



Department of Energy
 Savannah River Operations Office
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OCT 22 2020

Ms. Susan B. Fulmer, P. G., Manager
 Federal Remediation Section
 Division of Site Assessment, Remediation and Revitalization
 Bureau of Land and Waste Management
 South Carolina Department of Health and Environmental Control
 2600 Bull Street
 Columbia, South Carolina 29201

Mr. Jon Richards
 Savannah River Site Remedial Project Manager
 Superfund Division
 U. S. Environmental Protection Agency, Region 4
 61 Forsyth Street, SW
 Atlanta, Georgia 30303

Dear Ms. Fulmer and Mr. Richards:

SUBJECT: 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, October 2020) (Redline Pages and Clean Copy) and Savannah River Site's Responses to the Regulatory Comments on the Revision 0 Document SEMS, Number: 71

In accordance with the terms of the Federal Facility Agreement, the U. S. Department of Energy (DOE) is submitting the subject document for your review. The South Carolina Department of Health and Environmental Control (SCDHEC) and U. S. Environmental Protection Agency (EPA) provided comments on the Revision 0 report on July 14, 2020 and August 28, 2020, respectively. The draft Savannah River Site's (SRS) comment responses were transmitted electronically to the SCDHEC and EPA on October 1, 2020. The enclosed final SRS' responses have been incorporated into the revised document. Please review the enclosures and provide your approval within thirty (30) days of receipt. The effort and time that the SCDHEC and the EPA have given on the subject operable unit are greatly appreciated.

Questions from you or your staff may be directed to me at (803) 952-8365, or the DOE Federal Project Director, Karen Adams, at (803) 952-7871.

Sincerely,
 Brian T.
 Hennessey

Digitally signed by Brian T.
 Hennessey
 Date: 2020.10.19 15:11:07 -04'00'

Brian T. Hennessey
 SRS Remedial Project Manager
 Infrastructure and Area Completion Division

IACD-21-102

OCT 22 2020

Ms. Susan Fulmer
Mr. Jon Richards

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Enclosures:

1. 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, October 2020) SEMS Number: 71 (Redline Pages and Clean Copy)
2. SRS Responses to EPA Comments on the Post-Construction Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U) (SRNS-RP-2020-00003, Revision 0, June 2020) SEMS Number: 71
3. SRS Responses to SCDHEC Comments on the Post-Construction Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U) (SRNS-RP-2020-00003, Revision 0, June 2020) SEMS Number: 71

cc w/o encl:

J. Blalock, SCDHEC-Columbia
S. French, SCDHEC-Columbia
M. Reece, SCDHEC-Columbia
G. K. Taylor, SCDHEC-Columbia
T. Fuss, SCDHEC-Aiken Environmental Affairs Office
G. O'Quinn, SCDHEC-Aiken Environmental Affairs Office
B. Cameron, SCDHEC-Aiken Environmental Affairs Office
R. H. Pope, EPA-Atlanta

cc w/ encl:

M. McRae, TechLaw, Inc.

Post-Construction Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U)

SEMS Number: 71

SRNS-RP-2020-00003

Revision 01 Redline

June-October 2020

ash and limits of disturbance was excavated and stockpiled along the edge of the ash remediation area (Figure 5). The eastern corridor was backfilled, and a diversion berm was constructed as part of the initial sediment and erosion control features. This diversion berm prevented stormwater from entering the contaminated area from the western higher elevation side.

2.3.2.2 NARA Phase I activities

The NARA includes an ~2.5 ha (6.1 ac) of ash remediation plus an additional 1.9 ha (4.7 ac) that were used for stormwater conveyance, temporary stockpiles, and erosion and sediment control measures. This ~4.4-ha (10.8-ac) lies between the now closed PAB and the SRS Road 74-28. Initial stormwater and sediment control activities (perimeter controls) in this area included the construction of a sediment trap at the southern end of the NARA, a stormwater diversion channel, and diversion berms (Figure 6). During Phase I, clearing and grubbing activities in the NARA were limited to the area required for construction of the stormwater channel, sediment trap and diversion berms to prevent contaminated ash and sediment migration during land disturbing activities.

