Savannah River Site Breaks Ground on Saltstone Disposal Units 8 and 9

AIKEN, S.C. (June 12, 2019) – Savannah River Site (SRS) workers broke ground June 10 on two more large-scale units to provide safe and permanent storage for decontaminated waste material at SRS.

Officials with DOE-Savannah River (SR) and liquid waste contractor Savannah River Remediation (SRR) held a groundbreaking ceremony for Saltstone Disposal Units (SDU) 8 and 9. About 100 federal and contractor employees, all a part of the SDU projects, attended. SRR is responsible for the design, construction, and operation of the SDUs.

At the ceremony, DOE-SR Manager Mike Budney acknowledged the importance of SDUs to the liquid waste mission.

“SDUs are key to our ability to safely dispose of material in the liquid waste tanks and underscore the Department of Energy's continued commitment to furthering progress on closing the high-level waste tanks at SRS,” Budney said.

SDUs are designed to permanently dispose of a treated, non-hazardous material called saltstone. Saltstone is a waste form that is produced by treating decontaminated salt waste with dry materials to create a cement-like grout.

The salt waste is removed from the SRS waste tanks and treated through the site’s interim salt waste processing facilities, where more than 99.9 percent of the radioactive isotopes are removed.

The interim facilities, called Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit, are built to pilot the processes to be used in the Salt Waste Processing Facility (SWPF), the newly constructed salt waste treatment facility currently undergoing testing and commissioning. The large-scale SDUs will accommodate the larger volume of decontaminated salt solution to be generated from SWPF.
In unprecedented form for SDU construction, SDUs 8 and 9 will be built in conjunction, with each phase of construction — excavation, liner installation, slab placement, etc. — completed consecutively. This approach will optimize crews and resources used on the two adjacent structures, ultimately cutting costs for the two projects.

SRR President and Project Manager Tom Foster said SRR is proud to continue the mission of decontaminating and immobilizing the radioactive salt waste into a solid form safe for long-term disposal.

“The large-scale disposal units have proven to be operationally robust and cost-saving to the taxpayer,” Foster said. “We are pleased to break ground here today to continue that operational excellence and innovation with SDUs 8 and 9.”

Construction of SDU 7 is underway and on schedule to be completed by spring 2022. When complete, SDU 7 will be 43 feet high and 375 feet in diameter, just like the original mega-volume unit built next to it, SDU 6. SDU 6 was completed 16 months ahead of schedule and $25 million under budget in 2017. It began operating in August 2018.

SDUs 6, 7, 8, and 9 are all considered mega-units, each able to hold about 32 million gallons of saltstone. Units 8 and 9 are being built with the same design as units 6 and 7, which decreases design costs for the project.

The larger SDU design will result in substantial cost savings over the life of the SRS liquid waste project. The design requires less infrastructure and materials to design and build seven of the large units compared to the 80 smaller units originally proposed to store the remaining waste.

Cutline 1: Federal and contractor employees at the Savannah River Site attend the groundbreaking ceremony for Saltstone Disposal Units 8 and 9 on June 10.

Cutline 2: Savannah River Site officials break ground on Saltstone Disposal Units 8 and 9. From left Joseph Hughes, BK All American Company Project Manager; Jim McNulty; SRR SDU Construction Manager; Brandon Witt; SRR Construction Manager; Jon Lunn, SRR SDU Program Manager; Tom Foster; SRR President and Project Manager; Mike Budney; DOE-SR Manager; Shayne Farrell, DOE SDU Project Director; Jim Folk; DOE-SR Assistant Manager for Waste Disposition; and Chuck Comeau, DOE-SR Waste Disposition Programs Division Manager.

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