

News from the Savannah River Site

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SRS BEGINS STEPS TO DOUBLE-STACK CANISTERS FOR CONTINUED SAFE STORAGE OF GLASSIFIED WASTE

AIKEN, S.C. (October 20, 2015) – Workers have now relocated 156 canisters of glassified waste from Glass Waste Storage Building (GWSB) 1 to GWSB 2, which begins the modification process for double-stacking canisters at the Savannah River Site (SRS). Actual double-stacking of the canisters could begin as early as calendar year 2016.

The innovative proposal to store canisters was created by Savannah River Remediation (SRR), the U.S. Department of Energy's (DOE) liquid waste contractor at SRS. The concept is to take existing canister storage positions in GWSB 1, where canisters are now stored one per slot, and modify the slots to allow two canisters to be safely stored vertically in one position, one canister on top of the other.

Double-stacking canisters in existing GWSB 1 could increase storage capacity from 2,254 slots to 4,508 slots, continuing safe interim storage while creating adequate canister storage through Fiscal Year 2026. It would also postpone the expense of another storage facility estimated to cost as much as \$74 million.

The canisters contain vitrified waste from the Defense Waste Processing Facility, 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.

To accommodate two, 10-foot tall canisters, the 21-foot-deep slot will have to be modified. Currently, each canister storage position has an elevated steel crossbar support base and a four-foot-thick shield plug that seals the opening at the top of each canister's slot.

The crossbar base support, on which canisters sit, will have to be removed and the four-foot-thick concrete shield plug will be replaced by a thinner, denser 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.

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The physical work to modify canister positions will begin this month, and the project will continue to modify canister positions for another 7 to 8 years, as needed.

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

Stuart MacVean, SRR President and Project Manager, said the work of safely storing waste canisters is a key but sometimes less visible element of the overall liquid waste program. "Without space to store the canisters, our production stops," MacVean said. "This double-stack concept keeps us processing waste, further reducing the risk of this waste staying in the tanks."

SRR is composed of a team of companies led by AECOM, with partners Bechtel National, CH2M and BWXT Technologies. Significant subcontractors for the contract are AREVA, EnergySolutions and URS Professional Solutions.

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