

News from the Savannah River Site

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For Immediate Release

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DWPF Melter 2 Pours 10 Millionth Pound of Glass

AIKEN, S.C. (February 26, 2015) – The “heart” of the Defense Waste Processing Facility (DWPF) at the Savannah River Site (SRS) is pumping at a record pace.

The second melter ever installed in DWPF has just poured its 10 millionth pound of glass.

This workhorse melter has almost doubled what Melter 1 poured in its lifetime. While Melter 2 is now 12 years old and operating a full 10 years beyond its design life expectancy, it is still working very safely and efficiently.

A melter is a 65-ton, teapot-shaped vessel that treats high-level radioactive waste being stored in SRS waste tanks by blending it with a borosilicate frit to form a molten glass mixture. The mixture is poured into stainless steel canisters, which are decontaminated and stored on-site until a permanent storage facility is identified.

This melter, only the second in the 19-year history of DWPF’s radioactive operations, has poured 2,589 canisters compared to the 1,339 canisters poured by Melter 1.

The predicted number of canisters needed to dispose of SRS’s current high-level waste inventory is 8,582.

(more)

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DWPF Melter 2

Some of the reasons for the increased time Melter 2 has been operational include:

- Fitting the pour spout with an improved insert used from the beginning of this melter's operation ensures glass waste doesn't cause the melter's pour spout to erode;
- Heating the internal area where the glass flows into a canister to ensure it does not stick to the melter pour spout area;
- Adjusting available amperage to the electrode heaters inside the melter to increase the melter's heating capacity to prevent a failed heating component from negatively impacting waste glass production; and
- Installing agitation bubblers that are used to improve the heat distribution in the waste glass pool in the melter to achieve a better pour rate.

Jim Folk, DOE-Savannah River Acting Assistant Manager for Waste Disposition, said canister production is crucial in eliminating the Site's hazardous waste.

"Since beginning operations, DWPF has poured more than 15 million pounds of glass and has immobilized more than 55 million curies of radioactivity," Folk said. "Every canister poured means we are reducing the single most substantial environmental risk to people and the environment in the State of South Carolina."

SRR keeps one melter in storage in case the working melter needs to be replaced. Currently, Melter 3 is waiting in storage and is ready when needed.

SRR is the Savannah River Site (SRS) Liquid Waste contractor; SRS is owned by the U.S. Department of Energy. SRR is composed of personnel from a team of companies led by AECOM with partners Bechtel National, CH2M HILL and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, EnergySolutions and URS Professional Solutions.

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