

SRS Facts

SAVANNAH RIVER SITE • AIKEN • SC

Soil and Groundwater Cleanup at SRS

Savannah River Site is responsible for assessing and remediating waste units, including groundwater, as well as deactivating and decommissioning excess facilities at the site to meet environmental requirements and regulations. This scope is accomplished by using project management principles, a core team approach for decision making with stakeholders, and cost effective and innovative technologies.

In the early 1990s, a change in mission shifted SRS focus from reactor and nuclear materials production to environmental cleanup and management. Beginning in 1993, environmental remediation work gained momentum with more than half of the waste disposal areas being completed by 2002. In 2003, Department of Energy (DOE), United States Environmental Protection Agency (EPA), and South Carolina Department of Health and Environmental Control (SCDHEC) entered into a Memorandum of Agreement (MOA) to accelerate cleanup at SRS. The MOA describes how environmental remediation and facility decommissioning activities will be executed to accelerate and complete areas of the SRS.

Following initiation of an aggressive deactivation and decommissioning (D&D) program, site remediation continues with over 75 percent of the 515 inactive waste units completed, and over 25 percent of 1,126 excess facilities dispositioned to date. Remediation is being executed in a fashion that completes environmental cleanup and facility decommissioning area by area until all areas at SRS are completed.

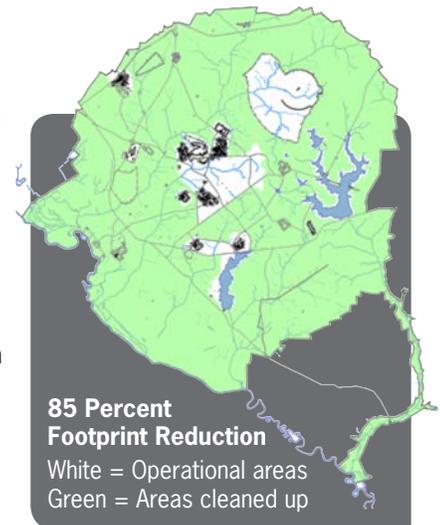
Reducing the Footprint

The SRS focus is to reduce the footprint of legacy waste. Contamination in the soil and groundwater is treated and cleaned up or the source is immobilized to slow contamination migration. From capping waste sites to installing efficient groundwater treatment units, fieldwork is a top priority. Fieldwork includes the closure of inactive seepage basins, rubble pits, rubble piles and disposal facilities.

The approach for deactivating facilities is to ensure each one is in a safe condition in order to proceed with material removal, some of which may be hazardous or radiologically contaminated, followed by decommissioning, which involves physically removing a facility or dispositioning the facility in place. Types of facilities that are decommissioned include administrative, radiological and nuclear facilities. To date, the SRS Environmental Management (EM) footprint has been reduced by 265 square miles or 85 percent.



T Area after final closure in 2006



85 Percent Footprint Reduction

White = Operational areas
Green = Areas cleaned up



U.S. DEPARTMENT OF
ENERGY



Soil and Groundwater Cleanup at SRS *(continued)*

Area Completion Approach

Under the Area Completion strategy, SRS uses an Area Operable Unit concept to clean up and close large industrial areas of the Site. This strategy integrates D&D and soil and groundwater activities in each of the 15 SRS industrial areas to realize efficiencies of scale in the characterization, assessment and remediation activities. With concurrence from the EPA and SCDHEC, this strategy focuses on addressing the contaminated surface units, the vadose zone and addressing groundwater plumes subsequently. This approach streamlines regulatory documentation and enhances the ability to make large-scale cleanup decisions.

Technology Deployment

Numerous ground-breaking technologies have been pioneered to advance cost effective remediation efforts and to reduce risk across the Site. A variety of innovative technologies have been deployed ranging from the aggressive dynamic underground stripping, which uses steam injection to remediate high concentrations of solvents within soils and groundwater, to MicroBlowers™ that passively remove contaminants from subsurface soils. There are other varieties of natural remedies being used at SRS, such as phytoremediation (using natural vegetative processes) and bioremediation (using naturally occurring microbes). These technologies are proving not only to be a cost-effective means of reducing risk to human health and the environment, but also successful in reducing the time it takes for cleanup.

Regulatory Communications and Public Involvement

SRS has established strong working relationships with its regulators and other stakeholders including the SRS Citizens Advisory Board (CAB). Once a waste unit has been fully characterized, cleanup alternatives evaluated, and a preferred method proposed, SRS asks for input from the general public, which includes representatives from the media, elected officials, educators and other citizens. During the public comment period, SRS also engages the CAB, an independent group of citizens that regularly makes recommendations to the DOE, EPA, and SCDHEC regarding cleanup of the SRS. SRS provides regular briefings to the CAB on the progress of cleanup actions for SRS cleanup activities.



P Reactor after final closure in 2011



P Reactor decommissioning: shield door removal

