SRS Expands Canister Double-Stacking to Second Building

AIKEN, S.C. (October 4, 2021) – The Department of Energy’s Office of Environmental Management has demonstrated the capability to expand double-stacking high-level waste canisters at the Savannah River Site (SRS), an approach that saves the cleanup program more than $100 million.

For the first time in Glass Waste Storage Building (GWSB) 2, crews with SRS liquid waste contractor Savannah River Remediation (SRR) recently demonstrated stacking two canisters, one on top of the other. GWSB 2 is the second of two interim storage facilities for the stainless-steel canisters. The canisters are maneuvered using the one-of-a-kind shielded canister transporter (SCT).

Jim Folk, DOE-Savannah River assistant manager for waste disposition, said demonstrating double-stack capabilities in GWSB 2 means EM will not have to build an additional interim storage facility for canisters, saving more than $100 million.

“The Department of Energy is focused on completing the liquid waste mission at SRS,” Folk said. “Canister double-stacking is an innovative solution for providing the interim storage options needed for the high-level waste canisters.”

The canisters hold glassified high-level waste from the Defense Waste Processing Facility (DWPF). Double-stacking canisters has already proven successful in GWSB 1. Just over 1,350 canisters have been double stacked in the first building since the project began in August 2016. SRR has exceeded its fiscal 2021 goal of double-stacking 300 canisters in GWSB 1.

SRR President and Project Manager Phil Breidenbach said the double-stack demonstration is another example of SRR’s core value of continuous improvement.

“We have proven it is safe, feasible, and effective to expand the canister double-stack project into Glass Waste Storage Building 2,” Breidenbach said. “The innovative thinking of our engineers and performance of our construction team have proved expanding the double-stacking improves the process and saves money, a win-win.”
If fully implemented in both GWSB 1 and GWSB 2, this technique will increase the total storage capacity in both buildings to 9,204 canisters, exceeding the total number of canisters projected to be produced by DWPF. The canisters will be safely stored underground in the GWSBs until a federal repository for high-level waste is established.

A feasibility study for double-stacking canisters in GWSB 2 verified the safety basis, radiological, fire protection, structural, environment, and other technical evaluations for GWSB 2 double-stacking.