

United States Department of Energy
Early Action Statement of Basis/Proposed Plan
Fact Sheet for the C-Area Operable Unit
 ERD-EN-2014-0013

Savannah River Site, South Carolina

September 2014

INTRODUCTION

This fact sheet summarizes the Early Action Statement of Basis/Proposed Plan (EASB/PP) for the C-Area Operable Unit (CAOU) located at the Savannah River Site (SRS). The United States Department of Energy (USDOE) owns and operates the SRS. Hazardous substances that are regulated under the federal law requirements of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) are managed at the SRS as part of a comprehensive cleanup program.

An early remedial action is needed at portions of the CAOU because contaminants are present in soil, gravel and concrete that may pose a threat to human health. The EASB/PP for the CAOU describes the remedial alternatives evaluated to reduce exposure to the contaminated media and presents the proposed remedy. The document describes how the public can comment on the proposed action through written comments and by participating in public meetings.

CAOU BACKGROUND

The CAOU is located at the SRS in Barnwell County, South Carolina (Figure 1). It is one of several operable units identified at SRS. In 1955, C-Reactor began operations with a mission of producing nuclear materials for the defense program. C-Reactor was placed on cold standby in 1987, followed by shutdown due to reduced requirements for defense-related products. Reactor

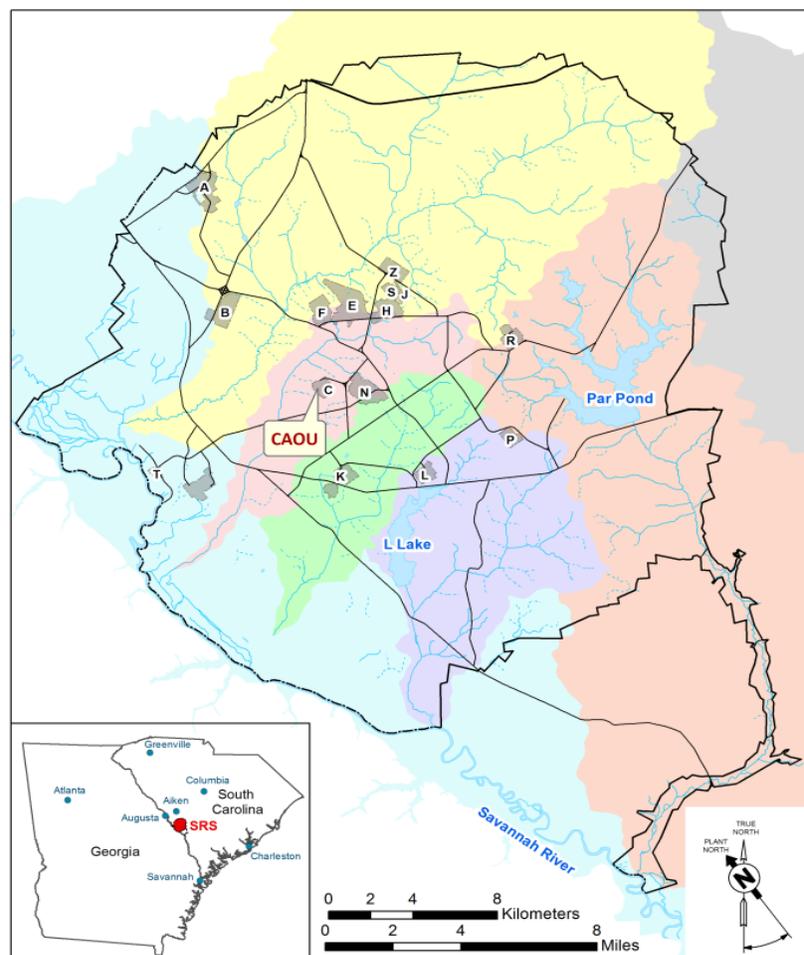


Figure 1. Location of the CAOU at SRS

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operations resulted in the generation of chemical and radioactive wastes. The C-Reactor is currently used as a storage site for tritiated-moderator water in tanks, cask car refurbishment, and Wackenhut training. The C-Reactor Building (105-C) has been identified as a historically significant structure.

