SRNS Takes on Environmental Cleanup Challenge: Coal-Fired Ash

AIKEN, S.C. (June 4, 2015) – The U.S. Department of Energy’s (DOE) management and operations contractor, Savannah River Nuclear Solutions (SRNS), has begun the excavation and removal of a thick layer of coal ash covering approximately 100 acres at the Savannah River Site (SRS).

Approximately 1.3 million cubic yards of coal ash is located in four nearly side by side, pond-like, basins. This coal ash is being safely and efficiently consolidated into two large mounds. Each mound will be capped with a thick earthen cover consisting of fill dirt, a synthetic material and clay to prevent rainwater from reaching the ash beneath.

This CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) project is a result of a closure plan developed and approved by a core team consisting of members of DOE-Savannah River and state and federal environmental regulatory agencies. This closure plan uses proven technology and methods successfully implemented in the past to close contaminated, water-filled basins at SRS.

Cleanup of these large basins will eliminate a potential risk to the Savannah River. This is particularly true given their age, having been created in the 1950s.

The initial work will involve moving more than 80,000 cubic yards of ash and dirt excavated from one basin and placed on an adjacent, existing ash landfill.
“To date, the management of this project has been right on schedule with the site prep work successfully achieved and the relocation of ash in progress,” said Chris Bergren, SRNS Director, Environmental Compliance and Area Completion. “We expect the high level of productivity and dedication to safety to continue all the way through the completion of this project, about three years from now.”

The protective cap for the first mound alone is expected to require nearly 87,000 cubic yards of new, clean soil. In all, enough ash, clay and dirt will be moved to fill about 17,000 average-sized dump trucks. When complete, the top of this mound will be large. The overall length will be equivalent to 17 football fields, if placed end to end.

Upon completion of the first mound, SRNS will begin to consolidate the ash from the remaining basins, forming a second large, capped mound.

“At the conclusion of this project, decades of ash will no longer exist as a potential environmental hazard,” said Bergren. “In its place will be two highly engineered grassy hills, which we will continue to carefully monitor.”

Construction of the ash basins was required to collect and control the watery ash-laden solutions produced as a by-product at the large, coal powered D-Area powerhouse located a short distance from the basins. Special sluice lines (pipes) carried the environmentally hazardous fluid to the basins.

For decades, a large percentage of the steam and power needed to operate SRS facilities was produced by the D-Area powerhouse.

Only recently has this powerhouse been closed for eventual demolition.