



January 24, 2019

Mr. Brian T. Hennessey, SRS Remedial Project Manager
Infrastructure and Area Completion Division
U. S. Department of Energy
Savannah River Operations Office
Post Office Box A
Aiken, South Carolina 29802



Re: Removal Site Evaluation Report / Engineered Evaluation / Cost Analysis (RSER/EE/CA) for the D-Area Coal Storage Area (484-17D) (U), SEMS Number: 63 (SRNS-RP-2018-00813, Revision 0, November 2018) received November 29, 2018.

Dear Mr. Hennessey:

The Department has completed its review of the above referenced document pursuant to the Savannah River Site Federal Facility Agreement. The attached comments were generated as a result of this review. These comments must be addressed prior to final approval of the above referenced document. As specified in Section XXII, Review/Comment on Documents, the appropriate technical staff will be available to participate in a joint DOE/EPA/DHEC comment resolution meeting to discuss these comments, if necessary.

To schedule a meeting to resolve the attached comments or to obtain further information, please contact me at (803) 898-4331.

Sincerely,

Susan B. Fulmer, P.G., Manager
Federal Remediation Section
Division of Site Assessment, Remediation, Revitalization
Bureau of Land and Waste Management

cc: C. L. Bergren, SRNS-ACP (Signed Original)
Travis Fuss, Aiken Environmental Affairs Office (via email)
Jon Richards, EPA Region IV
Heather Cathcart, BLWM

South Carolina Department of Health and Environmental Control Comments on:
Removal Site Evaluation Report / Engineered Evaluation / Cost Analysis (RSER/EE/CA) for the
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Page 1 of 2

General Comments

1. The last paragraph of Section 2.5 indicates that, if left unmitigated, the continued presence of an acidic plume and the resulting impact on downgradient groundwater is estimated to persist for decades. The final sentence of this section indicates that neutralization of this acidity can eventually lead to reduction or elimination of the metals plume. For Alternative 2, the following statement (or similar) is made in Sections 4.0, 5.1 and 6.0: "The addition of soil neutralization amendments will assist in the return of vadose zone soil to more natural conditions and eventually allow groundwater pH to return to natural background levels over time." Is there an estimate for a time frame in which this will occur? Additional sampling is proposed 1.5 years following the addition of soil neutralization amendments. Is this the expected time frame for groundwater pH levels to return to background levels, or will this sampling be more of a gauge to determine the immediate effectiveness of the soil neutralization amendments? Please elucidate.
2. The RSER/EE/CA should be revised to be more clear about the expectations of the Preferred Removal Action Alternative (i.e., time frame for achieving RAO), and should also discuss in more detail the purpose and goals for the Sampling Plan for the D-Area Coal Storage Area (DCSA).
3. The document mentions that normal pH levels in native soils are generally above 5.0. It is unclear if the removal action objective is to raise the pH in the DCSA to 5.0. Please consider expanding Section 3.2 Removal Action Objective on page 8 of 42 to include more specific objectives for the removal action.

Specific Comments

1. Section 2.2, Previous Action, page 4. Figure 4 is referenced in the first sentence of this section which discusses the construction of a drainage ditch connecting the southern section of the DCSA to the southern 75% section of the 489-D Coal Pile Runoff Basin, as well as, grooming the area with topsoil and a grass cover. Figure 4 shows field pH measurements of groundwater the beryllium plume at D-Area. It appears that Figure 5 may have been the intended referenced figure instead.
2. Section 4.0, Identification of Removal Action Objectives, Alternative 2, last paragraph, page 9. The document states: "The 15-20 cm layer of coal fragments in the southern 2-ha section has similar pH measurements to the vadose zone soils, is *likely weathered/oxidized, and poses no greater leaching threat...*" Please expand on how this is known to pose no greater threat, and how the characterization of the layer of coal fragments is known to have limited leaching potential. It is the State's opinion that if Alternative 2 is the accepted remedy and the coal layer is not removed, then

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Page 2 of 2

additional follow-up soil pH sampling events be conducted to confirm the effectiveness of the removal action.

3. Section 5.4 Cost, Alternative 2, first paragraph, page 15, and Appendix A, Sampling Plan for the DCSA, page App A-1. The document states that a one-time sampling event will occur approximately 1.5 years after the soil amendment additions to confirm that the addition of soil neutralization amendments were effective. Please give some explanation as to why only one confirmation sampling event is sufficient and considered a long-term solution.
4. Section 5.4, Cost, Alternative 3, first sentence, page 16. Please change the Alternative "2" to a "3".
5. Section 5.5, Comparison of Removal Action Alternatives, page 17 and Section 6.0, Preferred Removal Action Alternative, page 18. The comparative analysis table for the three alternatives lists "High" in Acceptance for Alternative 2 and "Medium" for Alternative 3, yet the reason for these rankings is not provided along with those for Effectiveness, Implementability, and Cost in Section 6.0. Please provide discussion and justification for the Acceptance rankings.
6. Appendix A, Sampling Plan for the DCSA, page A-1. The last sentence of this section states: "SRS will submit a Program Plan prior to collecting saturated soil samples from the DCSA." Is this a Sampling and Analysis Plan? Please clarify.