



**REGION 4**  
ATLANTA, GA 30303

**ENVIRONMENTAL COMPLIANCE &**

SRNS-OS-2025-00241

August 21, 2025

**AUG 21 2025**

Mr. Matthew Baker, SRS Remedial Project Manager  
Remediation and Deactivation & Decommissioning Division  
U.S. Department of Energy  
Savannah River Operations Office  
P.O. Box A  
Aiken, South Carolina 29802

**AREA COMPLETION PROJECTS**

**EPA Comments: PERFORMANCE EVALUATION REPORT FOR THE A-AREA BURNING/RUBBLE PITS (731-A, -1A) AND RUBBLE PIT (731-2A) AND THE MISCELLANEOUS CHEMICAL BASIN/METALS BURNING PIT (731-4A, -5A) OPERABLE UNIT, JANUARY THROUGH DECEMBER 2024 (U) SEMS NUMBER: 28 SRNS-RP-2025-00079, REVISION 0 MAY 2025**

Dear Mr. Baker,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the A Area PER BRP[731-A,-1A], RP[731-2A], MCB/MBP[731-4A,-5A], 2024 report. Our comments are attached below:

If you have any questions or require additional information, please contact me at (404) 431-1340.

Sincerely,

JON RICHARDS Digitally signed by JON RICHARDS  
Date: 2025.08.21 13:24:33 -0400

Jon Richards  
FFA Remedial Project Manager  
Superfund & Emergency Management  
Division

cc: C.L. Bergren, SRNS-ACP  
Susan Fulmer, SCDHEC

## GENERAL COMMENTS

1. The Report references soil vapor concentration trends extending from 2011–2024 without presenting a robust statistical trend analysis (e.g., regression, 95% upper confidence limits (UCLs), or Mann-Kendall). Statements about asymptotic behavior and “decreasing VOC trends” are qualitative and would be strengthened by visual presentations and quantified long-term mass removal or concentration trends. *Please revise the Report to include statistical trend analyses for statements regarding trends and remedy goals.*
2. The Report states that 420 of 422 soil samples at the A-Area Burning/Rubble Pits and Rubble Pit (ABRP) and 381 of 383 at the Miscellaneous Chemical Basin (MCB) were non-detect for trichloroethylene/tetrachloroethylene (TCE/PCE), with two estimated values below cleanup thresholds. However, no discussion is provided on the analytical sensitivity (e.g., method detection limits vs. reporting limits), reproducibility, or representativeness of split and duplicate samples. *Please revise the Report to include a quality assurance/quality control (QA/QC) evaluation and assurance that acceptable data addressed the entire areas sampled.*
3. In the Sampling and Analysis Plan for the A-Area Burning/Rubble Pits (731-A, -1A) and Rubble Pit (731-2A) and the Miscellaneous Chemical Basin/Metals Burning Pit (731-4A, -5A) Operable Unit to Evaluate the Effectiveness of the Soil Vapor Extraction System at Achieving Remedial Goals, SEMS Number: 28 SRNS-RP-2022-01080, Revision 0, January 2023, Section 3.0, Project Data Quality Objectives (DQOs) outlines QA/QC requirements for this Report. However, the Report has no mention of DQOs. *Please revise the Report to include a discussion of the DQOs, whether they were met, any issues with the data, and whether the data can be used to make decisions regarding the Report's recommendations.*
4. While the Report recommendations state “Maintain LUCs to preclude residential/unrestricted land use. No change to the ABRP/MCB/MBP OU Land Use Control Implementation Plan (WSRC-RP-2006-4073, Revision 1, September 2007) is needed”, it does not summarize current institutional controls (ICs), monitoring frequencies, or how continued compliance will be verified following soil vapor extraction (SVE) discontinuation. *Please revise the Report to discuss the ICs, monitoring frequencies, and how continued compliance will be performed for the A-Area Burning/Rubble Pits (731-A, -1A) and Rubble Pit (731-2A) and the Miscellaneous Chemical Basin/Metals Burning Pit (731-4A, -5A) Operable Unit (OU).*
5. In Section 2.1.2 (Historical Information) the Report states “Rebound testing conducted on September 12 and 13, 2012, indicated that the VOC removal at the ABRP Trench Subunit is significantly diffusion limited (SRNS 2017).” This supports the conclusion that the SVE system has likely reached asymptotic performance and could be discontinued, but the potential for rebound still exists. *Please revise the Report to include a plan to verify that rebound has not occurred before the SVE system can be entirely discontinued, the equipment removed, and the wells abandoned.*

## SPECIFIC COMMENTS

1. **Section 1.3, Groundwater, Page 2 of 76:** The Report notes that the M-Area Aquifer Zone (MAAZ) wells have decreasing trends and TCE is “trending downward to the MCL.” A trend chart or time-

series data summary would clarify this statement and better support the assertion of mass depletion. Additionally, no statistical confidence is provided regarding when compliance is expected to be fully achieved. *Please revise the Report to include statistically based support for this statement.*

2. **Section 2.1.4, Sampling Methods and Results, Page 5 of 76:** TCE values for ASH-06 (e.g., 3.383 parts per million by volume ( ) in 2018) suggest it remains a high-concentration well. Yet, the Report recommends ceasing operations. *Please revise the Report to provide additional lines of evidence to justify that residual mass is inaccessible or unlikely to impact groundwater, potentially using mass transfer rate analysis or rebound evaluations.*
3. **Section 2.1.4, Sampling Methods and Results, Page 7 of 76:** The calculations for estimating mass removal, Equation 1, include assumptions about flow rates and operational periods. The method should specify how uncertainties in flow rates and operational periods were accounted for, particularly for BaroBalls™ flow rates. *Please revise the Report to expand on the text in the footnotes and discuss whether the calculated mass removed is biased high or low due to the assumptions used and noted uncertainties.*
4. **Section 4.3, Recommendations, Page 13 of 96:** Recommendation #3 states that wells will be abandoned “as funding becomes available.” This raises concern about the indefinite status of infrastructure. EPA typically requires post-remedial performance verification; therefore, a specific schedule or requirement for abandonment verification should be included. *Please revise the Report to include a schedule, timeline, and plan for decommissioning SVE wells and equipment.*
5. **Figure 6, ABRP Passive Soil-Gas Vapor Concentration Over Time Trend Diagram, Page 29 of 76 and Figure 8, MCB Soil-Gas Vapor Concentration Over Time Trend Diagram, Page 31 of 76:** The soil vapor concentration trend diagrams should include confidence intervals or note whether detection limits changed over time. Without this information, it is unclear if concentration stability reflects actual plume asymptotes or analytical limitations. *Please revise the figures to include confidence intervals or trend analyses.*

#### **MINOR COMMENT**

1. **Table of Contents, List of Tables, Page iv of vi: Table 12 (Summary of ABRP Soil Sampling Results) and Table 13 (Summary of MCB Soil Sampling Results (Page 63 of 76) are missing from the list of tables in the table of contents. Please revise the list of tables to include Tables 12 and 13.**