SRS Modifies Third Blend Tank to Feed Salt Waste Processing Facility

AIKEN, S.C. (September 20, 2021) – A third tank at the Savannah River Site (SRS) has been converted into a blend tank to support feeding waste to the Salt Waste Processing Facility (SWPF).

With completion of Tank 42 modifications, DOE-Environmental Management (EM) now has three tanks — 21, 41, and 42 — in the site’s H Tank Farm that will serve as blend tanks for SWPF. The blend tanks provide space for preparing salt waste batches to be transferred to SWPF. Each tank can hold 1 million gallons and will prepare up to 3 million gallons of salt waste feed each year for processing at SWPF.

EM’s liquid waste contractor, Savannah River Remediation (SRR), manages and operates the SRS tank farms and provides the salt batches to be transferred to SWPF, which are planned to reach a rate of 9 million gallons each year in the future. EM contractor Parsons designed and constructed SWPF and has operated the facility since it began processing radioactive salt waste in October 2020.

Prior to SWPF operations, one blend tank was required for processing through the previous interim salt processing facilities, Actinide Removal Process (ARP) and Modular Caustic Side Solvent Extraction Unit (ARP/MCU). On a smaller scale, ARP/MCU, operated by SRR, proved the technologies for removing the radioactive components of salt waste implemented in SWPF. The interim facilities processed 7.4 million gallons of salt waste. ARP/MCU operations were suspended in 2019 to prepare final SWPF tie-ins with the liquid waste facilities.

SRR completed a series of complex projects over many years to complete the tank modifications. Once a waste tank is ready to serve as an SWPF blend tank, liquid salt waste from other waste tanks is combined to meet the specific waste acceptance criteria for SWPF.

DOE-Savannah River Assistant Manager for Waste Disposition Jim Folk said the liquid waste program at SRS is aligned to meet EM’s Strategic Vision 2021-2031, and SRS is well positioned to support that vision.
“The work to prepare salt waste batches for processing at the Salt Waste Processing Facility includes changing how our tanks are used and how to best position SRS for success in this area,” Folk said. “With the progress that has already occurred, the liquid waste mission at SRS continues to demonstrate that the safety of the community and environment remain a top priority.”

The SRR team overcame many challenges over the last several years to complete the blend tank modifications project, according to SRR Chief Operating Officer and Deputy Project Manager Mark Schmitz.

“Savannah River Remediation has the critical responsibility to prepare salt feed for the Salt Waste Processing Facility, and the team has already achieved four salt batches — four million gallons of feed,” Schmitz said. “Utilization of three blend tanks now enables SRR to achieve even higher rates of salt feed preparation.”