

SPENT NUCLEAR FUEL

Expectation:

Protect the Columbia River by safely moving more than 2,100 metric tons of deteriorating spent nuclear fuel from aging wet storage near the river to safe, dry, interim storage in the center of Hanford.

Construction and Fabrication Update:

- Installation of the cask loadout system is on track for completion by the end of February. Much of it is in place, including the shuttle in the transfer channel that connects the main basin to the loadout area, and a gantry and grapple to lift multi-canister overpacks (MCOs) from the shuttle into casks.
- We began fabricating 2,170 heavy steel and copper baskets to hold spent fuel in the MCOs during movement out of the K Basins, the drying process and interim storage in the Canister Storage Building. (Details of this onsite fabrication effort are on Page 17, Site Services section.)
- Fabrication also began on the 400 stainless-steel MCOs after our vendor successfully passed strict quality reviews.



A multi-canister overpack (MCO) sample hood gets final inspection at the vendor's plant. The hood will be used in the Canister Storage Building to sample internal gases from the MCOs.

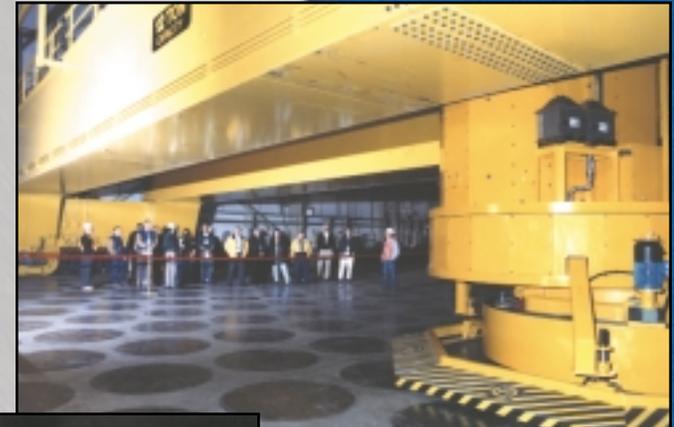
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Construction and Fabrication Update: *(continued)*

- Completed the Cold Vacuum Drying facility, and installed equipment in the first two bays on schedule.

Safety Update:

- Project workers completed one million hours without a lost-workday injury.
- Successfully passed DOE review of Phases I and II of the Project's Integrated Environment, Safety and Health Management System.
- DOE has approved nearly 3,000 pages of safety documentation since summer, including final reports for the K Basins and Cold Vacuum Drying facility, a topical report for the MCOs, and the Project's general requirements.



Hundreds of workers and guests got their first look at the 450-ton multi-canister overpack handling machine (top) and the rest of the new Canister Storage Building at a November open house.

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Safety and Compliance Update: *(continued)*

- DOE classified sludge accumulated in the basins as “remote-handled transuranic waste.” The decision is a key step toward eventual shipment of the sludge, after treatment, to the Waste Isolation Pilot Plant in New Mexico.

What’s Next:

- Initiate operational tests of K-West Basin fuel retrieval and water treatment systems as part of a phased approach to enhance worker proficiency and our ability to start removing spent fuel by November.
- Complete the K-West Basin cask loadout system.
- Submit the Project’s final safety document, for the Canister Storage Building, and secure DOE’s approval.



As fuel-removal preparations proceed in K West, work gets under way in nearby K-East Basin to make room for equipment to remove more than 50,000 spent fuel assemblies and

tons of contaminated debris in that basin. Activities include underwater relocation of 400 28-inch tall canisters like these. Two, eight-inch diameter, interlocked barrels form one canister holding 14 fuel assemblies.

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