

News from the Savannah River Site

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For Immediate Release

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SRS Mega-Volume Waste Disposal Unit Reaches Halfway Construction Mark

AIKEN, S.C. (March 23, 2015) – Saltstone Disposal Unit 6 (SDU 6), the first mega-volume salt waste disposal unit being built at the Savannah River Site (SRS), has now reached the halfway point in construction, a significant milestone for the 30-million gallon structure.

Construction of the unit, which began in October 2013, reached the halfway point in February. Current plans indicate that SDU 6 will begin to receive decontaminated salt solution in May 2017, when the current SDUs 3 and 5 reach capacity.

The U.S. Department of Energy's (DOE) liquid waste contractor, Savannah River Remediation (SRR), operates the salt processing facilities, disposal units and the other SRS facilities that disposition radioactive liquid waste. SRR's contract also calls for operationally closing waste tanks.

SRS currently has six smaller SDUs in place, each with a 2.9 million gallon capacity. The new mega-unit, which sits on a two and a half acre site next to the Saltstone Facilities, is more than 10 times the size of the current SDUs. Comparatively, its size would allow a football field to fit inside. SRS will now need only seven of the larger units vs. the previous need for 72 smaller SDUs. This change will result in a significant life-cycle cost savings of potentially \$300 million over the life of the program, given economies of scale, layout, design and construction processes.

The SDUs play an essential role in the closure of the 45 remaining liquid waste tanks on the Site. About 10 percent of the waste in the tanks is a sludge, which is processed into a glass matrix at the Site's Defense Waste Processing Facility (DWPF). The glassified waste is held in stainless-steel canisters and temporarily stored onsite, awaiting a future repository. The remaining 90 percent of the waste in storage tanks is salt waste, which must be retrieved and pretreated for ultimate disposition before the tanks can ultimately be closed.

(more)

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The salt waste is treated to remove most of the radioactive components. The radioactive components are mixed with the sludge in DWPF. The remaining lower-activity treated liquid is then sent to the Saltstone Processing Facility, where it is mixed with cement powders. The resulting grout is then pumped into the SDUs for permanent disposal.

Jim Folk, DOE-Savannah River Acting Assistant Manager for Waste Disposition, said the SDUs are a substantial part of the process to remove waste from the aging, high-level waste tanks.

“At the end of the waste disposition path, these mega-facilities allow us to give the decontaminated salt solution a safe, final destination,” Folk said. “Our plans are to continue to leverage this proven technology and build the larger units to stay on top of the waste tank cleanup program.”

The SDUs now receiving the low-level salt waste are doing the job intended – safely keeping the waste away from the environment but include a cost-savings, added Stuart MacVean, SRR President and Project Manager.

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 HILL and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, EnergySolutions and URS Professional Solutions.

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Photo Caption: SDU 6, the first mega-volume salt waste disposal unit being built at SRS, recently reached the halfway point in construction, a significant milestone for the 30-million gallon structure.

