



# FACTS

ABOUT THE SAVANNAH RIVER SITE

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## Liquid Nuclear Waste Tank Closures

The Savannah River Site is home to the first two liquid radioactive waste tank operational closures in the nation. These two closures mark a major milestone in stabilizing another portion of Cold War legacy materials for the site and the country.

Tank 20, the first closed, was certified closed by the South Carolina Department of Health and Environmental Control (SCDHEC) and applicable DOE Orders in July 1997. SCDHEC certified closure of Tank 17 in December 1997. Both tanks were constructed in 1958 and first used in 1960.

Use of Tank 20 and Tank 17 is no longer required to support tank farm operations. The U.S. Department of Energy, SCDHEC, the U.S. Environmental Protection Agency, SRS workers and the public worked closely together to establish strict closure requirements that support all state and federal regulations.

Closure activities began years before the actual closing of the tanks. First, contaminated waste and sludge was removed from the tank to the extent practical, while finalizing agreements and closure plans with state and federal regulators. Once these steps were completed, the closure activities began with workers pouring specially formulated grout, a cement-like substance, into the 1.3 million-gallon tanks. First a special grout was added to retard the leaching and migration of the waste. Over the course of several weeks, the tanks were filled with controlled low strength material (a cement-like backfill) to within a few feet of the top. Then the balance of the empty tanks was filled with very high strength cement.

This waste tank closure effort reduces risks to human health and the environment by stabilizing residual waste in the tanks, which minimizes the potential for groundwater contamination.

To reach the tank closure goals, workers had to build, test and deploy new technology and tools to remove waste from the tanks. In addition, special grout testing helped determine how to best pour the grout into the tanks to stabilize the remaining waste and the tank structure.

The two closed tanks are part of the 51 underground tanks used in the Site's F and H Area Tank Farms to hold liquid radioactive waste generated from weapons material production during the Cold War. This radioactive waste from the tank farms has been concentrated over the years to reduce its volume and is currently stored as 36 million gallons in 49 underground carbon-steel waste tanks. The most intensely radioactive waste is being sent to the site's Defense Waste Processing Facility, where it is being immobilized in glass for safe storage.

SRS waste tanks have provided more than 40 years of safe storage for nuclear waste. These tanks include four designs, all consisting of a steel tank within a concrete vault. The Site's goal is to eventually close all waste tanks.

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WASHINGTON SAVANNAH RIVER COMPANY

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