Savannah River NUCLEAR SOLUTIONS℠

United States Department of Energy Statement of Basis/Proposed Plan Fact Sheet for the D-Area Ash Basin Wetlands (NBN) in Support of the Savannah River and Floodplain Swamp Integrator Operable Unit (U), SEMS Number: 69

SRNS-RP- 2025-01448

Savannah River Site, South Carolina **July 2026**

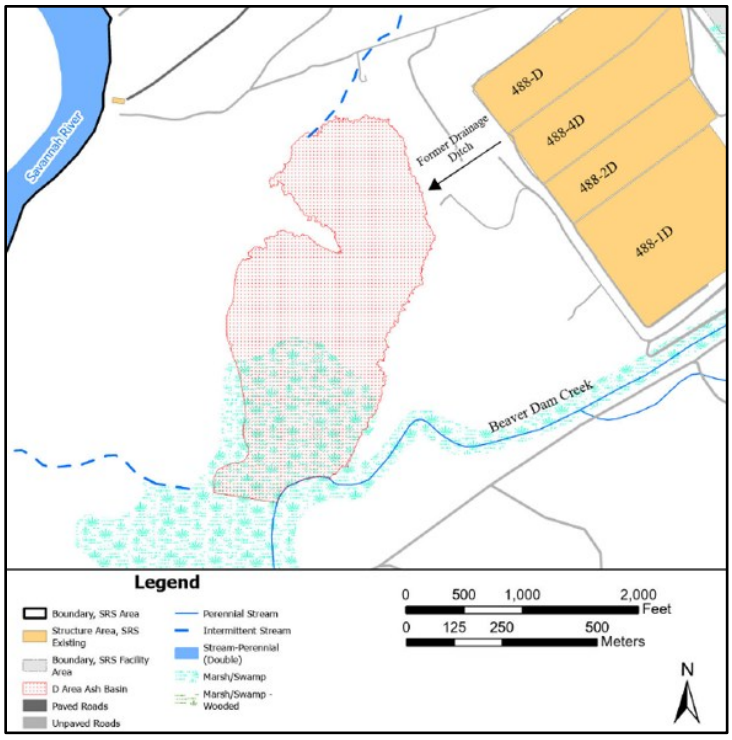
INTRODUCTION

This fact sheet summarizes the Statement of Basis/Proposed Plan (SB/PP) for the D-Area Ash Basin Wetlands (DABW) in Support of the Savannah River and Floodplain Swamp (SRFS) Integrator Operable Unit (IOU) 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.

Remedial action is needed at the DABW because arsenic and coal-related radionuclides (potassium-40 [K-40], thorium-232 [Th-232], and uranium-238 [U-238]) are present in surface ash/soils that may pose a threat to human health and the environment. The SB/PP for the DABW outlines the range of remedial alternatives evaluated to clean up the contaminated surface ash/soils 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.

D-AREA ASH BASIN WETLANDS BACKGROUND

Early infrastructure development of the SRS between 1951 and 1955 included the use of coal-fired powerhouses to generate steam and electricity. These powerhouses were located in each industrial/administrative area of the SRS with coal ash waste generated as a result of boiler operations (i.e., coal combustion). The D-Area Powerhouse was the longest running coal-fired powerhouse on SRS, operating from 1952 until 2012. The D-Area Ash Basins received ash from the coal fired D-Area Powerhouse via a wet sluice line.



The DABW is located in the SRFS IOU downgradient of D Area. It is a forested mixed compositional bottomland wetland that received

Savannah River NUCLEAR SOLUTIONS℠

United States Department of Energy Statement of Basis/Proposed Plan Fact Sheet for the D-Area Ash Basin Wetlands (NBN) in Support of the Savannah River and Floodplain Swamp Integrator Operable Unit (U), SEMS Number: 69

SRNS-RP- 2025-01448

Savannah River Site, South Carolina **July 2026**

overflow ash from the D-Area Ash Basins via an upgradient drainage ditch. The DABW ash depositional area has an estimated area of ~36 hectares (ha) (90 acres [ac]) with an estimated volume of ~565,006 cubic meters (m^3) (739,000 cubic yards [yd^3]) of ash. The area has a gentle relief that slopes toward the Savannah River. The depth to groundwater is ~0 m (0 feet [ft]) (wetland/floodplain) to 3.1 m (10 ft) below ground surface. Topography and environmental conditions are major considerations in remedy selection. Due to the wetland environment, certain remedial activities including excavation would be challenging and costly.

