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SRNS-OS-2024-00190

REGION 4
ATLANTA, GA 30303

ENVIRONMENTAL COMPLIANCE &

May 31, 2024

MAY 31 2024

AREA COMPLETION PROJECTS

Ms. Avery Hammett
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EPA Comments on RCRA Facility Investigation/Remedial Investigation Work Plan Addendum for the D-Area Groundwater Operable Unit (D-area Upgradient Sources) (U), SEMS Number: 63, (SRNS-RP-2024-00312), Revision 0, dated April 2024 (RFI/RIWP)

Dear Ms. Hammett:

The U.S. Environmental Protection Agency, Region 4 (EPA) has reviewed the RCRA Facility Investigation/Remedial Investigation Work Plan Addendum for the D-Area Groundwater Operable Unit (D-area Upgradient Sources) (U), SEMS Number: 63, (SRNS-RP-2024-00312), Revision 0, dated April 2024 (RFI/RIWP). EPA's comments are enclosed.

If you have any questions or require additional information, please contact Brianne Martin at (678) 906-8075.

Sincerely,

BRIANNE MARTIN Digitally signed by BRIANNE MARTIN
Date: 2024.05.31 13:17:38 -04'00'

Brianne Martin, RPM
Federal Facilities Branch
Superfund and Emergency Management Division

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

TECHNICAL REVIEW OF THE
RCRA FACILITY INVESTIGATION/REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FOR THE D-AREA GROUNDWATER OPERABLE UNIT (D-AREA UPGRADIENT SOURCES) (U), SEMS NUMBER: 63, SRNS-RP-2024-00312, REVISION 0, DATED APRIL 2024
SAVANNAH RIVER SITE
AIKEN, SOUTH CAROLINA

GENERAL COMMENTS

1. Section 5.0, Sampling Design and Rationale of the RFI/RIWP states that the implementation of the Sampling and Analysis Plan (SAP) to obtain decision-quality data for each subunit is documented in the remaining sections of this sampling and analysis plan; however, several elements that are typical of the information presented in a SAP per EPA guidance *Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP), Optimized UFP-QAPP Worksheets*, dated March 2012 are missing from the RFI/RIWP. Examples of missing elements include, but are not limited to, the following:
    a. Procedures for collecting split samples
    b. Identification of key project personnel and contact information, including the analytical laboratory
    c. Field and laboratory quality control (QC) performance or acceptance criteria
    d. Project action limits that will be used to evaluate the data
    e. Calculations for evaluating accuracy and precision
    f. Standard operating procedures

    Revise the RFI/RIWP to include sufficient information required to perform the tasks outlined in the RFI/RIWP and to ensure data collected is of sufficient quality to meet the data quality objectives (DQOs) per EPA guidance.

2. The proposed sample locations at the 715-D Gasoline Station Area appear insufficient to determine whether tetrachloroethylene (PCE) contamination has been successfully remediated in soil to levels below the threshold limit of 20 micrograms per kilogram (µg/Kg). As such, is it unclear whether the objectives listed in Section 3.1, Objectives will be achieved. Specifically, there are only three intervals proposed for sampling and analysis for volatile organic compounds (VOCs) in each of the five proposed borings. According to Table 5, Proposed DSVE VOC Soil Samples, the 5-6 foot interval below ground surface will not be sampled. Additionally, it is unclear why the borings are not located near the soil vapor extraction (SVE) units where PCE and trichloroethylene (TCE) concentrations were historically the highest (e.g., DSVE 006 and DSVE 008 and DSVE 009). According to Figure 12, Proposed 715-D Gasoline Station Area Sample Locations, soil boring DBR-016 is proposed near DSVE-008; however, a soil boring is not proposed near DSVE-006 or DSVE-009. Thus, it unclear how it will be determined whether PCE contamination has been successfully remediated. Please revise the RFI/RIWP to propose soil sampling from the 5-6 foot interval and to propose additional soil borings near DSVE-006 and DSVE-009.

3. The RI/RIWP should present a figure that reflects the current footprint of all known Per- and Polyfluoroalkyl Substances (PFAS) including Perfluorooctanesulfonic acid (PFOS) and Perfluorononanoic acid (PFNA) based on recently published maximum contaminant levels (MCLs). Please revise the RFI/RIWP to reflect the current plume footprint based on recently published PFAS

MCLs (i.e., 4 nanograms per liter (ng/L) for PFOS and 10 ng/L for PFNA).

