



Spent Nuclear Fuel Project employees gather at the west door of K West Basin to celebrate the removal of Multi-Canister Overpack No. 185. They're all part of the team that met a significant Tri-Party Agreement milestone by removing 957 metric tons of fuel.

## Spent Nuclear Fuel Project reaches major milestone

Michele Gerber, *Fluor Hanford*

The Fluor Hanford Spent Nuclear Fuel Project passed a critical juncture on Jan. 7 when it finished removing more than 957 metric tons of heavy metal (irradiated uranium) from the K West Basin. In achieving this milestone, the project has removed about 25 million curies of radioactivity from the Columbia River shoreline, accomplishing more risk reduction than has ever been achieved by any cleanup project in Hanford's history.

The irradiated fuel, which was packed in 185 Multi-Canister Overpacks, or MCOs, brings the project nearly halfway to the goal of removing all spent fuel from both K Basins. Removing 957 tons met a Tri-Party Agreement milestone one week late, but was hailed by all concerned as a huge achievement because of its massive risk-reduction and safety implications.

"The safe achievement of this milestone is the result of super-human efforts by hundreds of workers," said Larry Gadbois, manager of the Spent Fuel Project for the U.S. Environmental Protection Agency. "Removal of

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## Spent Nuclear Fuel Project reaches major milestone, cont.

spent nuclear fuel had a very slow start. During the first 18 months, 67 containers of fuel were moved. In the last seven months or so, that number jumped to 118 containers moved. So removing the first third of the K West Basin fuel used three-quarters of the schedule. Kudos to so many people who sacrificed so much of their personal time in the long push to come from behind and complete this phase of the project.”

“Our critics said we’d be months or even years behind schedule, but we knew we had to stay the course and let our performance prove them wrong,” said Keith Klein, manager of the DOE Richland Operations Office. “Getting to this point has taken the dedication and innovation of a whole lot of people to overcome all that could go wrong and did go wrong.”

“Removing 957 tons is an extraordinary achievement, and I congratulate each project worker on the fine job in support of cleanup, the environment and the Hanford Site,” said Keith Thomson, president and chief executive officer of prime contractor Fluor Hanford. “Fluor Hanford is extremely proud of the effort and ingenuity that the project displayed to get as close to the milestone date as it did.”

Thomson said it was a remarkable accomplishment considering “the major setbacks the project encountered early on.” He said it was the personal sacrifices by SNF Project personnel that enabled the project to come as close as it did to meeting its deadline.

The 957-ton figure is significant because it corresponds to the amount of irradiated uranium that was in the K West Basin when the Spent Nuclear Fuel Project began removing fuel. However, the K West Basin is not empty, because fuel from the K East Basin continues to be transferred in for processing with the K West equipment.

### Setting records

Since fuel removal began just two years and one month ago, the Spent Nuclear Fuel Project has removed an average of more than one metric ton of heavy metal per day, and more than two per day for the past five months. During the recent push to reach the 957-metric-ton benchmark, Fluor Hanford Spent Nuclear Fuel Project workers removed 25 MCOs in December, a month that included holiday shutdown time. During one week in December, project personnel moved seven MCOs, an all-time weekly record.

Since fuel movement began in December 2000, project workers have decreased the cycle time to fill, seal, remove, dry, transport and store an MCO by 60 percent — from more than 200 hours per MCO to just over 80 hours per MCO. Fluor Hanford’s implementation of solid recovery plans allowed the project to make significant enhancements to production efficiency, utilizing innovative approaches to production and streamlining redundant or low-value processes. To step up the processes involved in retrieving, drying and storing spent nuclear fuel, the project added a Production Control organization and adopted a commercial production management approach. Additionally, project operators gained familiarity and experience using the unique equipment and became extremely proficient in anticipating and fixing malfunctions.

Norm Boyter, Fluor Hanford vice president for the SNF Project, recalled the hectic year just past. “The efforts of everyone across the SNF Project to start up the new fuel transfer system in parallel with increased

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production of MCOs is nothing short of remarkable,” Boyter said. “Although we were about one week late in achieving our ‘957’ milestone, we have done a superb job and I am proud of our entire team.”

Following the achievement, the SNF Project entered its normal quarterly maintenance outage. During this outage, the project will make significant repairs on equipment and install new scrap-processing tables in the K West Basin.

All future SNF Project work will focus on supporting the new DOE performance goals and incentives for the project that were recently agreed to by DOE and Fluor Hanford. Those goals include cleaning the K East Basin by June 30, 2005, cleaning the K West Basin by Sept. 30, 2005, welding all MCOs at the Canister Storage Building by Sept. 30, 2005, and completing deactivation and transition to Hanford's River Corridor Project in October 2005.

The project's next significant “deliverables” include starting up welding operations at the Canister Storage Building next month, starting up the sludge/water system and beginning scrap processing this coming spring, and formulating a “breakthrough” plan by June for deactivating the facilities. ■