

For Immediate Release

Monte Volk, U.S. Department of Energy
803.952.8283
Monte.Volk@srs.gov

Colleen Hart, Savannah River Remediation
803.208.2428
Colleen.Hart@srs.gov

SAVANNAH RIVER REMEDIATION SUCCESSFULLY DEMONSTRATES CANISTER DOUBLE-STACK CAPABILITIES

AIKEN, S.C. (August 8, 2016) – The U.S. Department of Energy (DOE) successfully demonstrated canister double-stacking capabilities in June when two non-radioactive canisters were stacked in one storage position at the Savannah River Site (SRS).

The canisters were stacked by the Shielded Canister Transporter in Glass Waste Storage Building (GWSB) 1 at the Defense Waste Processing Facility (DWPF). The two non-radioactive canisters were later retrieved from the double stack position by the transporter.

This non-radioactive demonstration is part of the startup process to begin radioactive operations of double-stacking canisters, which is expected to begin later this summer.

The innovative double-stack concept is to take existing canister storage positions in GWSB 1, where canisters are now stored one per position, and modify the 21-foot-deep slot to accommodate two, 10-foot tall canisters. To do this, SRS employees developed and implemented a remote cutting tool that removes the existing canister support crossbar.

Currently, each canister storage position also has a four-foot-thick concrete shield plug that seals the opening at the top of each canister's slot. This shield plug will be replaced by a thinner, galvanized cast iron shield plug, which will provide equivalent radiation shielding and structural support. In addition to the shield plugs, steel-support plates will be installed in place of the crossbar base support.

More than 200 canister support crossbars out of 2,254 have been removed, and more than 100 of this group have been fully prepared for double stacking, including installation of the new support plate and shield plugs. The project will continue to modify canister positions for another 7 to 8 years, as needed.

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SRR Demonstrates Canister Double-Stack Capabilities

Double-stacking canisters in the existing GWSB 1 is expected to increase storage capacity from 2,254 slots to 4,508 slots. This will create adequate safe interim canister storage through Fiscal Year 2026. It also postpones the expense of another storage facility estimated to cost as much as \$74 million.

"The project is a win for SRS and a win for saving taxpayers' money," said Jim Folk, DOE-Savannah River Assistant Manager for Waste Disposition. "At DOE, we want to see safe, creative solutions to solve issues. Finding this new method for canister storage is a game-changer in terms of finding new storage space that will save millions of dollars."

Doubling the interim storage space in GWSB 1 allows the site to continue processing waste, which further reduces the risk of the waste staying in the 43 operational tanks.

"The successful execution of double-stacking two non-radioactive canisters is a key step in furthering the overall Canister Double-Stack Project," said Tom Foster, President and Project Manager for the liquid waste contractor at SRS, Savannah River Remediation. "It proves that our concept is working and will continue to be the integral solution of canister storage."

The radioactive canisters contain vitrified waste from DWPF, where high-level waste and a borosilicate glass are heated to create a molten glass, which hardens inside the stainless steel canisters. The canisters are destined for a future federal repository, but pose no technical or radiological issues staying at SRS in this interim double-stack storage arrangement, according to engineering studies.

SRS is owned by DOE. The SRS Liquid Waste contract is managed by SRR, which is composed of a team of companies led by AECOM with partners Bechtel National, CH2M and BWX Technologies. Critical subcontractors for the contract are AREVA, Atkins and URS Professional Solutions.

Photo Caption:

Shown is a cutting tool designed by Savannah River Remediation used in a mock-demonstration of the Canister Double Stack Project.

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