The CAOU consists of multiple subunits, some of which were selected for non-time critical removal (NTCR) actions. The selected NTCR actions were made available for public comment, and Action Memorandums were issued after the comment periods ended with no comments received from the public. The NTCR actions have been completed.

The CAOU is located in an area currently designated for industrial land use, and is expected to remain industrial in the future. Due to their proximity to the C-Reactor Building (105-C) as well as potential to encounter subsurface radiological contamination, subunits located within the C-Area perimeter fence will not support unrestricted (i.e., residential) land use and will require Land Use Controls (LUCs) as part of any remedial decision.

Refined constituents of concern (RCOCs) are those constituents that are retained following a weight-of-evidence evaluation and require remedial action. Subunits located inside the C-Area perimeter fence for which RCOCs were determined include:

- *Building 717-C, Contaminated Maintenance Facility:* surface concrete media, RCOCs identified for the future industrial worker scenario include cesium-137 and strontium-90, with a total cumulative risk (TCR) = 1.2E-05.
- *C-Area Cask Car Railroad Tracks as Abandoned:* surface soil/gravel media, cesium-137 identified as a RCOC for the future industrial worker scenario with a risk = 2.8E-06.

There are other subunits located within the current C-Area perimeter fence line that were determined to have no problems warranting action under the industrial land use scenario. However, these subunits will be managed with LUCs because of their location within the perimeter fence line and the area will not support unrestricted land use.

Subunits located outside the perimeter fence for which RCOCs were determined include:

- *Early Construction and Operational Disposal Site (ECODS) C-1:* surface soil media, RCOCs identified for the future resident scenario include Aroclor 1254 and polycyclic aromatic hydrocarbons (PAHs) that include benzo(a)pyrene and benzo(b)fluoranthene, with a TCR = 2.2E-05. Aroclor 1254 was also identified as a RCOC for the future industrial worker scenario with a risk = 3.6E-06.

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- *Outfall C-03*: surface soil media, cesium-137 identified as a RCOC for the future resident scenario with a risk = 1.9E-05 and the future industrial worker scenario with a risk = 1.2E-05.

Potential exposure to fixed radiological contaminants within the subsurface pipelines in the *Process Sewer Lines (PSLs) as Abandoned* subunit is also identified as a problem warranting action at the CAOU.

CLEANUP GOALS

The following Remedial Action Objectives are identified for the CAOU to support the future land use:

- Prevent future resident exposure to contaminated media or structures located at subunits within the perimeter fence line.
- Prevent industrial worker exposure to radiologically-contaminated media or structures located at the *Building 717-C, Contaminated Maintenance Facility, the C-Area Cask Car Railroad Tracks as Abandoned, and the C-Area PSLs as Abandoned.*
- Prevent future resident and industrial worker exposure to Aroclor 1254 in soils that exceed the polychlorinated biphenyl (PCB) ARAR and 1E-06 risk and prevent future residential exposure to PAHs in surface soil that exceed 1E-06 risk at *ECODS C-1.*
- Prevent future resident and industrial worker exposure to cesium-137 in surface soil present at the *Outfall C-03.*

PROPOSED REMEDY

In order to prevent the potential exposure to the future resident or industrial worker to the contaminated or potentially contaminated media at CAOU, the preferred alternative for the following CAOU subunits is LUCs.

- *Building 717-C, Contaminated Maintenance Facility*
- *C-Area PSLs as Abandoned*
- *C-Area Reactor Cask Car Railroad Tracks as Abandoned*
- *Potential Release from C-Area Disassembly Basin*
- *Potential Release from C-Area Reactor CWS (186/190-C)*

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- *ECODS C-1*
- *Outfall C-03*

LUCs will be needed to control access and land use for the entire area where contaminants were found. Risks will be reduced through breaking the pathway for human exposure. The USDOE will restrict land use through administrative measures and the placement and maintenance of signs in these areas. Figure 2 shows the approximate LUC boundaries that will cover the entire area inside the perimeter fence line (86 acres) and the two (2) subunits outside the perimeter fence line: ECODS C-1 (3,600 square meters) and Outfall C-03, which is 340 linear meters.

