

The Savannah River Site Environmental Bulletin

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Notice of Public Availability

Fourth Phase: Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems

The Sixth Five-Year Remedy Review Report is being conducted in five phases for operable units (OUs) with similar remedies. The OUs are grouped by the following remedy types: (1) native soil cover and/or land use controls, (2) groundwater, (3) engineered cover system, (4) geosynthetic or stabilization/solidification cover system, and (5) operating equipment. The public is notified when each phase of the remedy review is conducted and when the phase is complete. The review for the fourth phase—that is, for OUs with geosynthetic or stabilization/solidification cover system remedies—is complete and is being made available to the public.

The Comprehensive Environmental Response, Compensation, and Liability Act requires that remedial actions that result in hazardous substances, pollutants, or contaminants remaining at an OU at levels unsuitable for unrestricted land use be subject to a five-year remedy review to ensure their continuing effectiveness. The Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems evaluated the remedial actions for geosynthetic or stabilization/solidification cover systems selected through issued Records of Decision (RODs), Interim RODs, ROD Amendments, or Explanations of Significant Differences to determine whether the selected remedies remain protective of human health and the environment. The Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems is complete and is being issued by the U. S. Department of Energy (DOE), the lead agency for the Savannah River Site (SRS), with concurrence by the U. S. Environmental Protection Agency – Region 4 (EPA), and South Carolina Department of Health and Environmental Control (SCDHEC).

The five-year remedy review addressed three major questions:

- Are the remedies functioning as intended by the decision document?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection still valid?
- Has any other information emerged that could call into question the protectiveness of the remedy?

The fourth phased submittal of the Sixth Five-Year Remedy Review Report focused on SRS OUs with geosynthetic or stabilization/solidification cover systems. Geosynthetic cover systems are used at SRS when there is a concern that contamination may leach to groundwater above acceptable levels. Geosynthetic cover systems are designed to meet layer/liner criteria requirements and a specific conductivity (usually 1×10^{-7} centimeter per second or less). In some cases, a stabilization/solidification technology (i.e., in-situ-grouting) may be used with a low permeability cover (i.e., compacted clay, concrete, etc.) to deter contaminant migration and provide another layer of protection to prevent intrusion and exposure to contaminated material.

The SRS Environmental Bulletin

The Sixth Five-Year Remedy Review Report for SRS OUs with Geosynthetic or Stabilization / Solidification Cover Systems includes a review of the following OUs:

- B-Area Operable Unit
- C-Area Reactor Seepage Basins (904-66G and 904-68G)
- D-Area Expanded Operable Unit [Comprised of D-Area Ash Basin (488-D) and D-Area Rubble Pit (431-2D)]
- E-Area Low-Level Waste Facility (LLWF) (643-26E) (Slit Trench Disposal Units 1-5)
- F-Area Retention Basin (281-3F)
- F-Area Tank Farm (Waste Tanks 5 to 6 and 17 through 20)
- General Separations Area Consolidation Unit [Comprised of Old Radioactive Waste Burial Ground (including Solvent Tanks) (643-E), HP-52 Ponds, H-Area Retention Basin (281-3H) and Spill on 05/01/1956 of Unknown Amount of Retention Basin Pipe Leak (NBN), Warner's Pond (685-23G) and Spill on 03/08/1978 of Unknown Seepage Basin Pipe Leak in H-Area Seepage Basin (NBN) and Spill on 02/08/1978 of Unknown H-Area Process Sewer Line Cave-In (NBN)]
- H-Area Tank Farm (Waste Tanks 12 and 16)
- K-Area Reactor Seepage Basin (904-65G)
- L-Area Oil and Chemical Basin (904-83G)
- L-Area Reactor Seepage Basins (904-64G) and C-Area Reactor Seepage Basin (904-67G)
- Old F-Area Seepage Basin (904-49G)
- P-Area Operable Unit
- P-Area Reactor Seepage Basins (904-61G, 904-62G, and 904-63G)
- R-Area Burning/Rubble Pits (131-R and 131-1R) and Rubble Pile (631-25G)
- T-Area Operable Unit

The exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection are still valid for all the remedial actions evaluated. All OU-specific remedy decisions were determined to be protective of human health and the environment. The E-Area LLWF, F-Area Tank Farm and H-Area Tank Farm OUs are currently in the operational phase and unit specific land use controls have been deferred until final closure of the OUs. The interim remedies are currently protective because access is controlled by SRS security and administrative controls.

In the Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems, the DOE, EPA, and SCDHEC made the following determination:

- Maintenance of the stormwater runoff covers at the E-Area LLWF continues to be problematic due to subsidence, water pooling on the covers, and lifting during wind events. The current geosynthetic covers are not expected to meet the original project life of 25 years and high maintenance and replacement costs are anticipated. The DOE recommends that discussions continue with the EPA and SCDHEC on the type of cover system needed for future slit trench disposal units.

The SRS Environmental Bulletin

To aid in the review of the report, a Savannah River Site Fact Sheet for the Sixth Five-Year Remedy Review Report for SRS Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems was also developed.

Copies of the Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems and the Fact Sheet are available in the Administrative Record. The Administrative Record is available in the information repositories listed below:

- DOE Public Reading Room at the Gregg-Graniteville Library at the University of South Carolina (USC)-Aiken campus in Aiken, SC; and
- Thomas Cooper Library Government Documents Department at USC in Columbia, SC

Hard copies of the Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems and the Fact Sheet are available at the following locations:

- Reese Library Government Information Section at Augusta University in Augusta, GA; and
- Asa H. Gordon Library at Savannah State University in Savannah, GA

An electronic copy of the Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems can be found at the following website:

- <http://www.srs.gov/general/programs/soil/rod/rod.html>

An electronic copy of the Fact Sheet can be found at the following website:

- <http://www.srs.gov/general/programs/soil/pub/pubinv.html>

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The SRS Environmental Bulletin

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