

# News from the Savannah River Site

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**FOR IMMEDIATE RELEASE**

## SRS Safely Completes Dissolution of Sodium Reactor Experiment Fuel

AIKEN, S.C. (August 28, 2014) – The Department of Energy's (DOE) primary contractor at the Savannah River Site (SRS), Savannah River Nuclear Solutions (SRNS), has successfully completed the dissolution of the Sodium Reactor Experiment (SRE) used nuclear fuel campaign, dissolving 147 bundles of used nuclear fuel from L Area Disassembly Basin. DOE evaluated the fuel stored in L Area and determined the SRE fuel was not suitable for long term wet storage and, as a result, authorized the processing of this fuel.

SRE was an experimental nuclear power reactor built by Atomics International (AI) at the Santa Susana Field Laboratory near Simi Valley, California. The reactor operated from 1957 to 1964. In 1957, SRE became the first nuclear reactor in the United States to produce electrical power for a commercial power grid. SRE was shut down in 1964. The SRE fuel slugs were prepared for disposition by AI in the late 1970s and then shipped to SRS for storage in L Basin.

"The fuel was made of a thorium-uranium alloy," said George Zachmann, Acting Environmental Management Business Manager for SRNS. "The high uranium-233 content made the uranium



*H Canyon is the nation's only hardened nuclear chemical separations plant still in operation in the U.S.*

not suitable as feed material in the fabrication of fuel for nuclear energy power plants like the Tennessee Valley Authority, a disposition path taken with much of the down blended high enriched uranium at the Site. DOE made the decision to dissolve the SRE fuel and directly disposition the resulting solution as waste.”

The fuel was dissolved with other high aluminum fuel from L Area and the resulting solution will be transferred directly to the Defense Waste Processing Facility at SRS for disposition through the vitrification process.

H Canyon was originally constructed to produce nuclear materials in support of our nation’s defense weapons systems. Today, this facility is the nation’s only hardened nuclear chemical separations plant still in operation in the U.S. It is playing an important role in the efforts to eliminate or minimize nuclear materials through safe stabilization, treatment and/or disposition of DOE’s Environmental Management program’s nuclear materials.

*Savannah River Nuclear Solutions is a Fluor-led company whose members are Fluor Federal Services, Newport News Nuclear and Honeywell, responsible for the management and operations of the Department of Energy’s Savannah River Site, including the Savannah River National Laboratory, located near Aiken, South Carolina.*

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SRNS- 2014 – 256