Energy Secretary Rick Perry Breaks Ground on SRS Waste Facility

Energy Secretary Rick Perry joined Savannah River Site (SRS) officials Feb. 1 to break ground on EM’s second 32.8-million-gallon liquid waste disposal unit during his first visit to the site.

“We were pleased that Secretary Perry could be here to commemorate this occasion with us,” DOE-Savannah River Manager Jack Craig said. "The Saltstone Disposal Units (SDU) are an important part of our cleanup mission and underscore the Department of Energy’s continued commitment to furthering progress on the closure of the high-level waste tanks at SRS.”

SDUs are permanent disposal units for low-activity waste grout produced from the solidification of decontaminated non-hazardous salt waste at SRS. The groundbreaking was for SDU 7, the second of seven mega units planned to store the remaining tank waste. EM approved the concept of replicating the mega-volume design for all remaining SDUs at SRS.

Tom Foster, president and project manager of Savannah River Remediation (SRR), the SRS liquid waste contractor, noted that SDU 7 site preparation began just three months after SRR completed construction on SDU 6. Workers completed SDU 6 $25 million under budget and 16 months ahead of schedule last year. EM recognized the successful project by naming it the 2017 EM Project of the Year.

“The template created by the liquid waste team from safely completing Saltstone Disposal Unit 6 will continue as we begin construction on Saltstone Disposal Unit 7,” Foster said.

Workers removed structures as part of the SDU 7 site preparation that began in October 2017. They are rerouting above- and below-ground utilities within the SDU 7 footprint to allow for excavation of more than 170,000 cubic yards of soil for the structural base slab.

The mega-volume SDUs will accommodate the larger stream of decontaminated salt solution from the Salt Waste Processing Facility (SWPF).

The seven larger units will result in more than $500 million in cost savings over the life of the low-level saltstone waste storage program because less infrastructure and materials are required to design and build the larger SDUs.

New Melter at SRS Pours First Canisters of High-Level Waste

A new melter at SRS—only the third in the 20-year history of the Defense Waste Processing Facility (DWPF)—poured its first canisters of vitrified radioactive waste.

On December 29, 2017, Melter 3 completed a half-filled canister left from Melter 2 operations, then poured a full canister of vitrified waste on January 1, 2018. It has since poured six more canisters.

Known as the heart of DWPF, the 75-ton teapot-shaped vessel treats high-level radioactive liquid waste stored in SRS waste tanks by blending it with a borosilicate glass, or “frit,” to form a molten glass mixture, a process known as vitrification. The mixture is poured into stainless steel canisters stored onsite until a permanent disposal facility is identified.

SRS liquid waste contractor Savannah River Remediation (SRR) installed Melter 3 when Melter 2 reached the end of its operational life last year after a record 14 years in operation, pouring 2,819 canisters, or 10.8 million pounds of glass.

Installing Melter 3 into DWPF was a complex task that took several months to complete. Hundreds of actions were taken to prepare the new melter to pour glass, including the fabrication and installation of dozens of electrical and process jumpers connecting the melter to the facility.

Workers completed extensive testing of melter-related components and supporting systems in conjunction with rigorous assessments of the work performed to ensure safe, compliant melter startup.

Melter replacements are built into the overall SRS Liquid Waste System Plan, meaning there have been no production impacts to the liquid waste lifecycle due to this outage, said SRR President and Project Manager Tom Foster.

“SRR really optimized this system outage to replace the melter,” Foster said. “We saw it as an opportunity to focus on other critical facility upgrades while we integrated the schedule of a separate planned outage to tie in the Salt Waste Processing Facility (SWPF) into our current liquid waste facilities.”

DWPF remains in an outage to finish facility upgrades and implement updated safety documents. Upgrades include maintenance in the chemical process cells, electrical and steam system maintenance, and other internal equipment improvements. Underlying those upgrades and new melter operations is the Documented Safety Analysis, which provides the technical basis for ensuring safe, compliant operations of DWPF and other facilities.
Early Career Engineers Grow Professionally, Support SRS Liquid Waste Mission

The Reaching Engineers at the Development Years (READY) program provides an avenue for personal and professional growth at the Savannah River Site (SRS) while supporting the liquid waste cleanup mission.

Early career engineers can join the five-year career development program when they begin working for SRS liquid waste contractor Savannah River Remediation (SRR). The program stands on six foundational pillars—job rotation, training and development, mentoring/coaching, professional development, site visibility, and social networking.

SRR Salt Waste Processing Facility Senior Project Advisor Carl Scherman chairs READY. Scherman recognizes the challenges newly graduated engineers face when considering their careers. He said allowing participants to spend their first year rotating through three assignments gives them exposure to the many ways legacy liquid waste is remediated at SRS.

“Choosing an industry can be a daunting task, and many times newly graduated engineers are unsure about the trajectory of their careers,” Scherman said. “Participation in the program helps SRR meet their business needs by developing its engineer workforce through a structured experience where employees obtain a broader knowledge of the liquid waste process.”

The employees’ educational background sets the path for customized progression, allowing the engineers to find niches in the liquid waste system. They build knowledge and skills, increasing their advancement opportunities, while helping SRR retain its employees.

DOE-Savannah River Facility Engineer/Safety System Oversight Engineer Tom Temple said READY supports the long-term liquid waste mission by developing the contractor’s early career workforce.

“We are always trying to develop and implement new technology to better achieve our goal of safely receiving, storing, processing, and ultimately dispositioning the waste,” Temple said. “This approach makes the work interesting, and keeps engineers engaged.”

SRS Women in Nuclear Organization Boosts Outreach, Visibility

The Women in Nuclear (WIN) organization’s chapter at the Savannah River Site (SRS) is fostering a collaborative environment across the site and increasing the visibility of nuclear-related careers in the workforce and community, particularly for women. Since its inception in 2015, SRS-WIN has inspired its members to develop leadership skills, network for professional development, and provide educational outreach to surrounding communities.

SRS-WIN is an affiliate of U.S. WIN, which helps its members succeed in the nuclear industry, and provides networking opportunities and organized association to inform the public about nuclear energy and technologies. The chapter’s leadership includes employees from the SRS liquid waste contractor Savannah River Remediation, management and operations contractor Savannah River Nuclear Solutions (SRNS), EM’s Savannah River National Laboratory, and the Mixed Oxide Fuel Fabrication Facility.

SRR Awards SRR STAR Grants and Family Scholarships

Savannah River Remediation (SRR) President and Project Manager Tom Foster (first row, right) and SRR Chief Operating Officer and Deputy Project Manager Mark Schmitz awarded SRR Students/Teachers Achieving Results (STAR) grants of up to $1,000 to 11 elementary school teachers from Aiken, Columbia, Richmond, and Edgefield counties at a reception in Aiken, S.C. on February 27, 2018. The 2018 SRR STAR grants totaled nearly $10,000 to help advance Science, Technology, Engineering, and Math (STEM) curriculum in elementary school classrooms.

SRR awarded eight SRR Family Scholarships to local graduates, all of whom are children of SRR employees.

At a recent dinner and award reception, the high school seniors each received scholarships of $2,500. They were selected on the basis of leadership, extracurricular involvement, community service, grade point average, and scholastic achievement.