

News from the Savannah River Site

U S DEPARTMENT OF ENERGY • AIKEN • SC 29808

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FOR IMMEDIATE RELEASE

Savannah River Nuclear Solutions Makes Improvements to Minimize High Level Liquid Waste Volume

AIKEN, S.C. December 2, 2014 – Savannah River Nuclear Solutions (SRNS), the Department of Energy's (DOE) primary contractor at the Savannah River Site, has implemented a waste minimization plan, which provides improvements to a number of processes in order to minimize the amount of high level liquid waste produced by H-Canyon activities.

H-Canyon, the only operating production-scale, shielded chemical separations facility in the United States, is currently working on campaigns to blend down highly enriched uranium into low enriched uranium, which can be used as a fuel source to produce electricity by the Tennessee Valley Authority. During the process of blending down the uranium, highly radioactive liquid waste is produced. This waste is then transferred to the H-Tank Farm for storage.

“SRNS created a waste minimization plan to reduce the amount of waste produced by H-Canyon,” said Patrick McGuire, DOE Assistant Manager for Nuclear Material Stabilization Project. “The plan presents the timing and implementation of the improvements to make sure the minimum amount of liquid waste is generated while supporting continuing campaigns in the Canyon.”



One of the improvements made in the waste minimization plan was repairing the Acid Recovery Unit, which recycles nitric acid for reuse in Canyon processes.

One of the improvements outlined in the plan is lessening the frequency of sump flushes. The Canyon floor is sloped so that any leaks that occur during Canyon processes can be flushed into the sump. In the past, conservative estimates were made as to when flushes of the Canyon floor needed to occur. The waste minimization plan changes that procedure so that the number of Canyon runs are counted instead of estimated. This ensures the Canyon floor is not flushed prematurely and reduces the number of flushes done each year.

Other improvements include repairing the Acid Recovery Unit, which recycles nitric acid for reuse in Canyon processes; and changing procedures to allow for only necessary use of scrubber jumpers, which capture ammonium vapors in the Process Vessel Vent system but increases liquid waste when used.

“The waste minimization program helps realize a significant savings of tax payer dollars,” said Wyatt Clark, SRNS Sr. Vice President, Environmental Management Operations. “Every gallon of waste produced costs \$84 to be stored, evaporated, qualified, and, for sludge, run through the melter to produce glass. Every gallon eliminated saves that money.

“Another benefit of the waste minimization plan is that it lets us leave a smaller footprint while completing our missions that help make the world safer. SRNS is committed to continuing to improve our methods and processes to make the smallest economic and environmental impacts that are possible.”

Savannah River Nuclear Solutions is a Fluor-led company whose members are Fluor Federal Services, Newport News Nuclear and Honeywell, responsible for the management and operations of the Department of Energy's Savannah River Site, including the Savannah River National Laboratory, located near Aiken, South Carolina.

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