

**LUCIP Addendum for the  
Wetland Area at Dunbarton Bay**  
*Addendum to the Revision 1 Land Use Control Implementation Plan  
for the Wetland Area at Dunbarton Bay in Support of  
Steel Creek Integrator Operable Unit (U)*  
SRNS-RP-2023-00335, Revision 0, June 2023

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# **Addendum to the Revision 1 Land Use Control Implementation Plan for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)**

**SEMS Number: 71**

**SRNS-RP-2023-00335**

**Revision 0**

**June 2023**

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## LIST OF ABBREVIATIONS AND ACRONYMS

~	approximate, approximately
ac	acres
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
ESD	Explanation of Significant Difference
FFA	Federal Facility Agreement
ft	feet
ha	hectare
IOU	Integrator Operable Unit
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
LUCAP	Land Use Control Assurance Plan
m	meter
m <sup>3</sup>	cubic meter
PCR	Post Construction Report
RA	remedial action
ROD	Record of Decision
SARA	South Ash Remediation Area
SCDHEC	South Carolina Department of Health and Environmental Control
SRNS	Savannah River Nuclear Solutions, LLC
SRS	Savannah River Site
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
WADB	Wetland Area at Dunbarton Bay
WSRC	Washington Savannah River Company, LLC
yd <sup>3</sup>	cubic yard

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## **1.0 INTRODUCTION**

This Addendum to the *Land Use Control Implementation Plan for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)* (SRNS 2018a) has been prepared for the Wetland Area at Dunbarton Bay (WADB) at the Savannah River Site (SRS) (Figure 1). The WADB is listed as a Resource Conservation Recovery Act 3004(u) Solid Waste Management Unit/ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Unit in Appendix C of the Federal Facility Agreement (FFA) for SRS (FFA 1993). The WADB covers approximately (~) 15.4 hectares (ha) (38 acres [ac]). Groundwater is not part of the scope of the WADB.

The purpose of this Addendum to the WADB Land Use Control Implementation Plan (LUCIP) is to describe the change in the area subject to land use controls (LUCs) as identified in the *Explanation of Significant Difference for the Revision 1 Record of Decision Remedial Alternative Selection for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)* (SRNS 2023). This Addendum to the LUCIP provides new locations for the access control warning signs as a result of the expanded LUC boundary, as well as a new sign design. The LUC objectives are documented in the LUCIP (SRNS 2018a).

The selected remedy leaves hazardous substances in place that pose a potential future risk and will require land use restrictions until the concentrations of hazardous substances in the ash/soil media are at levels that allow for unrestricted use. As agreed on March 30, 2000, among the United States Department of Energy (USDOE), the United States Environmental Protection Agency (USEPA), and the South Carolina Department of Health and Environmental Control (SCDHEC), SRS is implementing a Land Use Control Assurance Plan (LUCAP) (WSRC 1999) to ensure that the LUCs required by numerous remedial decisions at SRS are properly maintained and periodically verified. The requirements of that LUCAP apply to the LUCs that were selected as part of the remedial action for the WADB. The WADB LUCIP (SRNS 2018a) and this Addendum to the WADB LUCIP contain the detailed and specific measures required to implement and maintain the LUCs selected as part of the remedial decision. The LUCs shall be maintained until the WADB is suitable for unlimited exposure and unrestricted use. Approval by USEPA and SCDHEC is required for any modification or termination of the LUCs.

The USDOE is responsible for implementing, maintaining, monitoring, reporting, and enforcing the LUCs in accordance with the approved LUCIP and Addendum to the LUCIP. Upon final approval, the LUCIP Addendum will be appended to the LUCAP and should be considered incorporated by reference into the Explanation of Significant Difference (ESD) to the ROD (SRNS 2023), establishing implementation and maintenance requirements for the LUCs under CERCLA and the SRS FFA (FFA 1993). The LUCIP Addendum will remain in effect unless and until modifications are approved by USEPA and SCDHEC as necessary for protection of human health and the environment. In accordance with Section 121(c) of CERCLA and National Oil and Hazardous Substances Pollution Contingency Plan §300.430(f)(5)(iii)(c), a statutory review will be conducted within five years of initiation of the remedial action, and every five years thereafter, to ensure that the remedy continues to be protective of human health and the environment.

