

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 Testing:

- Initiated 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 in November.
- Installed the last components of the cask loadout system, a Tri-Party Agreement milestone. This completes all major construction activities in the K West Basin required for fuel movement. Initiated startup testing of the loadout system components.



Craft workers position the final item for the K West cask loadout system, a gantry, on its support structure. The loading system operates under water to shuttle and lift spent fuel baskets and place them in overpacks and casks for transport.

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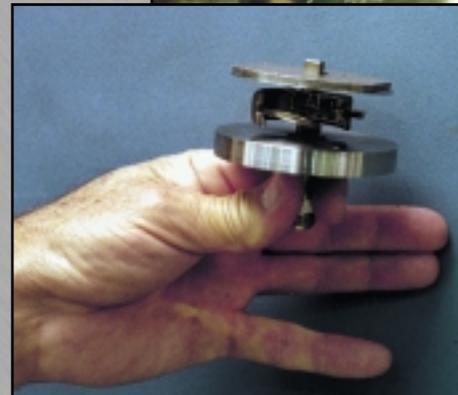
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Construction and Testing: (continued)

- Initiated integrated testing at the Cold Vacuum Drying Facility. Using a multi-canister overpack and a shipping cask, these tests will assure that the installed process equipment will meet performance criteria for safely drying fuel.
- Completed final welding on all 220 storage tubes in the Canister Storage Building vault.

Planning and Technical Issues:

- Resolved the last remaining technical issue, assuring we have a safe, solid foundation for the Project's path forward.
- We've proposed a strategy to expedite completion of sludge removal from the K Basins by one year without increasing overall Project costs.



The uniqueness of the Spent Nuclear Fuel Project posed a number of technical issues that had to be resolved prior to fuel movement. Some innovative solutions resulted, such as this magnetic pressure gauge that will sit just inside the shield plug at the top of the multi-canister overpacks to detect any pressure buildup.

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What's Next:

- Secure DOE's approval of the Project's final safety documentation.
- Complete acceptance testing at the K West Basin, Cold Vacuum Drying Facility and Canister Storage Building in preparation for November fuel movement; transition from construction to operation of the facilities.
- Receive the first production batches of fuel baskets and overpacks, due June 1.
- Continue K East integrated water treatment system design.



A purge-and-vent cart (left) will be used to vent, purge and refill storage tubes with helium in the Canister Storage Building, and sampling equipment (above) will allow workers to monitor the air inside the overpacks. Each circle on the floor is a cover for a 40-foot storage tube below.