



# Environmental Bulletin

Volume 24 Number 12  
August 31, 2012

*from the Savannah River Site*

## **U. S. Department of Energy Conducts Fourth Five Year Remedy Review at Savannah River Site**

The U. S. Department of Energy (DOE) is in the process of conducting the Fourth Five-Year Remedy Review for 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 and South Carolina Department of Health and Environmental Control will review and approve whether the five-year review adequately addresses the protectiveness of each remedy. The methods, findings, and conclusions of the five-year 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. Fifty-three (53) remedy decisions have been implemented at SRS' operable units to address soil and groundwater contamination and are the focus of the remedy review.

Each operable unit is unique in size, location, environmental factors, and contaminant type. Contaminants may include chemicals (e.g., trichloroethylene (TCE), tetrachloroethylene (PCE), etc.), metals, pesticides, polychlorinated biphenyls (PCBs), 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. Common remedies implemented at SRS include land use controls, 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.

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?

DOE will notify the public when the Fourth Five-Year Remedy Review Report is complete and is available to the public. The Fourth Five-Year Remedy Review Report is currently planned to be available in February 2014.

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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