

## Fallan Flatow

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## SRNS reaches a major milestone in groundwater remediation



*D Area Groundwater Treatability Study project team assesses artesian flow into injection well.*

**AIKEN, S.C.** – (August 16, 2024) – Savannah River Nuclear Solutions (SRNS) has injected more than 100 million gallons of artesian well water, which is clean groundwater from deep underground, to clean up shallow groundwater underneath 33 acres of a former coal storage yard and associated runoff basin in Savannah River Site’s D Area. According to Ashley Shull, Senior Scientist for the project, “100 million gallons is nine times more water than contained in the Georgia Aquarium in Atlanta.”

Over 60 years of power plant operation, which generated acidic materials and metals associated with coal, has made an impact on the groundwater in D Area. The coal-powered plant, which began operations in 1952, produced electricity for D Area and other parts of SRS until 2012. Even though the coal was removed in 2012-2013, decades of rainwater passing through the coal on the ground left the soils underneath acidic. Metals leached from the coal and natural soil minerals, causing shallow groundwater contamination. It is common in the United States for contamination such as this to exist where coal was used for power production.

SRNS developed a unique solution, taking advantage of the existing conditions of the groundwater and the natural flow of the two nearby artesian wells, which offer a groundwater remedy that does not involve electricity or pumps.

The project was constructed and is operated by SRNS’s Environmental Compliance and Area Completion Projects (EC&ACP) group. This unique groundwater remediation system is saving millions of dollars compared to traditional technologies that are not as sustainable, passive or cost effective.

“This system passively ensures a neutral buffering to groundwater to help correct the currently overly acidic conditions in groundwater caused by the decades storage of coal in the area,” stated Shull.

Working with regulators from the South Carolina Department of Environmental Services (formerly the South Carolina Department of Health and Environmental Control) and the U.S. Environmental Protection Agency, EC&ACP began injecting the artesian well water to neutralize the groundwater in March 2022.

While this passive technology project is adjusting the balance of the groundwater below the coal storage and runoff basin areas, it will take time to see the groundwater restored to pristine conditions. SRS tracks the cleanup regularly by monitoring the groundwater surrounding the treatment system.

“Tapping into the natural benefits, artesian well water equipped our team with a sustainable alternative to address groundwater quality to levels that will enhance the environment,” said Michael D. Budney, Manager, U.S. Department of Energy-Savannah River (DOE-SR). “DOE and SRS have a long-standing approach to remediation that identifies opportunities to craft solutions to lower costs through less labor- and equipment-centered methods, opting for passive technology when practicable.”

Rasheed Muwwakkil, Senior Project Engineer, stated “I would like to thank the team for all their hard work, constant communication with the DOE and regulators to gain the support needed to help SRNS reach this major milestone in groundwater remediation. This is truly a great and historic accomplishment to be proud of.”

*Savannah River Nuclear Solutions, a Fluor and HII partnership company, is responsible for the management and operations of the Department of Energy’s Savannah River Site, located near Aiken, South Carolina.*

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