The Savannah River Site
Environmental Bulletin
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Removal Site Evaluation Report/Engineering Evaluation/Cost Analysis (RSER/EE/CA) for C-Area Groundwater Operable Unit Available for Public Comment

The U. S. Department of Energy (DOE) is proposing to perform a non-time critical removal action for the C-Area Groundwater Operable Unit (CAGW). Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Removal Site Evaluation Report/Engineering Evaluation/Cost Analysis (RSER/EE/CA) describes how the proposed removal action meets the criteria established in the National Oil and Hazardous Substances Contingency Plan, 40 Code of Federal Regulations 300.415. The purpose of this RSER/EE/CA is to identify the objectives of the removal action and to develop alternatives that address the potential threats from release of contaminants to the environment from this operable unit. This document will be available for public review and copying at the locations listed below. The 30-day public comment period is scheduled for March 13, 2018 to April 11, 2018.

The RSER/EE/CA was completed to meet the terms of CERCLA, a law governing the investigation and cleanup of operable units. The DOE has worked with the U. S. Environmental Protection Agency-Region 4 (EPA) and the South Carolina Department of Health and Environmental Control (SCDHEC) to ensure the removal approach is consistent with all applicable environmental requirements.

The CAGW is located within the Fourmile Branch watershed and encompasses groundwater beneath

C-Area. The C-Area is situated near the center of the SRS. The primary SRS operation facility in C-Area was the C-Reactor, which operated between 1955 and 1985. Known sources such as the C-Reactor Seepage Basins (904-66G, 904-67G, 904-68G), C-Reactor Area Trichloroethylene (TCE) Vadose Zone Source, C-Reactor Purification Area Tritium Source, and non-specified sources associated with reactor operations have resulted in tritium and volatile organic compounds (VOCs) contamination to the groundwater. The CAGW includes a VOC groundwater plume containing primarily TCE, with minor quantities of tetrachloroethylene, and a larger tritium groundwater plume.

DOE, EPA, and SCDHEC have reviewed the risks associated with this subunit and have determined that an early removal action is warranted to reduce the discharge of TCE to surface water that exceeds regulatory limits. The tritiated groundwater will be addressed in a separate, future decision and is not part of this removal action. Three cleanup alternatives were evaluated based on effectiveness, ease of implementation, and cost. The preferred removal action for the CAGW is Alternative 2, Treatment Barrier Using Emulsified Edible Oil for the distal portion of the CAGW TCE groundwater plume. A mixture of emulsified edible oil, water and buffer solution will be injected into the groundwater at the areas of highest TCE concentrations in the distal portion of the CAGW TCE groundwater plume. The emulsified edible oil will provide a carbon source for the microbes already present within the area that will aid in the destruction of the TCE. The emulsified oil also acts to adsorb the TCE as the water flows through the injection zone, thus reducing the mobility of the TCE. This alternative will not preclude any additional remediation of the CAGW and is expected to be consistent with the expected final remedial action.

For additional information, contact: Janet Griffin, Savannah River Nuclear Solutions, LLC, Savannah River Site, 730-1B, Aiken, SC 29808

Upon completion of the public comment period, an Action Memorandum with a Responsiveness Summary that addresses public comments will be prepared.

Copies of the RSER/EE/CA 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-Aiken campus in Aiken, SC; and
- Thomas Cooper Library Government Documents Department at the University of South Carolina in Columbia, SC.

Hard copies of the RSER/EE/CA are available at the following:

- 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 RSER/EE/CA is posted at the following address: http://www.srs.gov/general/programs/soil/pub/pubinv.html

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The SRS Environmental Bulletin

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

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