## **2.0 OVERVIEW OF WADB REMEDIAL ACTION**

A general description and history of the WADB is provided in the WADB LUCIP (SRNS 2018a). The nature and extent of contamination as determined from the *Focused Corrective Measures Study/Feasibility Study Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)* (SRNS 2013) is also described in the WADB LUCIP. The remedy for the WADB selected in the ROD is excavation of 16,820 m<sup>3</sup> (22,000 yd<sup>3</sup>) of ash and contaminated soil media from the boundary of the P-Area Ash Basin to the edge of the 30-m (100-ft) buffer at Dunbarton Bay and LUCs for 10 ha (25 ac) which includes Dunbarton Bay and a 30-m (100-ft) buffer area (Figure 2). During implementation of the remedy, additional ash was discovered outside of the South Ash Remediation Area (SARA), the area between the powerline road and the wetland buffer area. The additional ash discovered encompassed ~0.4 ha (~1 ac).

Due primarily to saturated conditions in the remediation area, but also the discovery of additional ash and restrictions on disposal volume and moisture content that were imposed by the disposal facility, the decision was made to suspend further excavation of the remaining SARA (SRNS 2020) and to expand the original boundaries of the area subject to LUCs as described in the ESD to the ROD (SRNS 2023) to include the SARA (1.6 ha [4 ac]) and the additional ash area (0.4 ha [~1 ac]) (Figure 3). The entirety of the expanded LUC boundary will include the area in the as-built survey for the Dunbarton Bay and Buffer area ( ~14 ha [~34 ac]) as provided in the *Post-*

*Construction Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)* (SRNS 2020) and the ~2 ha (~5 ac) that is being added under this LUCIP Addendum per the ESD. Further excavation will not be pursued in this entire ~16 ha (~39 ac) area, with all ash/soil constituents of concern remaining in place and requiring land use restrictions until such a time as it can be shown that concentrations of hazardous substances in the ash/soil media are at levels that allow for unrestricted use and exposure.

### **3.0 LAND USE CONTROL OBJECTIVES**

This LUCIP Addendum proposes no changes to the WADB LUC objectives documented in the WADB LUCIP (SRNS 2018a) which ensure protectiveness of the remedy.

### **4.0 IMPLEMENTATION OF LAND USE CONTROLS**

The LUCs will be implemented as described in the WADB LUCIP except with respect to the change to the LUC boundary maps and warning signs as documented in this LUCIP Addendum. The original LUC boundary map as presented in the WADB LUCIP (SRNS 2018a), Figure 2, has been revised per this Addendum as shown in Figure 3. The signs installed as described in the Post-Construction Report (PCR) (SRNS 2020) (Figure 2) will be repositioned as shown in Figure 3. Because much of the area subject to LUCs is within a wetland that is not readily accessible, warning signs will be placed along access roads near the LUC area, and all the warning signs will include a map of the LUC boundary as shown in Appendix A.

Following field implementation of the remedial action, a final (as-built) drawing will be prepared to include the boundary coordinates for the area subject to land use restrictions and general locations of access control warning signs as provided in this LUCIP Addendum. The final as-built drawing will be submitted to USEPA and SCDHEC in an Addendum to the WADB PCR.

If the site is ever transferred to non-federal ownership, a certified survey plat of the waste unit will be prepared at or near the time of conveyance to support the restrictive covenants on land use required by the LUCIP and Addendum to the LUCIP and will be recorded with the appropriate county recording agency.

This Addendum to the WADB LUCIP does not change the land transfer requirements, property record notices and restrictions, and security/surveillance measures documented in the WADB LUCIP (SRNS 2018a). There is no change to the field inspection and maintenance activities because of this Addendum. The field inspection checklist that was included in the PCR (SRNS 2020) is included as Appendix B. The expansion of the LUCs did not result in a change to the field inspection checklist. This Addendum to the WADB LUCIP will be appended to the updated SRS LUCAP upon final regulatory approval. The final field inspection checklist will be included in the PCR Addendum.

## **5.0 REFERENCES**

FFA, 1993. *Federal Facility Agreement for the Savannah River Site*, Administrative Docket No. 89-05-FF (Effective Date: August 16, 1993)

SRNS, 2013. *Focused Corrective Measures Study/Feasibility Study Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)*, SRNS-RP-2013-00252, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

