SRS Facility Celebrates 35th Anniversary Since Groundbreaking

AIKEN, S.C. (November 14, 2018)— In November 1983, crews broke ground for the Defense Waste Processing Facility (DWPF), the largest vitrification facility in the U.S.

Now in its 35th year since the groundbreaking, the facility immobilizes sludge waste stored in the Savannah River Site (SRS) liquid waste tanks by combining it with borosilicate glass. The mixture is then poured into 10-foot-tall stainless steel canisters.

Before DWPF was built, a pilot facility was designed and constructed to demonstrate the project’s viability. That facility tested new remote operation concepts, like pouring glass into the canisters and decontaminating and welding the canisters.

The attitude at the site was extremely positive toward the new project, according to John Owen, who has worked at SRS since 1977. At the time, the site was called the Savannah River Plant, operated by the company DuPont.

“DWPF was the first large project at the site since original construction,” said Owen, who has worked in DWPF Melter Engineering since 1992. “The DuPont company position was that the site could continue to build additional waste tanks or use those resources instead to start making room for future waste generation by emptying waste tanks and stabilizing that waste.”


Local, state, and federal officials, dignitaries, and site employees were among the more than 1,000 people attending the DWPF groundbreaking. The event featured displays depicting new technology being developed for the facility’s mission, including the melter, known as the heart of DWPF. The melter heats the waste-glass mixture to 2,100 degrees Fahrenheit, achieving the vitrification process.

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“Waste vitrification had been pursued in other countries. However, those processes were very different from the vitrification process developed for DWPF,” said Dan Iverson, a melter engineer who attended the DWPF groundbreaking and had operated a small-scale pilot melter. “It is exciting to see a complex and remotely operated process in successful operation for so many years.”

Since DWPF began operating in March 1996, it has poured over 16 million pounds of glass and filled over 4,100 canisters. The current SRS liquid waste contractor Savannah River Remediation (SRR) has operated DWPF since July 2009. SRR is responsible for processing over 6 million pounds of glass and pouring more than 1,400 canisters.

Jim Folk, DOE-Savannah River Assistant Manager for Waste Disposition, said SRS has come a long way since the DWPF groundbreaking and is making great progress at dispositioning radioactive liquid waste.

“The mission at SRS began with developing nuclear materials for national defense,” Folk said. “The waste generated as a byproduct is being remediated, which started and continues with DWPF. Eight of the 51 waste tanks are operationally closed, and we continue to develop and implement technology to disposition the high-level waste at SRS.”

CAPTIONS:

Savannah River Remediation Melter Engineers John Owen, left, and Dan Iverson currently work at the Savannah River Site’s (SRS) Defense Waste Processing Facility (DWPF). They attended the groundbreaking for the facility as SRS employees in 1983.

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