No previous CERCLA regulatory actions have been implemented for the DABW. However, the DABW was investigated as part of the approved RCRA Facility Investigation/Remedial Investigation/Baseline Risk Assessment (RFI/RI/BRA) for the D-Area Expanded Operable Unit (DEXOU) in 2002. The DEXOU RFI/RI/BRA concluded that there was an unacceptable risk from exposure by human receptors to coal-related contaminants in surface ash/soil at the DABW subunit, but there was no ecological, principal threat source material (PTSM)[1], or contaminant migration (CM) problems warranting actions. The DABW was administratively transferred to the SRFS IOU in 2002 to allow for additional ecological data to support a final remedial decision for the DABW.

As part of a Focused Corrective Measures Study/ Feasibility Study (FCMS/FS) for the DABW the information and conclusions of the DEXOU RFI/RI/BRA for the human health risk assessment, PTSM evaluation, CM analysis, and the results of the site-specific ecological studies were reevaluated. The updated risk evaluations presented in the FCMS/FS confirm there are no ecological, PTSM, or CM refined constituents of concern (RCOCs) identified for the DABW. However, arsenic and coal-related radionuclides (K-40, Th-232, and U-238) present in the 0.0 to 0.3 m (0 to 1 ft) ash/soil intervals were confirmed to be a potential threat to human health (hypothetical resident, industrial worker, and IOU onsite worker [i.e., Savannah River Ecology Laboratory researcher]). Arsenic, K-40, Th-232, and U-238 were identified as RCOCs for all receptor scenarios. Individual risks for each RCOC are greater than 1E-06.[2]

CLEANUP GOALS

Results of the evaluations for DABW indicate that there are no CM, ecological, or PTSM RCOCs. Contaminants are present at the DABW at levels that are not suitable for unrestricted use due to potential risk to human receptor scenarios. The cleanup goal for the DABW was based on the most likely hypothetical receptor and was identified as follows:

[1] PTSM are described as highly toxic materials that would present a significant risk to human health or the environment should exposure occur.
[2] A risk greater than or equal to 1E-06 indicates a probability of 1 chance in 1,000,000 of an individual developing cancer.

Savannah River NUCLEAR SOLUTIONS℠

United States Department of Energy Statement of Basis/Proposed Plan Fact Sheet for the D-Area Ash Basin Wetlands (NBN) in Support of the Savannah River and Floodplain Swamp Integrator Operable Unit (U), SEMS Number: 69

SRNS-RP- 2025-01448

- Prevent the IOU onsite worker from exposure to arsenic and coal-related radionuclides (K-40, Th-232, and U-238) in the surface ash/soil (0 to 0.3 m [0 to 1 ft]).

PROPOSED REMEDY

Land Use Controls (LUCs) are the preferred remedy to prevent human exposure to arsenic and coal-related radionuclides present in surface soils that pose an unacceptable risk to the IOU onsite worker. The USDOE will restrict land use through administrative measures and the placement and maintenance of warning signs and the establishment of administrative and worker access controls to effectively reduce exposure of contaminated media to human receptors. General public access to the site is limited to site workers. This remedy does not support unrestricted land use and would require five-year remedy reviews. No PTSM, CM, or ecological RCOCs were identified that would require remedial action.

The United States Environmental Protection Agency and the South Carolina Department of Environmental Services concur with the proposed remedies for the remaining coal ash and coal fines OUs.

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
471 University Parkway
Aiken, South Carolina 29801
(803) 641-3465

Thomas Cooper Library
Government Information and Maps Department
University of South Carolina
1322 Greene Street
Columbia, South Carolina 29208
(803) 777-4841

The Administrative Record File is available electronically at the following address:

https://public.srs.gov/missions-and-programs/environmental-stewardship/arf-irf-index/

Savannah River NUCLEAR SOLUTIONS℠

United States Department of Energy Statement of Basis/Proposed Plan Fact Sheet for the D-Area Ash Basin Wetlands (NBN) in Support of the Savannah River and Floodplain Swamp Integrator Operable Unit (U), SEMS Number: 69

SRNS-RP- 2025-01448

Savannah River Site, South Carolina **July 2026**

Hard copies of the SB/PP for the DABW are available at the following locations:

Reese Library
Government Information Department
Augusta University
2500 Walton Way
Augusta, Georgia 30904
(706) 737-1744

Asa H. Gordon Library
Savannah State University
2200 Tompkins Road
Savannah, Georgia 31404
(912) 358-4324

HOW TO SUBMIT COMMENTS

The public comment period for the SB/PP for the DABW begins September 16, 2026, and ends October 31, 2026. To request a public meeting (face-to-face and/or virtual) during the public comment period, to obtain more information concerning this document, or to submit written comments, contact one of the following:

Barbara Smoak
Savannah River Nuclear Solutions, LLC
Savannah River Site
Building 703-43A
Aiken, South Carolina 29808
(803) 952-8060
barbara.smoak@srs.gov

The South Carolina Department of Environmental Services
Attn: Mr. Kent Krieg, Director Division of Waste Management
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201
(803) 898-0255