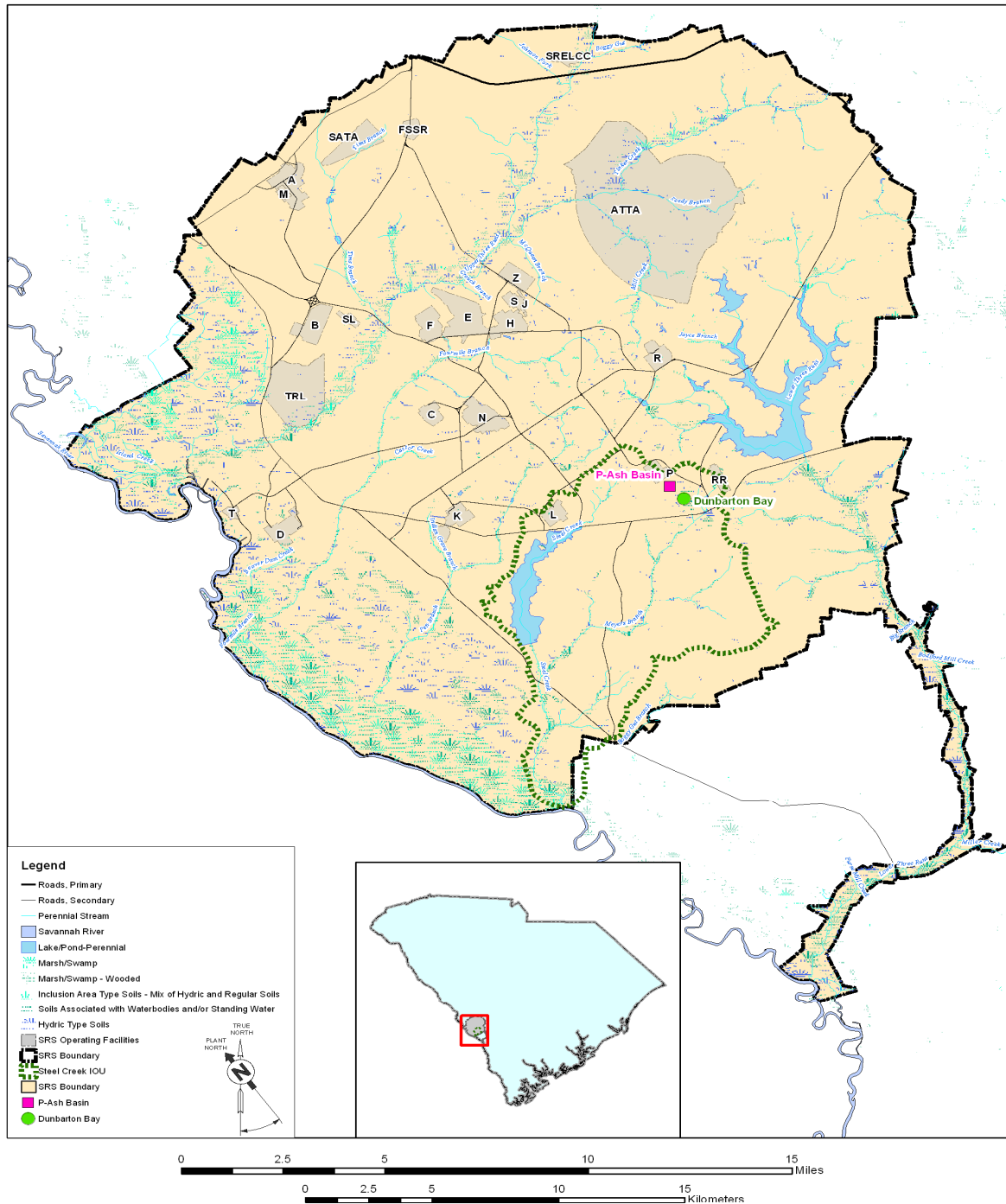
SRNS, 2018a. *Land Use Control Implementation Plan for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)*, SRNS-RP-2018-00479, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

SRNS, 2018b. *Record of Decision Remedial Alternative Selection for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)*, SRNS-RP-2013-00730, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

SRNS, 2020. *Post-Construction Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)*, SRNS-RP-2020-00003, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

SRNS, 2023. *Explanation of Significant Difference for the Revision 1 Record of Decision Remedial Alternative Selection for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)*, SRNS-RP-2022-00982, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

WSRC, 1999. *Land Use Control Assurance Plan for the Savannah River Site*, WSRC-RP-98-4125, Revision 1.1, August 1999, latest update, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC





Projection: Universal Transverse Mercator  
Datum: North American Datum 1983  
Zone: 17N

