Savannah River Site Completes First Batch in Waste Removal Pilot Project

AIKEN, S.C. (March 27, 2019) – The first batch of processed radioactive liquid waste using a new technology at the Savannah River Site (SRS) is complete.

Savannah River Remediation (SRR), the SRS liquid waste contractor, launched Tank Closure Cesium Removal (TCCR) operations in January, and finished processing the first batch of salt waste through TCCR last month.

Workers processed the beginning batch, about 152,000 gallons of dissolved salt waste, at a rate of five gallons per minute. It was the first of several batches expected to be processed — 600,000 to 750,000 gallons total — over a 9-month operating period.

TCCR is a demonstration project designed to accelerate removal of radioactive salt waste from the SRS underground waste tanks to support tank closure.

The recent TCCR batch process included transferring salt waste from Tank 10 into the TCCR processing module. Once inside the remotely operated module, the waste went through pre-filters and multiple ion exchange columns, where it was treated with an engineered resin to remove the cesium, a radioactive chemical element.

Successfully completing the first batch in TCCR operations means the Department of Energy-Environmental Management (DOE-EM) is well on the way to achieving desired results of this pilot project, according to Jim Folk, DOE-Savannah River assistant manager for waste disposition.

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“Our goal with Tank Closure Cesium Removal is to decontaminate salt waste safely and as efficiently as we can,” Folk said. “We’re pleased with how initial operations are going and look forward to continuing this performance throughout the coming months.”

SRR Chief Operating Officer and Deputy Project Manager Mark Schmitz said the TCCR equipment is performing as designed.

“TCCR operated very well in this first system test,” Schmitz said. “The team continues to work effectively to decontaminate the salt solution from Tank 10 while maintaining a rigorous, disciplined operation.”

Preparations to begin the second batch are underway, including adding water to the tank to begin dissolving the saltcake in the waste.

Cutline 1: The Tank Closure Cesium Removal module is located at tanks 10 and 11 in the Savannah River Site’s H Tank Farm.