The sediment trap construction included the excavation of a low-lying area to allow runoff from within the contaminated area to pond, and a rock outlet structure to trap sediment and prevent release of sediment outside of the NARA. During construction of the sediment trap, ash was found outside of the limits of ash boundary as identified on the design drawings. This additional ash included a narrow band which was parallel to the road and upgradient of the triple culverts (see Figure 7). A portion of this additional ash, where the rock outlet structure was installed, was excavated during Phase I activities. The remaining share was excavated during Phase II activities.

Once the sediment trap was constructed, excavated ash from the SARA was temporarily stockpiled adjacent to the sediment trap. Temporarily stockpiling ash was required for construction scheduling due to daily volume limits imposed by the disposal facility and to allow the ash to dry prior to transporting in order to meet the moisture limits required by the operators of Three Rivers Landfill.

The stormwater channel was constructed to direct stormwater from the closed PAB around the ash and contaminated soil into an existing triple culvert at SRS Road 74-28. The stormwater diversion channel is ~323-m (1,060-ft) long, much of which was outside the limits of ash. Clean soil excavated to construct the channel was stockpiled in the western stockpile area and used as fill material as needed throughout the project. Ash excavated during the construction of the stormwater diversion channel was stockpiled within the NARA or directly disposed of at Three Rivers Landfill. Seven rock check dams were installed within the stormwater channel to reduce the speed of the concentrated storm runoff flow. Sod was installed in the stormwater channel for stabilization.

Two diversion berms were installed in the NARA for sediment and erosion control. These diversion berms ran north-south along the east and west sides of the contaminated ash and prevented sheet flow from the adjacent areas from entering the contaminated area. Additional ash was found outside of the limits of ash during the installation of the diversion berm in the southwestern corner of the NARA (Figure 7). Ash near the culvert was excavated prior to installing the rock outlet protection. Ash to the west of the berm was excavated during Phase II activities prior to final stabilization.

2.3.3 Phase II Construction and Stabilization

Phase II activities included clearing and grubbing, excavation of ash, confirmation sampling, grading, and stabilization. Similar to Phase I activities, the design specified a particular sequencing of activities in order to mitigate sediment migration and to protect the wetlands associated with Dunbarton Bay. Phase II activities in the SARA were divided into four (4) zones with the requirement to begin construction activities and complete stabilization in each zone before proceeding to the next zone. In the NARA, there were no design requirements for a particular sequence for Phase II activities. Details of the Phase II activities performed in each of the remediation areas are described in the following subsections.

this migration is limited to the Zone 1/Zone 2 interface and the established stormwater flow channel. The frequency of future occurrences of this condition is a function of the quantity, intensity, and duration of rain events.

Ash remaining in the SARA, additional ash found outside of the limits of ash boundary, and ash migration into Zone 1 will be addressed at a later date after completion of an evaluation of ash disposition alternatives for all coal combustion residual waste sites listed in the FFA. RA(s) completed for this remaining WADB ash will be documented in the CMIR/RACR.

The selected remedy for ash remaining in the wetlands of Dunbarton Bay and the buffer area was LUCs. Six warning signs were installed at ingress points of the wetland area to control access by preventing unknowing entry and ensure that unrestricted use of the waste unit does not occur while the unit is under ownership of the USDOE. A survey plat of the LUCs for the wetland area and buffer area was prepared by John M. Bailey, a professional surveyor registered in the State of South Carolina. The location of the warning signs is shown on the survey plat provided in Appendix ~~D~~C. A photo of two of the access control signs is provided in Figure ~~4~~516.

The SRNS post-closure maintenance organization will perform inspections in accordance with the inspection checklist for the WADB (Appendix E) per the requirements of the LUCIP (SRNS 2018c). The checklist as presented in the LUCIP initially listed 5 warning signs. The checklist has been revised to account for an additional warning sign (i.e., six total signs) that was installed during field implementation of the RA. Maintenance per the revised checklist in Appendix E and LUCs per the LUCIP will be reported during the five-year review of the remedy.

