

For Immediate Release

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## Robotics Now Taking Waste Samples in Tight Areas

AIKEN, S.C. (February 28, 2011) – Savannah River Remediation (SRR) LLC, the liquid waste contractor at the Savannah River Site (SRS), successfully used a robotic crawler inside a waste tank with cooling coils for the first time, according to Neil Davis, Deputy Manager for Waste Removal & Tank Closure.

This crawler, aka G.I. Joe – due to its onboard grip arm, was an off-the-shelf design, modified by the SRR Maintenance team with assistance from Engineering to take samples of the residual waste in Tank 5 as it is prepared for closure. Closure sampling is directly related to SRR's mission to operationally close waste tanks.

"Thirteen samples were successfully obtained as young engineers used skills developed in their youth playing video games to navigate the crawler through the maze of cooling coils in the bottom of the tank," said Davis. The million-gallon waste tank, from which the samples were taken, contains over four miles of cooling coils distributed throughout the tank. The coils were once used to cool the highly radioactive waste.

Previously, crawlers were not used in tanks with cooling coils because the obstructions all but assured that the crawler and its umbilical would become entangled. Recent advances in robotic technology now make it possible to perform some sampling tasks remotely.

G.I. Joe is able to move along the tank floor crawling over and around the cooling coils to get to otherwise inaccessible locations where small deposits of stubborn, residual waste remain. The crawler then carefully scrapes the tank floor to get enough material fill a small sample vial. G.I. Joe then places the filled vials in a basket that is then removed from the tank, packaged and shipped to the Savannah River National Laboratory for analysis.

"I am very pleased with the performance of this robotic device," said Terrel Spears, Assistant Manager for Waste Disposition Project, U.S. Department of Energy (DOE) Savannah River Operations Office. "It shows the innovation necessary to take important samples in hard-to-reach areas."

Dave Olson, SRR President and Project Manager said, "The success of this robot is amazing in this highly congested area and will be most useful as we continue our mission of closing tanks."

SRR is the Savannah River Site's (SRS) Liquid Waste contractor. SRS is owned by DOE. SRR is composed of personnel from a team of companies led by URS with partners Bechtel National, CH2M Hill and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, Energy Solutions and URS Safety Management Solutions.

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Cutline: G.I. Joe during testing with simulated waste in the SRR test facility.