



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8960

ENVIRONMENTAL COMPLIANCE &

March 16, 2023

Mr. Brian T. Hennessey
SRS Remedial Project Manager
Infrastructure and Area Completion Division
U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
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MAR 17 2023

AREA COMPLETION PROJECTS

EPA Comments on 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 (U), SEMS NUMBER: 28, SRNS-RP-2022-01080, REVISION 0, JANUARY 2023

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed this SAP for these reports. EPA comments are attached.

If you have any questions or require additional information, please contact me at (404) 562-8648.

Sincerely,

**Richards,
Jon**

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Richards, Jon
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Jon Richards
FFA Remedial Project Manager
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Division

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

GENERAL COMMENTS

1. According to Format/Protocol F-14 in the EC&ACP Regulatory Document Handbook, the SAP should include a section that presents the reason/purpose for sampling, relevant background information, the regulatory framework for the operable unit (OU), and any evaluations and decisions made during the scoping process (i.e., Format/Protocol F-14, Section 1.1, Operable Unit/Facility Name and Purpose for Sampling). However, this section is missing from the SAP. *Please revise the SAP to include this information in accordance with Section 1.1 of Format/Protocol F-14.*
2. The last paragraph in Section 4.0 (Sampling Design and Rationale) indicates that groundwater flows towards the southwest; however, groundwater flow directional arrows are not depicted on any of the SAP figures. *Please revise the SAP to include a figure that shows groundwater flow directional arrows drawn based on groundwater elevations measured in site monitoring wells.*
3. The SAP includes Table 7 (Field Quality Control/Quality Assurance Sampling Requirements) (see Page 30); however, Table 7 is not referenced anywhere in the text, and as such, the significance of Table 7 is unclear. *Please revise the SAP text to include a reference to Table 7.*

SPECIFIC COMMENTS

1. **Section 2.4, Summary of Existing Data Compared to Risk-Based Thresholds, Page 4 of 30:** This section is insufficiently detailed. According to Section 2.4 in Format/Protocol F-14, this section should include a summary of the detected contaminant concentrations by media compared to the remedial goals (RGs), but this information is missing from Section 2.4. While Figure 7 (ABRP Proposed Soil Boring Locations with Maximum 2021 TCE Concentrations [ppmv]) and Figure 8 (MCB Proposed Soil Boring Locations with Maximum 2021 TCE and PCE Concentrations [ppmv]) show the highest concentrations of trichloroethylene (TCE) and/or tetrachloroethylene (PCE) from 2021, these figures are not referenced in Section 2.4. *Please revise Section 2.4 to include a summary of the detected contaminant concentrations by media compared to the RGs.*
2. **Section 3.1.1, State the Problem, Page 5 of 30:** The first sentence in the second paragraph states, “Analysis of 2021 soil gas data indicated PCE and TCE vapor concentrations demonstrated generally decreasing values;” however, according to Figure 6 (MCB Soil-Gas Vapor Concentration Over Time Trend Diagram), the total TCE and PCE maximum concentrations increased from 2020 to 2021. *Please revise Section 3.1.1 to clarify that total TCE and PCE maximum concentrations increased from 2020 to 2021.*
3. **Section 3.1.4, Define the Boundaries of the Study, Page 7 of 30:** This section does not discuss temporal boundaries. According to Chapter 4 (Step 4: Define the Boundaries of the Study) in EPA’s *Guidance on Systematic Planning Using the Data Quality Objectives Process*, QA/G-4, EPA/240/B-06/001, dated February 2006 (DQO Guidance), this section should specify temporal boundaries (i.e., the period of time the study should represent with consideration of time-related conditions, such as high humidity and/or elevated temperatures) and other practical constraints (e.g., obstacles, such as fences, property access, water bodies) associated with sample collection. *Please revise Section 3.1.4 to discuss temporal boundaries.*

4. **Section 3.1.5, Develop the Analytical Approach, Page 7 of 30:** This section includes decision statements (i.e., “If..., then...” statements) for TCE and PCE results that are all or mostly less than their respective RGs; however, there are no decision statements for TCE and PCE results that are all or mostly greater than their respective RGs. Also, it is unclear what is meant by “mostly” (e.g., a certain percentage of results, the location of samples with results that exceed RGs, etc.). *Please revise Section 3.1.5 to provide decision statements for TCE and PCE results that are all or mostly greater than their respective RGs and to clarify what is meant by “mostly.”*
5. **Section 5.1, Data Quality Levels for the ABRP/MCB/MBP OU, Pages 10 and 11 of 30, and Table 6, Preservatives, Holding Times, and Sample Containers, Page 30 of 30:** Section 5.1 indicates that 100 percent (%) Definitive level (D) data meets the following aspects of EPA National Functional Guidelines criteria: quantitation limits, surrogate recoveries, blanks, laboratory control sample (LCS) recoveries, matrix spike/matrix spike duplicate (MS/MSD) recoveries, lab and field replicates, cooler temperatures, preservation, and holding times, and that requirements for 100% D data are provided in Table 6. However, Table 6 only provides sample container, preservation, and hold time requirements, and it is unclear where the remaining criteria can be found. *Please revise the SAP to indicate where the remaining aspects of EPA National Functional Guidelines criteria can be found (i.e., quantitation limits, surrogate recoveries, blanks, LCS and MS/MSD recoveries, lab and field replicates, and cooler temperatures).*
6. **Section 6.1, List of Sampling/Collection Equipment, Page 12 of 30:** It is unclear why this section only lists examples of sampling equipment that may be used, rather than the actual equipment. For example, Section 3.1.3.1 (Soil Samples) indicates that a photoionization detector (PID) will be used continuously as soil cores are retrieved, but the PID is not listed in Section 6.1. *Please revise Section 6.1 to list all sampling equipment that will be used during this investigation.*
7. **Figure 8, MCB Proposed Soil Boring Locations with Maximum 2021 TCE and PCE Concentrations, Page 26 of 30:** Figure 8 shows maximum concentrations of TCE and PCE in red and green font, but it is unclear which color represents each contaminant. *Please revise the figure legend to indicate which color, red or green, represents TCE and which color represents PCE.*