



REGION 4

ATLANTA, GA 30303

November 25, 2024

ENVIRONMENTAL COMPLIANCE &

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Ms. Avery Hammett
SRS Remedial Project Manager
Remediation and Deactivation & Decommissioning Division
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Savannah River Operations Office
P.O. Box A
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AREA COMPLETION PROJECTS

EPA Comments: 2023 GROUNDWATER MIXING ZONE REPORT FOR THE D-AREA OIL SEEPAGE BASIN (631-G) (U)(SRNS-RP-2024-01008, REVISION 0, JULY 2024)

Dear Ms. Hammett:

The U.S. Environmental Protection Agency, Region 4 (EPA) has reviewed the 2023 GROUNDWATER MIXING ZONE REPORT FOR THE D-AREA OIL SEEPAGE BASIN (631-G) (U)(SRNS-RP-2024-01008, REVISION 0, JULY 2024) EPA has generated comments on this report which are included below.

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

Sincerely,

BRIANNE MARTIN

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MARTIN
Date: 2024.11.25 11:11:41 -05'00'

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

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

GENERAL COMMENTS

1. The Report should discuss the implementation of additional source control actions to address the potential source material remaining near well DOB 15 and reduce cleanup timeframes. The monitoring data for well DOB 15 indicates constituents of concern (COC) concentrations are consistently higher than surrounding wells. The time-series trend graphs prepared for tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (DCE) and vinyl chloride (VC) concentrations over time in DOB 15 (see Figures 1-4) show steady trends greater than the respective maximum contaminant levels (MCLs). This suggests source material may be present that continues to be a source of contamination to the groundwater near well DOB 15 with no clear cleanup timeframe for groundwater restoration. The Report states that the 2Q2023 results for pH, alkalinity, oxygen reduction potential (ORP) and dissolved oxygen (DO) indicate that the groundwater conditions are too aerobic to support reductive dechlorination. As such, natural attenuation at the D-Area Oil Seepage Basin (DOSB) Operable Unit (OU) relies mainly on physical processes (dispersion/dilution), which appear to be insufficient for degradation of contaminants and cleanup of groundwater within a reasonable timeframe based on the stable COC concentration trends. Please revise the Report to provide a discussion of additional source control actions that could be implemented to address the potential source material remaining near well DOB 15 and reduce cleanup timeframes.
2. The text in Section 1.2 (Regulatory History) states that, “The RFI/RI [RCRA Facility Investigation/Remedial Action] Report and Baseline Risk Assessment for the DOSB [D-Area Oil Seepage Basin] OU [Operable Unit] (WSRC 1997) identified eight VOCs [Volatile Organic Compounds] as final constituents of concern (COCs): benzene, 1,1-dichloroethylene (1,1-DCE), 1,2-dichloroethylene, cis-1,2-dichloroethylene (cis-1,2-DCE), dichloromethane (methylene chloride) (DCM), tetrachloroethylene (PCE), trichloroethylene (TCE), and chloroethene (vinyl chloride) (VC)”; however, there is no evidence in the Report that 1,2-dichloroethene was sampled or analyzed for. Please revise the Report to explain the missing sample, analysis, and discussion of 1,2-dichloroethene results.

SPECIFIC COMMENTS

1. **Appendix B, Figure B-5. DOSB Potentiometric Data – AQ1/2, 3 and GAU AQ1, 2023, Page B-12 of B-24:** The groundwater elevation for well DOB 15A is incorrectly shown as 142.15 feet (ft) mean sea level (msl). Table A-1 (DOSB Groundwater Monitoring Results, 2023) shows that the groundwater elevation at this well is 142.54 ft msl. Please revise Figure B-5 to reflect the correct groundwater elevation at well DOB 15A.
2. **Appendix B, Figure B-9, DOSB Vinyl Chloride in AQ1/2, 3 and GA AQ1, 2023, Page B-16 of B-24:** The 1.08 micrograms per liter ($\mu\text{g/L}$) VC concentration at well DOL 2 does not match the result of 2.0 $\mu\text{g/L}$ shown in Table A-1 (DOSB Groundwater Monitoring Results, 2023). Please revise Figure B-9 to reflect the correct VC concentration at well DOL 2.

MINOR COMMENTS

1. **List of Appendices, Page iv of vi:** The year listed in the titles for each appendix is incorrectly stated as 2021. Please revise the title for each appendix to state the year 2023.
2. **Section 4.4.2, Plume Compliance Wells, Page 13 of 32:** The text states that low-level detections of VOCs were also observed at well DOL 1; however, DOL 1 was not sampled in 2023. Please revise the sentence to correctly state that low-level detections of VOCs were observed at well DOL 2.
3. **Section 4.4.6, Trend Analysis, Page 13 of 32:** The text states that Figures B-6 through B-12 show 2023 monitoring results; however, monitoring results are shown on Figure B-6 through Figure B-13. Please revise the text to reflect that 2023 monitoring results are shown on Figures B-6 through B-13.
4. **Section 4.4.6, Trend Analysis, Page 14 of 32:** The text states, “The maximum concentrations of PCE (5.8 µg/L), TCE (13 µg/L), cis-1,2-DCE (72 µg/L), and VC (10 µg/L) were detected in well DOB 15 (plume compliance well), but below the specific MZCLs [Mixing Zone Concentration Limits] (78 µg/L, 200 µg/L, 147 µg/L, and 1,164 µg/L, respectively)”; however, the MZCLs shown for cis-1,2-DCE and VC should be switched as they do not respectively align with the order of COCs shown. Please switch the order listed of cis-1,2-DCE and VC MZCLs.
5. **Section 5.2, Horizontal and Vertical Flow Rates, Page 18 of 32:** The text states that, “The estimated horizontal gradients and groundwater flow rates are shown in Table 4”; however, estimated horizontal gradients and groundwater flow rates are shown in Table 4A (Horizontal Groundwater Flow Rate Summary). Please revise the text to state that estimated horizontal gradients and groundwater flow rates are shown in Table 4A.
6. **Appendix A, Table A-1, DOSB Groundwater Monitoring Results, 2023, Page A-11 of A-12:** The estimated quantitation limit (EQL) values in the PCE, TCE, and cis-1,2-DCE columns are cut off. Please expand the columns so that the EQL values are visible.
7. **Appendix A, Table A-1, DOSB Groundwater Monitoring Results, 2023, Page A-11 of A-12:** The title of Table A-1 does not match the title provided on page A-3 of A-12, which identifies Table A-1 as Figure A-1. Please verify the title of Table A-1 and revise the title of Table A-1 or the title and page provided on page A-3 accordingly.
8. **Appendix B, List of Figures, Page B-3 of B-24:** The year listed in the titles for Figures B-5 through B-13 is incorrectly stated as 2021. Please revise the titles for Figures B-5 through B-13 to state the year 2023.
9. **Appendix B, DOSB 2023 Figures, Figures B-10 through B-13, Pages B-19 through B-23:** The titles of Figures B-10 through B-13 do not match the titles in the List of Figures on page B-3 of B-24. Please revise the titles of Figures B-10 through B-13 to match the titles shown in the List of Figures.