

# SAVANNAH RIVER SITE FACT SHEET

## Fifth Five-Year Remedy Review Report for SRS Operable Units with Operating Equipment

ERD-EN-2017-0076

Savannah River Site, Aiken, SC  
December 2017/July 2018

*The United States Department of Energy (USDOE), the United States Environmental Protection Agency (USEPA), and the South Carolina Department of Health and Environmental Control (SCDHEC) has prepared the Fifth Five-Year Remedy Review Report for Savannah River Site (SRS) Operable Units (OUs) with Operating Equipment. This report documents the methods, findings, and conclusions for eleven remedy decision document reviews for the SRS.*

### What is a Five-Year Remedy Review?

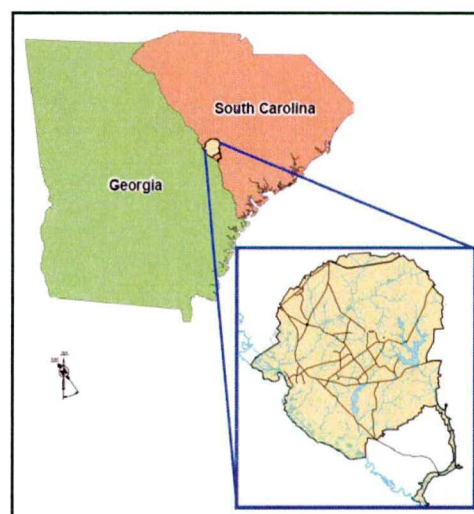
The Comprehensive Environmental Response, Compensation, and Liability Act requires that a remedy review is conducted every five years for sites where any hazardous substances, pollutants, or contaminants remain following a remedial or cleanup action. The remedies are evaluated to determine whether they are functioning as designed and whether they are protective of human health and the environment. The methods, findings, and conclusions of remedy reviews are documented in a five-year remedy review report.

### Three Major Questions:

- 1) Is the remedy functioning as intended by the decision documents?
- 2) Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection still valid?
- 3) Has any other information come to light that could call into question the protectiveness of the remedy?

Previous five-year remedy review reports were single reports that included all SRS OUs that had implemented a remedial action. Agreement was reached to conduct future remedy reviews in phases to reduce the volume of the reports and to more effectively identify and resolve issues for similar remedies. For this reason, the SRS Fifth Five-Year Remedy Review Report will be conducted in five phases with OUs grouped by the following remedy types:

- Phase 1: Native Soil Covers and/or Land Use Controls (LUCs);
- Phase 2: Groundwater Remedies;
- Phase 3: Engineered Cover Systems;
- Phase 4: Geosynthetic or Stabilization/Solidification (S/S) Cover Systems; and
- Phase 5: Operating Equipment.



**Figure 1. SRS General**

This report presents the fifth phase of the fifth five-year remedy review for OUs that selected operating equipment as part of the final remedy.

**SRS History**

SRS occupies approximately 310 square miles of land adjacent to the Savannah River, principally in Aiken and Barnwell counties of South Carolina. SRS is located approximately 25 miles southeast of Augusta, Georgia, and 20 miles south of Aiken, South Carolina (Figure 1). Approximately 90 percent of SRS land consists of natural and managed forests.

The ~~primary mission of SRS was constructed during the 1950s to produce the basic materials used in the fabrication of nuclear weapons, to produce primarily tritium and plutonium, and other special nuclear materials for in support of our nation’s defense programs as well as for medical, industrial, and research efforts.~~ Production of nuclear materials for the defense program was discontinued in 1988. SRS has provided nuclear materials for the space program, as well as for medical, industrial, and research efforts. Chemical and radioactive wastes are by-products of nuclear material production processes. These wastes have been treated, stored, and in some cases, disposed of at SRS. Past disposal practices (e.g., seepage basins, pits and piles, landfills, etc.) have resulted in soil and groundwater contamination.

<i>Site Chronology</i>	
<b>1989</b>	<i>SRS included on the National Priorities List as needing a long-term cleanup plan.</i>
<b>1993</b>	<i>Federal Facility Agreement established with the USDOE, USEPA – Region 4, and the SCDHEC to coordinate remedial actions at SRS into one comprehensive regulatory program.</i>
<b>1997</b>	<i>First SRS Five-Year Remedy Review is issued.</i>
<b>2004</b>	<i>Second SRS Five-Year Remedy Review is issued.</i>
<b>2009</b>	<i>Third SRS Five-Year Remedy Review is issued.</i>
<b>2014</b>	<i>Fourth SRS Five-Year Remedy Review is issued.</i>
<b>2015</b>	<i>Fifth Five-Year Remedy Review for SRS OUs with Native Soil Covers and/or LUCs (Phase 1) is issued.</i>
<b>2017</b>	<i>Fifth Five-Year Remedy Review for SRS OUs with Groundwater Remedies (Phase 2) is issued.</i>
<b>2018</b>	<i>Fifth Five-Year Remedy Review for SRS OUs with Engineered Cover Systems (Phase 3) is <del>scheduled for issuance in 2018</del> issued.</i>
<b>2018</b>	<i>Fifth Five-Year Remedy Review for SRS OUs with Geosynthetic or S/S Cover Systems (Phase 4) is <del>issued</del> scheduled for issuance in 2018.</i>

**What are the Cleanup Objectives?**

Remedial goals are defined for individual OUs, but generally support the following cleanup objectives:

