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REPACKAGING OF PLUTONIUM-BEARING RESIDUES UNDERWAY AT HANFORD'S PLUTONIUM FINISHING PLANT

Packaging of plutonium-bearing residues has begun at the Plutonium Finishing Plant (PFP) to prepare the waste for future shipment off the 560-square mile Hanford Site to the Waste Isolation Pilot Plant (WIPP) in New Mexico. PFP is located in the 200 West Area of the Hanford Site, in an area also called the Central Plateau.

Following completion of a standard startup review, Fluor Hanford, Inc. (FHI), the U.S. Department of Energy, Richland Operations Office (DOE-RL) operating contractor for PFP, declared readiness to begin the packaging of Rocky Flats ash earlier today. The ash will be stored at PFP until it is shipped to the Central Waste Complex, also in Hanford's Central Plateau.

This ash was generated during operations at the DOE Rocky Flats Environmental Technology Site, where plutonium residues were incinerated to reduce volume so that plutonium could more easily be recovered from the remaining ash. PFP had a similar operation that generated ash, which will be packaged later. PFP accepted scrap materials from other DOE sites when those sites did not have the capacity or process to recover the plutonium.

Following discussions between DOE, FHI and the Washington State Department of Ecology (Ecology), PFP was authorized by Ecology to proceed with temporary storage of the ash in PFP. An interim Tri-Party Agreement milestone was established for completion of Rocky Flats ash packaging by April 30, 2001.

PFP Director Bob McQuinn credits the high level of support, cooperation and timeliness exhibited by the three parties in addressing this issue so packaging operations could promptly proceed.

George Jackson, FHI Vice President for the Nuclear Material Stabilization Project, calls the residues packaging "an important element in our plan to have all of PFP's leftover plutonium stabilized by mid-2004 or before, and moved offsite as quickly as possible after that."

PFP's inventory includes 4 metric tons of plutonium contained in nearly 18 metric tons of bulk materials in various forms such as metals, powders, solutions, residues, and polycubes. Much of this inventory must be stabilized before it can be packaged.

However, there are many items stored in the PFP vault - including Rocky Flats ash - that are already stable and require no further treatment. These materials will be repackaged and shipped offsite to WIPP, using a technique called "pipe-and-go" developed at the Rocky Flats Site.

Some of these items may need to be blended with cement before packaging, but the ash and most other residues can simply be placed into 7-inch cans, and then placed into a pipe overpack in a standard Department of Transportation 55-gallon drum. The pipe overpack is designed to provide appropriate

spacing and protection for transuranic wastes. This eliminates unnecessary processing, reduces volume and minimizes dose rates to workers.

The Rocky Flats ash is contained in 411 double-sealed food pack cans stored at the PFP. The residue in the cans will be repacked into approximately 280 pipe overpacks. Repackaging involves opening the food pack cans in a glove box, examining the contents, and packaging into billet cans. The filled billet cans are removed from the glove box, assayed, and placed into pipe overpacks in the 55-gallon drums.

Jay Augustenborg, DOE Richland Operations Office Acting Assistant Manager for Nuclear Materials and Facilities Stabilization, said, "We're beginning to move PFP plutonium offsite, which is an important step for Hanford cleanup. Hanford has already shipped some transuranic wastes from PFP operations, and the new packaging operation will continue to ready more material for shipment to WIPP."

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Historical Note: The U.S. Department of Energy's Richland Operations Office manages the Hanford Site in southeastern Washington State. Hanford was established during World War II as part of the top secret Manhattan Project to produce plutonium for nuclear weapons. Weapons material production was halted in the late 1980s. The Hanford Site is now engaged in the world's largest cleanup effort to deal with the legacy of radioactive and hazardous wastes that resulted from the plutonium production era. The U.S. Environmental Protection Agency and the Washington Department of Ecology regulate Hanford's cleanup program under a long-term compliance contract called the Tri-Party Agreement. This agreement sets the framework and timelines on the cleanup work so that Hanford meets environmental standards. Hanford cleanup is focused on three outcomes: restoring the Columbia River Corridor for other uses, transitioning the Central Plateau to long term waste treatment and storage, and preparing for the future.

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