000 (of 37,000) drums of CH suspect TRU waste from the low-level burial grounds.

- Increase the processing rate of CH-TRU to the point that Hanford's legacy CH-TRU will be processed, certified, and shipped to WIPP by 2015. This acceleration will allow us to process CH-TRU waste by 2027, and to close the Waste Receiving and Processing Facility five years early, saving tens of millions of dollars in lifecycle costs.

- Continue to work with the national TRU program on the development of waste acceptance requirements for RH TRU waste. Once these requirements are available in 2005, we can finalize Hanford's schedules for processing and shipping of RH TRU waste to WIPP. Current planning is for shipments to begin in 2013, but we are evaluating potential acceleration opportunities.

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The Hanford Site is located in southeastern Washington State. Established during World War II as part of the Manhattan Project, the site continued producing plutonium for nuclear weapons through the late 1980s. Now the 586 square mile site is undergoing one of the largest cleanup efforts in the world.