

DOE NEWS

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DOE ELIMINATES SECOND OF HANFORD'S URGENT RISKS

Removal of Spent Fuel Complete; Columbia River Protected

In one of its most important risk reduction activities to date, the Department of Energy has completed the removal of about 2,300 tons of irradiated, or "spent," nuclear fuel from two water-filled basins just 400 yards from the Columbia River at the Hanford Site in eastern Washington. It is the second of three "urgent risks" at the site to be eliminated this year, following the completion of plutonium stabilization in February.

Containing 1.2 million gallons of water each, Hanford's K East and K West basins have held the degrading spent nuclear fuel underwater for more than two decades. The fuel had been irradiated as part of Hanford's plutonium production process and was stranded when reprocessing was halted in the mid 1980s. Hanford's spent nuclear fuel makes up about 80 percent of the Department of Energy's nationwide spent fuel inventory and is one of the largest sources of radioactivity on the Hanford Site.

"The Columbia River and surrounding communities are safer today because of the success of this project," said Energy Secretary Spencer Abraham. "Cleanup funding increases by the Bush Administration, and a real commitment to accelerated environmental cleanup and risk reduction, pushed this project over the finish line. This high risk material is now safely contained."

Beginning in December 2000, contractor Fluor Hanford has removed, cleaned, dried, and repackaged about 105,000 spent fuel assemblies. Only about half those assemblies were intact; the rest were degraded, corroded, broken, coated with sludge, and/or swollen and stuck inside their canisters.

“This kind of work has never been done before and presented constant challenges,” said DOE Richland Operations Office Manager Keith A. Klein. “Workers had to reengineer, redesign, and adapt as we came across varying conditions. My hat’s off to all those involved – from the operators in the basin, to the engineers and constructors, to the safety personnel and managers. Today, because of their perseverance, innovation, and plain old hard work, 50 million curies of radioactivity have been moved out of the Columbia River Corridor.”

Nearly 400 multi-canister overpacks, each containing multiple baskets of fuel, have been moved into Hanford’s underground Canister Storage Building, nine miles from the Columbia River and far enough above groundwater that the risk of this fuel to area water supplies has essentially been eliminated.

"Removal of the spent nuclear fuel is the largest risk-reducing cleanup to be performed near the Columbia River," said Larry Gadbois, K Basins project manager for the U.S. Environmental Protection Agency, which regulates Hanford cleanup. "This has been a ten year effort to plan, prepare, and conduct the cleanup which will stand as a landmark in Hanford cleanup progress."

Work is already underway on the second phase of K Basins cleanup – removing about 65 cubic yards of radioactive sludge and a highly contaminated layer of the basins' internal concrete walls. Crews will then remove water as cement is gradually poured into the basins. At the end, plans call for cutting the cement-filled basins into sections, disposing of approximately 12,000 tons of contaminated material, and removing contaminated soil underneath the basins. DOE has committed to removing the K East Basin by April 2007 and the K West Basin by April 2009.

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