SRS Begins Constructing Large-Scale Disposal Unit

AIKEN, S.C. (March 22, 2019) – The liquid waste contractor at the Savannah River Site (SRS), Savannah River Remediation (SRR), has begun constructing the outer shell of the site’s second large-scale saltstone disposal unit.

Saltstone Disposal Unit (SDU) 7 is designed to hold 32 million gallons of saltstone, a non-hazardous waste form that is produced by treating decontaminated salt waste with dry materials to create a cement-like grout. The unit’s outer structure is being constructed in 25 different sections. A 220-ton crane is placing the formwork. The outer shell is made of high-strength, reinforced concrete, which will be wrapped with seven layers and 341 miles of steel cable for added strength. It will take about seven months to complete the shell.

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.

The inside of the SDU will be lined with a rubber coating that will be epoxy-bonded to the floors and walls. The liner protects the wall structure from chemical degradation over time and potential leakage during the filling of the units.

The SDUs are designed to permanently dispose of the treated decontaminated salt solution removed from SRS’s high-level tank waste in the form of saltstone. SDU 7, as well as future additional SDUs, are being constructed to accommodate the very large volume of decontaminated salt solution that will be generated at the Salt Waste Processing Facility (SWPF), the newly constructed salt waste treatment facility currently undergoing testing and commissioning.
Page 2— SRS Begins Constructing Large-Scale Disposal Unit

SWPF will process at much higher rates than ever accomplished onsite by the current pilot-scale facility, making SDU 7 a critical component of the future of waste disposition at SRS, according to DOE-Savannah River SDU 7 Federal Project Director Shayne Farrell.

“We look forward to continued safe progress as we build this key structure,” Farrell said.

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

SDU 7 construction began last year and is on schedule to be completed by spring 2022. After the shell is completed, the next step in the project is to complete the roof structure, and then wrap the unit with the steel cable and install the interior rubber liner.

Cutline 1: A progress photo from February 2019 shows the initial construction of the outer shell of Saltstone Disposal Unit 7 at the Savannah River Site.

Cutline 2: A photo from March 2019 shows progress to the Saltstone Disposal Unit (SDU) 7 outer shell construction. SDU 6 is in the background.

-END-