



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

August 2, 2021

ENVIRONMENTAL COMPLIANCE &

AUG - 2 2021

Mr. Brian T. Hennessey, 730-B
SRS Remedial Project Manager
Area Completion Project
U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

AREA COMPLETION PROJECTS

EPA Comments on the R-AREA GROUNDWATER (NBN) BIENNIAL EFFECTIVENESS MONITORING REPORT IN SUPPORT OF R-AREA OPERABLE UNIT (OU) JANUARY 2019 THROUGH DECEMBER 2020, SEMS 95 [SRNS-RP-2021-03617] REVISION 0, JUNE 2021 Savannah River Site, Aiken, South Carolina

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the R-Area Groundwater (NBN) Effectiveness Monitoring Report in Support of R Area Operable Unit (U), January 2019 through December 2020. EPA comments on the Revision 0 document are attached.

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

Sincerely,

JON
RICHARDS

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JON RICHARDS
Date: 2021.08.02
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Jon Richards
FFA Remedial Project Manager
Superfund & Emergency Management
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cc: C.L. Bergren, SRNS-ACP
Susan Fulmer, SCDHEC

TECHNICAL REVIEW COMMENTS

- 1. Section 3.1, RAGW Monitoring, Page 2 of 40:** The text states that there are twenty eight wells in the monitoring network, four seep line locations, and nine surface water locations. However, only seven surface water locations are shown on Figure 3 (RAGW [R-Area Groundwater] Monitoring Station and 2020 Groundwater Plumes). *Revise the text or Figure 3 of the R-Area Groundwater (NBN) Biennial Effectiveness Monitoring Report in Support of R-Area Operable Unit (OU) January 2019 through December 2020, SEMS Number: 95, SRNS-RP-2021-03617, Revision 0, June 2021 (the EMR) as appropriate to include all surface water sample locations.*
- 2. Section 3.3, Groundwater Flow Directions, Page 5 of 40:** The text states that the groundwater flow in the Transmissive Zone (TZ) is radial. The text also states that the groundwater flows south towards Pond 4; however, Figure E-3 (R-Area LAZ Well Water Elevations 2020) is missing an arrow indicating flow towards Pond 4 to the south. *Revise the EMR to add a flow direction arrow on Figure E-3, Page E-3 of E-8.*
- 3. Section 4.1.1, Eastern VOC Plume, Page 8 of 40:** The text states that well RAG008B reflects the increasing trend in trichloroethylene (TCE) since 2010; however, an explanation as to why RAG008B may have an increasing TCE trend is not discussed in the text. It is noted that the observed increasing TCE trend in RAG008B could indicate vertical plume migration, especially considering its proximity to RAG008DL which has a decreasing trend. *Revise the EMR to provide an explanation for the increasing TCE trend in well RAG008.*
- 4. Section 4.1.4, Northern Tritium Plume, Page 11 of 40:** The text states that the 2020 Northern Tritium Plume has decreased in size and concentration as seen on Figure 3 (RAGW Monitoring Station and 2020 Groundwater Plumes) and Figure 7 (RAGW Tritium Plumes 2010 Data); however, the northern tritium plume is not depicted on Figure 3, so no comparison is possible. *Revise Figure 3 to include the Northern Tritium Plume.*
- 5. Section 5.1.1, Eastern VOC Plume, Page 13 of 40:** The text states, “Based on the 2019 and 2020 monitoring data, monitored natural attenuation (MNA) continues to be an effective remedy for the RAGW Eastern VOC Plume. The key source area well RWT003C and all plume definition wells except for RAG008B show decreasing VOC trends.” It is noted the vertical extent of dissolved TCE contamination within the Eastern VOC Plume is not defined at lower aquifer zone (LAZ) well RAG008B. The most recent TCE concentration in RAG008B is 22.1 micrograms per liter (µg/L). Additionally, the TCE concentrations in RAG008B indicate an increasing TCE trend, as illustrated in Figure 13 (RAGW Eastern VOC Plume Wells). Currently, it is not clear if the increasing TCE trend indicates the MNA remedy is not effective in controlling the vertical migration. *Revise the EMR to address this issue to demonstrate whether MNA is effectively mitigating vertical TCE plume migration considering the vertical extent of TCE contamination is not defined in the Eastern VOC Plume at RAG008B.*
- 6. Section 5.2, ISD Conclusions, Page 14 of 40:** The text states the 2017 and 2020 increase in tritium and carbon-14 at well RDB 3D may be due to mobilization of a small shallow legacy spill near the disassembly basin, related to the recent high-water table levels. The EMR also notes that greater than average rainfall was measured at the Savannah River Site during 2020. As such, it is unclear if the annual monitoring event is scheduled during the rainy season

when high water table conditions exist to ensure representative groundwater samples are collected to monitor potential source mobilization near the disassembly basin. *Revise the EMR to state whether the in-situ decommissioning (ISD) monitoring is being conducted during the rainy season.*

7. **Figure 5, Annual ISD Monitoring Wells (2018 through 2022), Page 23 of 40:** Several “Site Features” defined in the legend are not shown on the figure. For example; the land use control (LUC) Boundary, the R-Area Concrete Lakes, Lake/Pond Perennial and Perennial Stream are defined in the figure legend but not shown on the figure. *Revise the legend on Figure 5 as appropriate to address this*