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## FOR IMMEDIATE RELEASE

### SRS Tackles Groundwater Issue Using Innovative Passive Energy Process

**AIKEN, S.C.** July 28, 2022 – Savannah River Site (SRS) employees have adopted an innovative method to tackle groundwater cleanup at a former coal-fired power plant in D Area at the site.

Savannah River Nuclear Solutions (SRNS), SRS' management and operating contractor, is using crushed marble (calcium carbonate) to raise the pH levels of groundwater at the power plant site, thereby decreasing the acidity of the water. In chemistry, pH is a measure of water's acidity. The range goes from 0 to 14, with seven being neutral. pH levels of less than seven indicate acidity.

"Decades of storing coal on the ground in D Area has drastically lowered the pH of the groundwater due to rainwater leaching down through the contaminated soil," said Kelsey Holcomb, SRNS project manager for area closure projects (ACP). "D Area groundwater pH levels are monitored and average around 3.5, which can be harmful to the environment. We're taking action to eliminate this potential issue with an innovative, passive solution that will save millions of dollars versus using traditional cleanup methods, such as 'pump and treat.'"

The SRNS environmental cleanup group, Environmental Compliance and Area Completion Projects, has repeatedly introduced successful new environmentally friendly, low-cost and highly effective restoration methods that often harness and use the forces of nature.

"We're working closely with our regulators on what is, in essence, a large-scale experimental study with this new project in D Area," said Holcomb. "After extensive research, we're testing our hypothesis and continually analyzing the results. Scientist Ashley Shull and Design Authority Engineer Eric Schiefer collect and evaluate data to determine system effectiveness and recommend process improvements. ACP also conducts the operation of the system, providing the efficiency of real time feedback." Holcomb explained that there are different phases within the project to raise groundwater pH levels to normal.

First, water flowing up and out of a nearby artesian well acts like a tapped spring deep in the Earth; it pushes clean water into a series of injection wells stretched out in a line on the eastern edge of the underground pool of low pH water. The fresh water pushes the affected water westward, where it will naturally surface into a large canal. To date, over 7.3 million gallons of artesian water has been injected.

Next, taking advantage of natural topography, the low pH water flows down a canal where it is intercepted by two 40-foot-long engineered piles of marble stone chips locally purchased in Georgia. When the canal water contacts the marble, a chemical reaction raises the low pH water to an acceptable level.

"The U.S. Department of Energy (DOE) and our environmental regulators, the South Carolina Department of Health and Environmental Control and the Environmental Protection Agency, have been extremely supportive," said Holcomb. "We greatly value their teamwork, partnering to implement new and innovative solutions to protect the environment at the Savannah River Site."

Savannah River Nuclear Solutions, a Fluor-led company with Newport News Nuclear and Honeywell, is responsible for the management and operations of the Department of Energy's Savannah River Site located near Aiken, South Carolina.



*Savannah River Nuclear Solutions (SRNS) Technician Kenny Gunnells, left, takes questions from Engineer Ashley Schull and Senior Scientist Eric Schiefer, right, as SRNS Area Closure Projects Project Manager Kelsey Holcomb, fourth from left, confers with Brian Hennessey and Karen Morrow, right, of the Department of Energy's Infrastructure & Area Completion Division at the D Area site.*