The Savannah River Site
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U. S. Department of Energy Conducts Phased Submittals of the Sixth Five-Year Remedy Review at Savannah River Site

Third Phase: Savannah River Site Operable Units with Engineered Cover Systems

The U.S. Department of Energy (DOE) is conducting the Sixth Five-Year Remedy Review for some remedial actions implemented at the Savannah River Site (SRS). The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires that remedial actions that result in hazardous substances, pollutants, or contaminants remaining at an operable unit at levels unsuitable for unrestricted exposure be subject to a five-year remedy review. The purpose of this review is to determine whether the remedies remain protective of human health and the environment and to evaluate the implementation and performance of the selected remedies. The U.S. Environmental Protection Agency (EPA) and South Carolina Department of Health and Environmental Control (SCDHEC) will review and approve whether the five-year remedy review adequately addresses the protectiveness of each remedy. The methods, findings, and conclusions of the five-year remedy review will be documented in a report that will be made available to the public.

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. During the early 1950s, SRS began to produce materials used in nuclear weapons. Chemical and radioactive wastes are by-products of nuclear material production processes. These wastes have been treated, sorted, and in some cases disposed of at SRS. Hazardous substances, as defined by CERCLA, are currently present in the environment at SRS, with past disposal practices resulting in soil and groundwater contamination.

Each SRS operable unit is unique in size, location, environmental factors, and contaminant type. Contaminants may include chemicals (e.g., trichloroethylene, tetrachloroethylene, etc.), metals, pesticides, polychlorinated biphenyls, and radionuclides (e.g., tritium, cesium-137, etc.). Contaminants may be found in surface soils, subsurface soils, and/or groundwater. Operable unit-specific remedial actions are designed to address the contaminants for the protection of human health and the environment. In general, contaminated media are either covered, stabilized in place,

treated, removed, or managed with land use controls (LUCs). Common remedies implemented at SRS include LUCs, cover systems (i.e., soil covers, geosynthetic covers), excavation and disposal actions, removal systems (i.e., soil vapor extraction, electrical resistance heating, dynamic underground stripping), treatment systems (i.e., enhanced bioremediation, chemical oxidation), stabilization (i.e., in situ grouting), mixing zones, and monitored natural attenuation.

DOE, EPA, and SCDHEC previously agreed to conduct phased remedy reviews for OU groupings based on remedy similarity rather than combining all OU reviews in a single report. The OUs are grouped by the following remedy types: (1) native soil cover and/or LUCs, (2) groundwater, (3) engineered cover system, (4) geosynthetic or stabilization/ solidification cover system, and (5) operating equipment. These groupings were chosen to provide the opportunity to implement optimization initiative for similar projects.

The five-year remedy review will address 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 third phased submittal of the Sixth Five-Year Remedy Review Report will focus on SRS operable units with engineered cover systems. Engineered cover systems are similar to native soil covers, but have a lower permeability if well compacted, promote more effective surface drainage, and minimize infiltration. The engineered cover system grouping was expanded to include operable units that used common fill or clayey material from offsite sources and had some form on engineering controls (i.e., soil material requirements, soil compaction requirements, and/or storm water management systems).

DOE will notify the public when the Sixth Five-Year Remedy Review Report for Savannah River Site Operable Units with Engineered Cover Systems is complete and is available to the public. The report is currently planned to be available to the public in February 2022.

The Sixth Five-Year Remedy Review Report for SRS OUs with Engineered Cover Systems will include review of the following OUs:

- Central Shops Burning/Rubble Pits (631-1G and 631-3G)
- D-Area Burning/Rubble Pits (431-D and 431-1D)
- Ford Building Seepage Basin (904-91G)
- F-Area Hazardous Waste Management Facility (904-41G, 904-42G, and 904-43G)
- H-Area Hazardous Waste Management Facility (904-44G, 904-45G, 904-46G, and 904-56G)
- K-Area Burning/Rubble Pit (131-K) and K-Area Rubble Pile (631-20G)
- Metallurgical Laboratory Hazardous Waste Management Facility (904-110G)
- M-Area Hazardous Waste Management Facility (904-51G and 904-112G)
- Mixed Waste Management Facility (643-28E) and
- SRL Seepage Basins (904-53G1, 904-53G2, 904-54G, and 904-55G)

For additional information about the five-year remedy review process at SRS, please contact:

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The SRS Environmental Bulletin

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