8.0 PROJECT COSTS

The estimated capital cost as detailed in the Focused CMS/FS for the WADB (SRNS 2013) was prepared in 2011 and is provided in Table 5. This estimated cost was for the entire NARA and SARA portions of the remediation area. The actual cost includes remediation costs associated with Zone 1 of the SARA and the entire portion of the NARA.

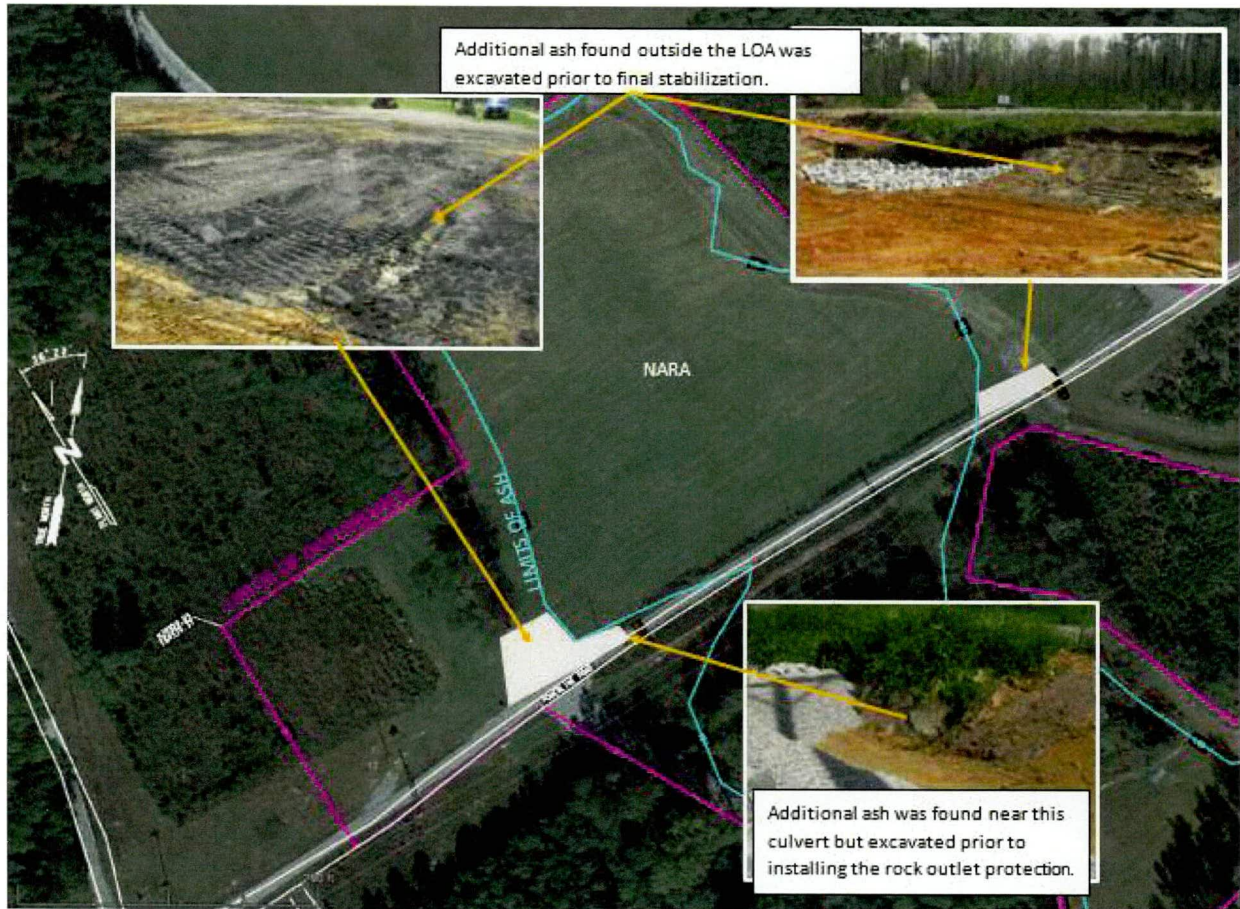


Figure 7. Additional Ash Outside the Limits of Ash Discovered During Phase I Activities in the NARASARA Phase II Excavation of Ash in Zone 1

Responses to the
South Carolina Department of Health and Environmental Control Comments on:
Post-Construction Report for the Wetland Area at Dunbarton Bay
in Support of Steel Creek Integrator Operable Unit (U),
SEMS Number: 71 (SRNS-RP-2020-00003, Revision 0, June 2020) received June 4, 2020.