4. The location of proposed new Upper Three Runs Aquifer (UTRA) monitoring well DCB087C is shown on Figure 13, Proposed 484-17D DCSA Groundwater Monitoring Well Location; however, a figure showing the location of DCB087C relative to the Fire-Fighting Training Area (FFTA) and the 715-D Gasoline Station Area is not included. Please revise the RFI/RIWP to include a figure showing the location of proposed well DCB087C in relation to the FFTA and 715-D Gasoline Station Area.

5. Figure 3, D-Area PFAS Plume (4Q2022) includes an inset map showing the location of the D-Area Groundwater (DAGW) Operable Unit (OU) within the Savannah River Site; however, it would be helpful if the RFI/RIWP included a larger scaled figure showing the relative location of the site within South Carolina. Please revise the RFI/RIWP to include a figure showing the location of the site within South Carolina.

6. The discussion of DQOs in Section 4.1.2 through 4.1.8 is insufficiently detailed and should be expanded to provide additional information regarding the decision process and objectives based on EPA's *Guidance on Systematic Planning Using the Data Quality Objectives Process*, EPA QA/G-4 (the DQO Guidance), dated February 2006. Examples of insufficient detail include, but are not limited to:
    a. Section 4.1.5 (Define the Boundaries of the Study, PDF Page 29 of 100) does not discuss practical constraints that could interfere with sampling or temporal boundaries that describe the timeframe the study will represent and when samples should be collected.
    b. Section 3.1.6 (Develop Decision Rules, PDF Page 38 of 122) does not provide decision statements (i.e., "if..., then..." statements) for how the project data will be used.
    c. Section 3.1.7 (Specify the Limits on Decision Errors, PDF Page 39 of 100) does not define the screening levels that will be used for making each project decision.

    Revise the RFI/RIWP to provide comprehensive DQOs in accordance with the DQO Guidance.

SPECIFIC COMMENTS

1. **Figure 14, Conceptual Site Model, PDF Page 75 of 100:** The text in Section 4.1.1.3, Secondary Sources of Contamination, states that concrete may be a secondary source of contamination; however, Figure 14 does not include this medium. Because the concrete in the FFTA and 715-D Gasoline Station is potentially contaminated with PFAS, please revise Figure 14 to include concrete as a secondary source of contamination.

2. **Section 6.2, Field Analytical Sampling Quality Assurance/Quality Control, PDF Page 36 of 100 and Table 11, Minimum Field Quality Control/Quality Assurance Sampling Requirements, PDF Page 99 of 100:** There is an omission of information from Section 6.2 and Table 11 regarding the frequency of collection of matrix spike/matrix spike duplicate (MS/MSD) Quality Assurance (QA) samples. For example, Section 6.1, Data Quality Levels for Analytical Results, states that MS/MSD samples are QA samples used to determine accuracy; however, MS/MSD frequency of sample collection information is not included in Section 6.2 and Table 11. Please revise Section 6.2 and Table 11 to include MS/MSD frequency information.

3. **Figure 1, D-Area 411-1D Fire-Fighting Training Area (FFTA), PDF Page 49 of 100:** Figure 5, D-Area FFTA 2022 Previous PFAS Soil Borings, identifies borings DBR-01 and DBR-02 as 2022 PFAS Soil Borings; however, they are not defined as such on Figure 1. Please revise Figure 1 to identify DBR-01 and DBR-02 as 2022 PFAS Soil Borings.

4. **Figure 2, D-Area 715-D Gasoline Station Area, PDF Page 51 of 100:** The symbol used to represent boring DCB063D and the red oval shape are not defined on the figure. Please revise Figure 2 to include definitions for the symbol representing boring DCB063D and the red oval shape.

MINOR COMMENTS

1. **List of Abbreviations and Acronyms, Pages vi and viii:** There are several acronyms and abbreviations missing from the List of Abbreviations and Acronyms including ACP, bgs, DCSA, ERDMS, FFTA, HASP, IDW, PFNA, PQL, QAPP, RBC, RG, SVE, TCL, TO, and V&V. Furthermore, there are several instances throughout the text where an acronym or abbreviation is not defined upon first use including: µg/L, BRA, TCL, and RG. Please revise the List of Abbreviations and Acronyms to add these missing acronyms and abbreviations and revise the text to define all acronyms and abbreviations upon first use.

2. **Section 4.2, Summary of DQO Evaluation, PDF Page 31 of 100:** The text states "The data needs developed under the DQO process are summarized in Tables 6 through 9"; however, these DQO processes are summarized in Tables 6 through 8. Please revise the sentence to reflect the tables that summarize DQO processes.