- To prevent unacceptable exposure of human receptors and ecological receptors to contaminants in soils, surface water, and groundwater.
- To prevent or minimize the migration of contaminants from soils to groundwater at levels that

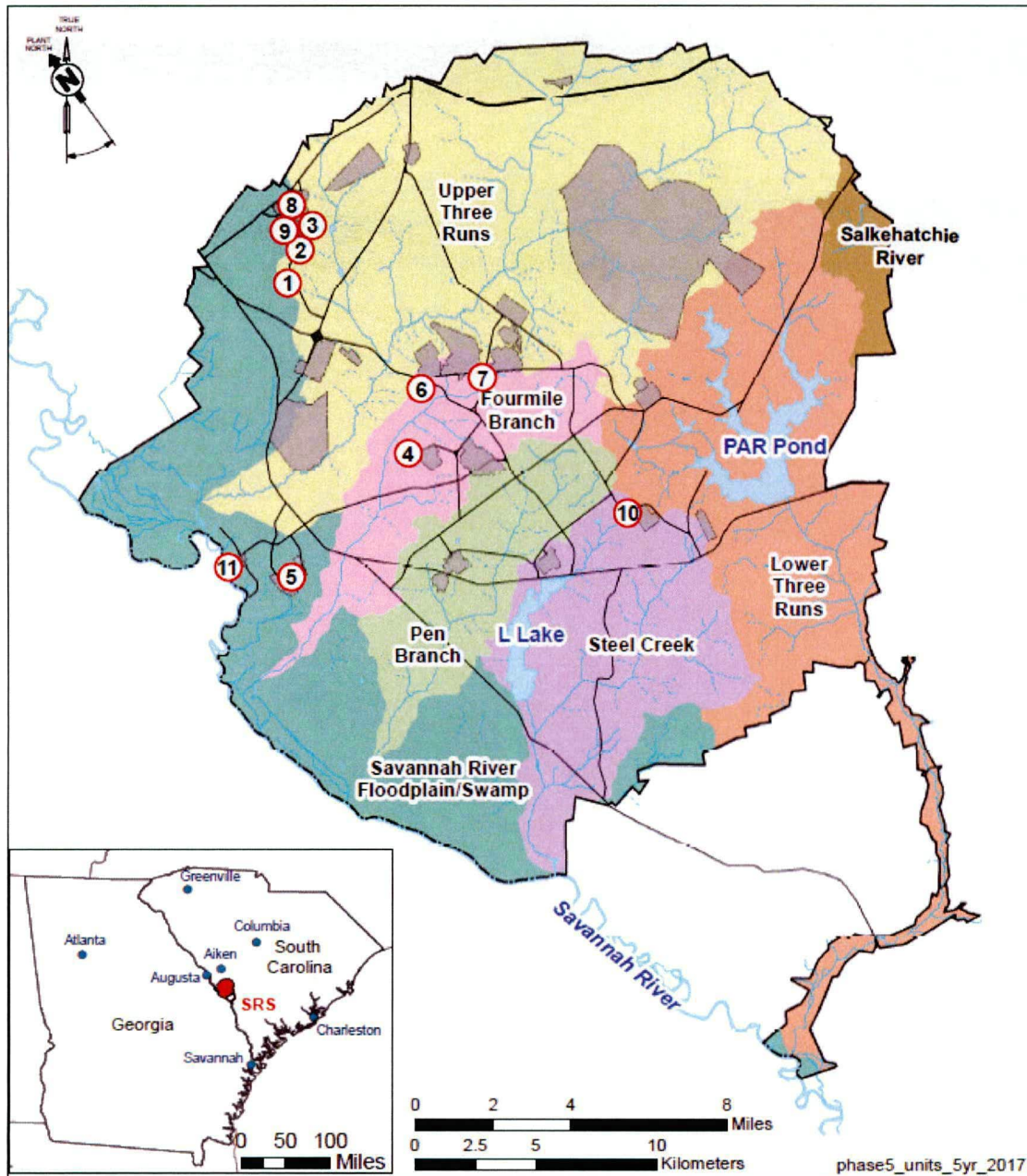


Figure 2. Location Map for SRS OUs with Operating Equipment

### Protectiveness Summary

- All eleven remedies were determined to be protective of human health and the environment.
- The remedy for the A/M-Area Groundwater OU has been determined to be protective in the short-term. To establish long-term protectiveness, optimization of the M-1 Air Stripper and recovery system and/or other remediation technologies must be implemented to treat the high concentration portion of the plume located outside of the recovery well zone of capture.

## Next Five-Year Remedy Review

The Sixth Five-Year Remedy Review Report for SRS OUs with Operating Equipment is due in January 2024.

## Issues and Recommendations

- The passive system at A-Area Miscellaneous Rubble Pile (731-6A) OU has been successful in treating VOC contamination and the soil remedial goals have likely been achieved. SRS recommends additional characterization of the ash layer and vadose zone soils to determine if the soil remedial goals have been met to support shutdown of the passive SVE system.
- The D-Area OU MicroBlower™ SVE system at the Bubble Tower subunit has been successful in treating VOC contamination and the soil remedial goals have likely been achieved. SRS recommends confirmation sampling of the soil to determine if the soil remedial goals have been met to support shutdown of the MicroBlower™ SVE system.

### For More Information

For more information regarding the complete Fifth Five-Year Remedy Report for SRS OUs with Operating Equipment, please contact:

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