SC DEPARTMENT of ENVIRONMENTAL SERVICES

Susan Fulmer, P.G.
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ENVIRONMENTAL COMPLIANCE &

APR 27 2026

AREA COMPLETION PROJECTS

April 27, 2026

Mr. Matthew R. Baker, Acting FFA Remedial Project Manager
Remediation, Deactivation and Decommissioning Division
U. S. Department of Energy
Savannah River Operations Office
Post Office Box A
Aiken, South Carolina 29802

Re: Removal Site Evaluation Report/Engineering Evaluation/Cost Analysis for the D-Area Groundwater SR

Dear Mr. Baker:

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/SCDES 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 Digitally signed by Susan B. Fulmer
Date: 2026.04.27 10:34:44 -04'00'

Susan B. Fulmer, P.G., Manager
Federal Remediation Section
Division of Site Assessment, Remediation, Revitalization

cc: C. L. Bergren, SRNS-ACP (Signed Original)
Gregg O'Quinn, BRLS – Aiken
Jon Richards, EPA Region IV
Heather Cathcart, BLWM

South Carolina Department of Environmental Services Comments on:
Removal Site Evaluation Report/Engineering Evaluation/Cost Analysis for the
D-Area Groundwater Operable Unit Per- and Polyfluoroalkyl Substances Plume (U),
SEMS Number: 63 (SRNS-RP-2025-01764, Revision 0, January 2026) received February 13, 2026.

General Comments

1. While the "Recommended Removal Action Alternative" of Alternative 2a: In-Situ PAB (CAC Injections) presented in the RSER/EE/CA is explained to have been extensively studied and deployed in the field to reduce PFAS mobility in the subsurface, there still remains an uncertainty regarding the long-term fate of the injected media in the subsurface and the potential for breakdown of the CAC media which could lead to breakthrough of the contamination. It is understood that as the CAC adsorption sites become saturated, additional adsorptive material may be applied. However, it is also understood that Alternatives 2a and 2b only sequester the PFAS contamination but do not destroy it. From what is understood, these Alternatives can generate PFAS management and reduce risk exposure, but PFAS is not completely removed from the subsurface; it is just immobilized.

    a. A more thorough explanation is needed to clarify whether there are any aging effects of the CAC Injected media which would cause reduction in longevity leading to the breakthrough of the PFAS contamination immobilized within. SCDES has concerns regarding the uncertainty of the long-term fate of the PFAS-contaminated media, specifically with Alternative 2a: In-Situ PAB (CAC Injections). Will the contaminated media remain in the subsurface indefinitely, or will it be removed and properly disposed of at some point in the future? See specific comment #5 below for a request for additional information on the ultimate fate of the PFAS-contaminated media at the end of the PAB's useful life.

    b. Additionally, based on the current understanding, subsurface PFAS treatment technologies are largely limited to the immobilization of PFAS contamination. In the future, PFAS destruction technologies may become available and be a potentially viable option for the Site. Does the Recommended Removal Action Alternative, In-Situ PAB (CAC Injections), allow for SRNS to implement any potential destructive treatment technologies developed in the future? For instance, will the CAC Injections maintain the current permeability of the formation such that a potential PFAS-destruction injectate can be injected in the future? Please clarify.

2. Since the PFAS constituent plumes overlap several other DAG OU plumes, would any other of these contaminants, such as TCE, affect the adsorption effectiveness and reduce the media longevity of either the CAC or GAC Alternatives. If so, please include a statement better explaining this concept and note that this factor will also be considered in the design of the selected Alternative.

3. As per the *RFI/RI Second Work Plan Addendum for the DAG OU (D-Area Upgradient Sources) (SRNS 2026)*, there is additional work planned in four potential PFAS source areas to further characterize the PFAS groundwater plume. Would this additional planned work to investigate these sources areas affect the arrangement of the recommended Alternative, specifically the investigative work in the "Potential Grass Fire" area? Based on maps, the

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"Potential Grass Fire" area is located just south/southeast of the higher concentration portion of the PFAS plume.

Specific Comments

1. List of Acronyms and Abbreviations, page v. The acronyms for "removal action objective" (RAO) and "permeable reactive barriers" (PRB) are not included on the list. Please include.

2. Section 2.6, Nature and Extent of Contamination, page 9. This section summarizes the efforts to characterize the nature and extent of the PFAS contamination within the DAG OU. However, this section does not mention the planned additional work as proposed in the *RFI/RI Second Work Plan Addendum for the DAG OU (D-Area Upgradient Sources) (SRNS 2026)*. As per the *RFI/RI Work Plan Addendum*, the purpose of the additional work is to perform the characterization investigation to delineate four additional potential PFAS source areas as well as further characterize the overall PFAS plume in the DAG OU. Please include a description of the planned work in this section since further characterization of the PFAS plume is ongoing.

3. Section 2.6, Nature and Extent of Contamination, Subsection – Characterization Efforts, pages 10 and 11. This section discusses the distribution and concentrations of the PFAS constituents detected in the UTRA. However, this section does not discuss those PFAS constituents detected in the GA, nor are the associated GA plume maps provided. Please include discussion on the extent of PFAS constituent contamination into the GA as well as the associated plume maps.

4. Section 3.0, Removal Action Scope and Objectives, page 12. The last sentence of this section states that an effectiveness monitoring plan for the DAGW OU PFAS Plume RA will be developed. Please indicate which document this plan will be included in, or if it will be a stand-alone document, and include it in the project schedule in Section 8.

5. Sections 4.2 and 4.3, Alternatives 2a and 2b, pages 13-15. Please include the potential ultimate fate(s) of the PFAS-contaminated soil and media at the end of each permeable adsorptive barrier's useful life for these two alternatives, similar to the discussion of the ultimate fate of GAC filter vessels provided in Section 4.4 for Alternative 3.

6. Section 5.1, Effectiveness: Alternatives 2a and 2b, pages 17 and 18. The short- and long-term effectiveness discussion for these two alternatives include the statement that "source elimination will extend the barrier lifetime." Please include some discussion of any possible source elimination and/or reduction methods for these two alternatives, and revise Section 4 as necessary to include these potential remedial enhancements.

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7. Figure 6, Sampling Locations, page 40. Surface water stations DSWM-1A and -3A appear to be missing labels.

8. Appendix B, Cost Estimates, page B-7. For the cost estimate of "Alternative 2b, PAB – GAC Trench", the Fifteen Year Cost Section contains the cost estimate labeled "Barrier Maintenance – Reinjection of CAC" with the note "50% of total capital cost of CAC barrier." Since this is the cost estimate for the GAC Trench, please correct these for the appropriate alternative. Additionally, since this Fifteen Year Cost Estimate is the same for both Alternative 2a and 2b, please clarify if this estimate cost is correct.