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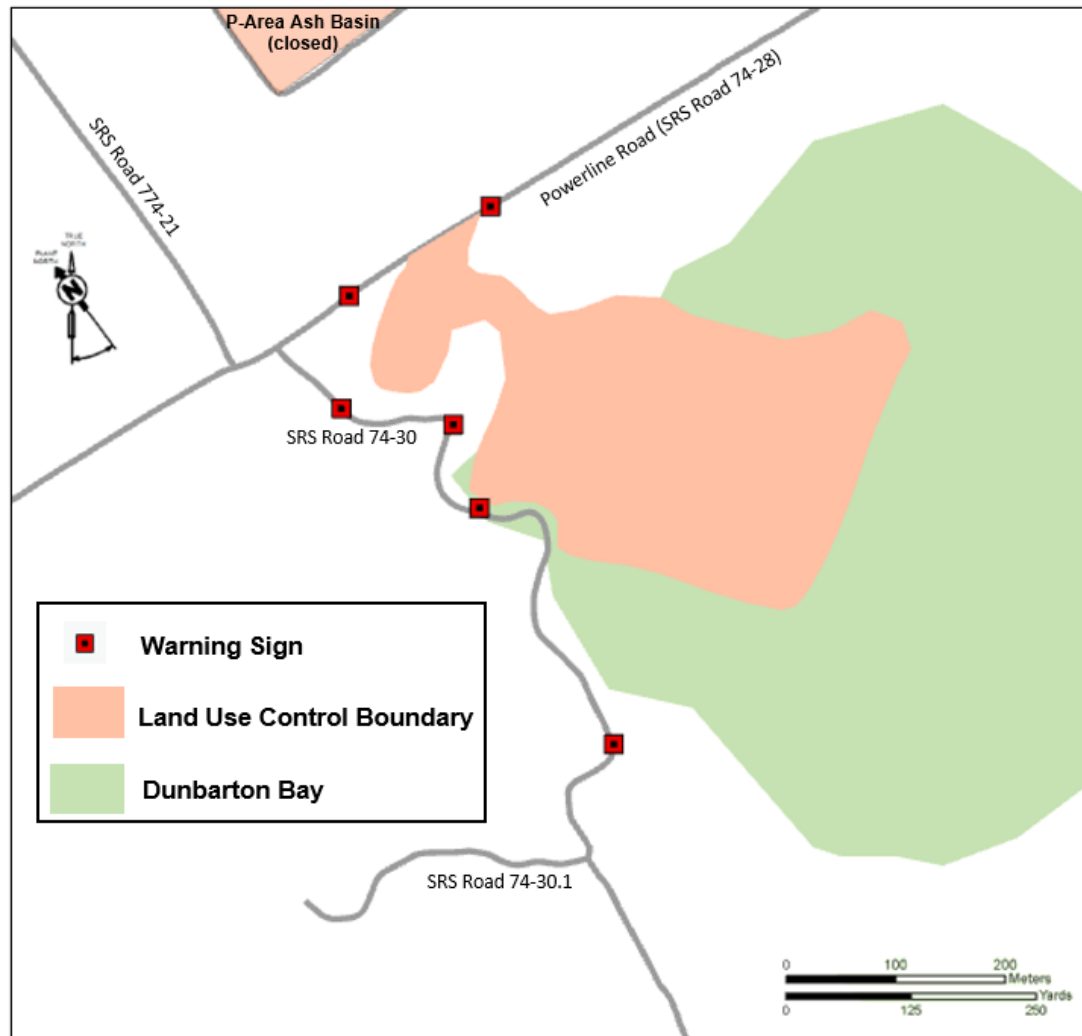


United States Department of Energy			
Project No.	Location	Rev.	Date
20120904	0	09/04/12	SRS
 			
Steel Creek IOU and P-Ash Basin Location			
Prepared by	Date	Reviewed by	Date
Steve Armstrong	09/04/12		

**Figure 1. Location of the WADB within the Savannah River Site**



**Figure 2.** Previous Land Use Control Boundary and Installed Warning Sign Locations



**Figure 3. Proposed New Land Use Control Boundary and New Warning Sign Locations for the WADB**



## APPENDIX A

### ACCESS CONTROL WARNING SIGN



Figure A-1. Access Control Warning Sign

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**APPENDIX B**

**FIELD INSPECTION CHECKLIST FOR WADB**

☐ **SCHEDULED**

☐ **UNSCHEDULED**

A= Satisfactory X= Unsatisfactory (Explanation required)	A or X	Observation of Corrective Action Taken
1. Verify that the roads are accessible.		
2. Verify that the waste unit signs [six signs] are in acceptable condition, have the correct information, and are legible from a distance of 25 feet.		
3. Verify that there are no excavation, digging, or construction activities in the area.		

Inspected by:

\_\_\_\_\_/\_\_\_\_\_  
(Print Name) (Signature) Date: \_\_\_\_\_

Post-Closure Manager:

\_\_\_\_\_/\_\_\_\_\_  
(Print Name) (Signature) Date: \_\_\_\_\_

**CAUTION:** The inspector shall notify the Post-Closure Manager and Environmental Compliance Authority **IMMEDIATELY** if there has been a breach or compromise of the land use controls of this waste unit. The notification shall be in accordance with SRS post-closure inspection procedures.

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