The following CAOU subunits located outside the C-Area perimeter fence and have no RCOCs; thus No Action is appropriate and they qualify for unrestricted (i.e., residential) land use:

- *Building 904-89G, Retention Basin for 100-C Containment (including Containment Tank C803-7-1 [NBN])*
- *Outfall C-01*

The United States Environmental Protection Agency and South Carolina Department of Health and Environmental Control concur with the proposed remedy.

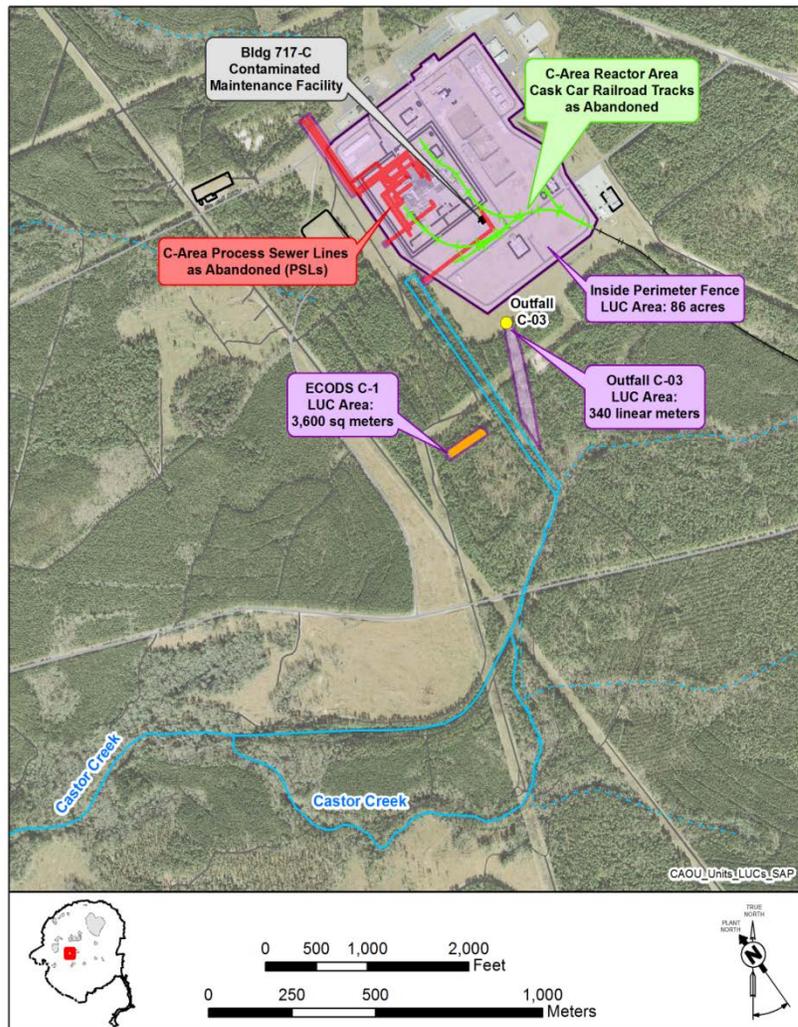


Figure 2. Approximate LUC Boundaries

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FOR MORE INFORMATION

The Administrative Record File, which contains the information pertaining to the selection of the response action, is available at the following locations:

US Department of Energy
 Public Reading Room, Gregg-Graniteville Library
 University of South Carolina – Aiken
 171 University Parkway
 Aiken, South Carolina 29801
 (803) 641-3465

Thomas Cooper Library
 Government Documents Department
 University of South Carolina
 Columbia, South Carolina 29208
 (803) 777-4866

Hard copies of the Statement of Basis/Proposed Plan for the CAOU are available at the following locations:

Reese Library
 Government Information Section
 Georgia Regents University
 2500 Walton Way
 Augusta, Georgia 30910
 (706) 737-1744

Asa H. Gordon Library
 Savannah State University
 Tompkins Road
 Savannah, Georgia 31404
 (912) 356-2183

HOW TO SUBMIT COMMENTS

The public comment period for the Early Action Statement of Basis/Proposed Plan for the CAOU begins November 17, 2014 and ends January 1, 2015. To request a public meeting during the public comment period, to obtain more information concerning this document, or to submit written comments, contact one of the following:

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