

from Savannah River Nuclear Solutions, LLC

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For Immediate Release

SRNS Uses Innovative Technology to “Steam Clean” at SRS

Project has created a cost avoidance of over \$15 million while removing tons of chemical solvents from beneath the Savannah River Site

AIKEN, S.C. – (June 11, 2012) Savannah River Nuclear Solutions, LLC (SRNS) recently completed a multi-year project resulting in the removal of over 33,000 gallons of non-radioactive chemical solvents from beneath the Savannah River Site’s (SRS) M Area, preventing these pollutants from entering the local water table.

This innovative and creative method used to remove sub-surface solvents is known as “Dynamic Underground Stripping” or DUS.

“This accomplishment highlights our success in developing and deploying innovative, cost-



Savannah River Nuclear Solutions, LLC employees Harrel McCray (left) and Joey Clark discuss the removal of an extensive SRS cleanup system that safely and successfully removed 33,000 gallons of non-radioactive chemical solvents from 10 million cubic feet of SRS soil by injecting millions of pounds of steam.

effective technology solutions to cleanup challenges. This is the type of innovative solution we think can prove valuable to other federal agencies and private industry,” said Dr. David Moody, Manager, DOE- Savannah River Operations Office.

During the decades when nuclear production reactors were operating at SRS, fuel and target rods were produced within

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several M Area facilities. Degreasers, in the form of liquid solvents, were used as a part of the production process to clean the rods.

According to SRNS President & CEO Dwayne Wilson, “Successfully completing our operations-related missions at SRS while responsibly guarding the health of our employees, area residents and the environment is a challenge we’ve fully accepted and an area where we continue to succeed. We take this important responsibility very seriously.”

The DUS cleanup system is simple in concept: Drill strategically placed vertical, horizontal and angled penetrations through 10 million cubic feet of soil, located beneath the now remediated M Area pond and inject millions of pounds of steam.

This process increases the temperature of the solvents to the point where they vaporize. The solvent vapors (and some associated contaminated liquids) are then “vacuumed” out of the contaminated area through the use of 33 extraction wells and treated at the surface.

The next phase of this program consists of the dismantlement and removal of much of the process equipment.

The DUS project has substantially reduced the time and cost needed to clean up the M-Area underground chemical contamination. SRS scientists estimate that the use of DUS technology accelerated the remediation at this portion of M Area by a minimum of 60 years. In addition, the innovative and highly efficient DUS project, versus previously used and proposed cleanup systems, resulted in a cost avoidance of over \$15 million through the following actions:

- Negotiating an Air Emissions Permit that eliminated the need for an expensive off-gas treatment system resulting in an estimated \$7 million in cost avoidances
- The use of the existing steam plant resulted in a cost avoidance of over \$8 million as compared to the use of leased portable boilers
- The reuse of programmable logic control system equipment from other decommissioned remediation projects resulted in a \$50,000 cost avoidance

In a recent letter to SRS employees, Franklin Hill, Director, Environmental Protection Agency’s Superfund Division, stated, “Of all the federal installations within Region 4, SRS is the front-runner in environmental protection and is distinguished by its collaborative approach to regulatory negotiations.”

Savannah River Nuclear Solutions, LLC, is a Fluor Partnership comprised of Fluor, 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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