Comment received: August 28, 2020

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Specific Comments

1. Table 4, Summary of Design Changes, page 40. Items 4 and 6 of this table indicate that additional ash was found outside of the original boundary for the limits of ash in two separate areas of the North Ash Remediation Area (NARA) - one location at the outfall structure of a sediment trap on the eastern side and the other at a designed diversion berm location on the southwestern corner. There appears to be no discussion of this additional ash in Sections 2.3.2.2 or 2.3.3.2 or a general figure showing these locations, as was done for the additional ash discovered outside of the original boundary at the South Ash Remediation Area (SARA). Please include a brief discussion and a figure showing the extent of additional ash at these two locations.

Response: Agree. Section 2.3.2.2 will be modified to include a discussion of the areas of additional ash found outside of the limits of ash boundary on the design drawings and a new figure will be added to show the locations of additional ash found. For the area within the sediment trap, the second paragraph of Section 2.3.2.2 will be modified as follows:

“The sediment trap construction included the excavation of a low-lying area to allow runoff from within the contaminated area to pond, and a rock outlet structure to trap sediment and prevent release of sediment outside of the NARA. During construction of the sediment trap, ash was found outside of the limits of ash as identified on the design drawings. This additional ash included a narrow band which was parallel to the road and upgradient of the triple culverts (see Figure 7). A portion of this additional ash, where the rock outlet structure was installed, was excavated during Phase I activities. The remaining share was excavated during Phase II activities.”

Once the sediment trap was constructed, excavated ash from the SARA was temporarily stockpiled adjacent to the sediment trap. Temporarily stockpiling ash was required for construction scheduling due to daily volume limits imposed by the disposal facility and to allow the ash to dry prior to transporting in order to meet the moisture limits required by the operators of Three Rivers Landfill.”

For the ash found in the southwestern corner near the diversion berm, the last paragraph of Section 2.3.2.2 will be modified as follows:

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“Two diversion berms were installed in the NARA for sediment and erosion control. These diversion berms ran north-south along the east and west sides of the contaminated ash and prevented sheet flow from the adjacent areas from entering the contaminated area. Additional ash was found outside of the limits of ash during the installation of the diversion berm in the southwestern corner of the NARA (Figure 7). Ash near the culvert was excavated prior to installing the rock outlet protection. Ash to the west of the berm was excavated during Phase II activities prior to final stabilization.”

A new figure, new Figure 7, will be added. The existing figures (7 through 15) will be renumbered appropriately. The new figure is shown below:

