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## **Melter 2 Leaves Defense Waste Processing Facility After 14 Years in Operation**

AIKEN, S.C. (May 16, 2017)— Today, a key component in the Defense Waste Processing Facility (DWPF) at the Department of Energy's Savannah River Site (SRS), that had reached its end of life, was removed from the facility and placed into an on-site underground equipment storage vault, after 14 years in operation.

Melter 2, encased in a 75-ton, one-inch-thick carbon steel storage box, was lifted by crane from DWPF onto a specially designed railcar then transported to the underground storage vault about 300 yards away.

The melter reached the end of its operational life in February, nearly seven times longer than its design life. Part of the reason for Melter 2's longevity is the critical life extension work conducted by SRS engineers and scientists, including work by the Savannah River National Laboratory.

Jack Craig, DOE-Savannah River Manager, said Melter 2 is a success story for SRS and for the Department of Energy.

"Because of the ingenuity of our technical experts, this melter operated more than a decade beyond its original design life."

Melter 2 now joins Melter 1 in the underground structure. The melter storage box provides confinement and shielding for the melter as well as a handling system for moving it. Each box is about 27 feet long, 16 feet wide and 21 feet high.

The melter is a teapot-shaped vessel that treats high-level radioactive liquid waste being 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, which are decontaminated and stored safely on-site until a permanent storage facility is identified. Melter 2 poured 2,819 canisters, or 16 million pounds of glass, in its lifetime.

# News from the Savannah River Site

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The liquid waste system has been in an outage since February to prepare for the removal of Melter 2, replace it with Melter 3 and complete tie-ins to the Salt Waste Processing System (SWPF), which is scheduled to be operation in December 2018. Melter 3 is currently undergoing final testing and will be moved into DWPF later this spring.

The system outage presented an optimum time to perform preventive and corrective maintenance on systems that cannot be shut down for extended periods during melter operations, said Craig.

SRR President and Project Manager Tom Foster said replacing the melter is a highly complex and technical task that takes extraordinary expertise and precise execution to complete.

“I have compared the complexity of this melter replacement and liquid waste system outage to be like sending a man to the moon...And I don’t think that’s far off,” he said. “It took outstanding skill to prepare for this important transport as well as executing the move itself with a heightened attention to detail.

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