News Savannah River Nuclear Solutions

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# SRS Working to Clean Up 12-Acre Coal Yard from Now-Defunct Cold War Powerhouse

AIKEN, S.C., August 26, 2020 – The long metal arm and strong steel teeth of a massive construction excavator recently cleared its first bucket full of hardened clay containing countless bits and pieces of coal, the first step towards removing contaminated soil from 12 acres at the Savannah River Site (SRS) known as the D-Area Coal Storage Yard.

Until recently, the yard held huge piles of coal used to continuously feed an enormous powerhouse built in the late 1950s that provided steam and electricity for SRS missions. The site shut it down in 2012 and launched an innovative technology that burns forest debris, agricultural waste and scrap lumber to generate steam and power. The powerhouse is now cold and dark, awaiting demolition.

"Any large pile of coal that sits for nearly six decades will interact with rainwater and the atmosphere," said Kelsey Holcomb, a project manager with Savannah River Nuclear Solutions (SRNS). "Coal contains iron sulfide, also known as pyrite or fool's gold. And when it mixes with rainwater, it creates sulfuric acid. The acidity leaches into the soil and draws out heavy metals such as beryllium and chromium."

*While maintaining social distancing, Savannah River Nuclear Solutions (SRNS) heavy equipment operators Tyler Wilson, left, and Ed Townsley, center, update SRNS Project Manager Kelsey Holcomb regarding the D-Area Coal Storage Yard Project at the Savannah River Site.*

According to Holcomb, these heavy metals are found primarily within

the first few feet of soil but will slowly migrate over time into the groundwater where they might risk reaching the Savannah River, a source of drinking water for downstream communities.

"We like to catch things as far up stream as possible before we get into a human health or ecology threat condition," Holcomb said. "We're taking action to remedy the acidic condition of the soil in the coal storage yard. It currently has about the same pH as cola-based soft drinks, around 3.0 to 3.2. We're going to thoroughly mix fine grade limestone throughout 12 acres of the coal storage yard down to four feet, which will bring the pH back to around 5.5. That's normal for this area."

Plans call for using approximately 1,000 tons of fine-grade limestone over six months to complete the project. The material was purchased from a quarry in eastern South Carolina.

SRNS construction personnel will work on only one acre at a time to control erosion and ensure no sediment enters nearby creeks and streams as a result of soil excavation. The construction workers will operate an excavator, dump trucks, a road scraper and a large industrial mixer to treat each section of the coal yard.

Gigantic piles of unused coal were removed from the coal storage yard in 2012 and the surface was scraped to reveal a layer of red clay.

"It looks like the surface of Mars out there," Holcomb said.

The sprawling coal storage yard will change from red to gray over the next six months as the final covering, likely sodded grass, will include a layer of limestone gravel. This innovative approach is expected to shorten the project schedule by one month and significantly reduce the overall cost.

"Working closely with our South Carolina and federal environmental regulators, this project is typical of the creative, cost-effective and responsible cleanup activities we as a company have embraced while successfully remediating dozens of projects since SRNS became the management-and-operations contractor in 2008," said Chris Bergren, SRNS Director of Environmental Compliance and Area Completion Projects. "Partnering with the Department of Energy, we're pleased to make it happen."

*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, including the Savannah River National Laboratory, located near Aiken, South Carolina.*

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