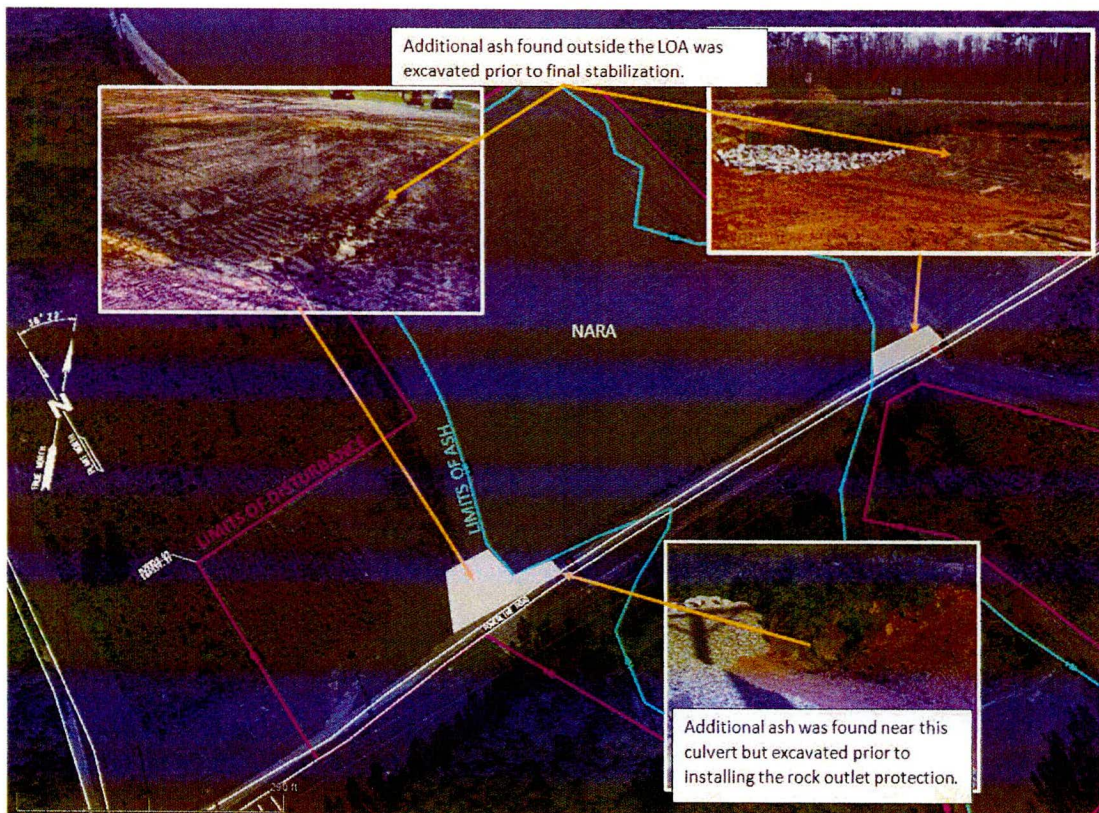


Figure 7. Additional Ash Outside the Limits of Ash Discovered During Phase I Activities in the NARA

Contact for comment: Monique Rabin, (803) 952-6695, monique.rabin@srs.gov

**SRS Responses to the
United States Environmental Protection Agency, Region 4 Comments on:
Post-Construction Report for the Wetland Area at Dunbarton Bay
in Support of Steel Creek Integrator Operable Unit (U),
SEMS Number: 71 (SRNS-RP-2020-00003, Revision 0, June 2020) received June 4, 2020.**

Comment received: July 14, 2020

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Comment:

The Post-Construction Report for the Wetland Area at Dunbarton Bay in Support of Steel Creek Integrator Operable Unit (U) (PCR) includes information about the inspection of the remediated Dunbarton Bay wetland area. For example, the PCR Section 7.0 (Post-Construction Activities) states the Savannah River Nuclear Solutions (SRNS) post-closure maintenance organization will perform inspections in accordance with the inspection checklist for the Wetland Area at Dunbarton Bay (WADB) per the requirements of the Land Use Control Implementation Plan (LUCIP). The LUCIP initially listed five (5) warning signs but was revised to account for an additional warning sign (i.e., six total signs). However, the checklist included in the PCR Appendix E only lists three (3) items. As such, it is not clearly understood if the checklist included in Appendix B includes all the inspection requirements per the LUCIP. *Please revise the PCR to include consistent information about what the post-remedial inspection checklist includes and to ensure the most recent, correct checklist is included in Appendix E.*

Response: Agree. The checklist in Appendix E is the current and correct checklist. It differs from the checklist in the approved LUCIP only in that it includes an additional sign. The last sentence of Section 7 of the PCR will be revised for clarification as follows:

“The checklist has been revised to account for an additional warning sign (i.e., six total signs) that was installed during field implementation of the RA. Maintenance per the revised checklist in Appendix E and LUCs per the LUCIP will be reported during the five-year review of the remedy.”

Contact for comment: Monique Rabin, (803) 952-6695, monique.rabin@srs.gov