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

June 5, 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
Aiken, South Carolina 29802

RE: EPA Comments on the **technical review of the GROUNDWATER REPORT FOR THE P-AREA GROUNDWATER (PAGW) OPERABLE UNIT (OU) (U) APRIL 2021 THROUGH MARCH 2022 DATED JANUARY 2023**

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the GW Report for the P-Area Groundwater (PAGW) Operable Unit (OU)(U), April 2021 through March 2022 Data, SEMS Number: 81, Jan 2023. EPA comments are attached.

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

Sincerely,

Richards, Jon Digitally signed by Richards, Jon Date: 2023.06.05 15:29:41 -04'00'

Jon Richards
FFA Remedial Project Manager
Superfund & Emergency Management Division

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

GENERAL COMMENTS

1. The vertical extent of trichloroethylene (TCE) contamination in PAGW is unclear. According to the text in Section 3.3.2.2 (Lower Aquifer Zone ((LAZ)), the TCE in the LAZ concentrations are increasing deeper in the aquifer; however, the PAGW Report does not discuss the data that indicates the vertical extent of TCE contamination is defined in the LAZ. As such, it is unclear whether TCE contamination has impacted the Gordon Aquifer Unit (GAU) due to the downward vertical migration from the LAZ. *Please revise the PAGW Report to include the vertical extent of TCE contamination in relation to the GAU.*

2. There is a grey patterned box symbol depicted on multiple site figures that is not defined in the respective figure legends. For example, the grey patterned box is depicted on Figure 7 (Monitoring Well Network for the Upper Aquifer Zone, Page 28 of 100) near upper aquifer zone (UAZ) well PSC002D1/D2, on Figure 8 (Monitoring Well Network for the Lower Aquifer Zone, Page 29 of 100) near LAZ well PGW014C and at a similar location in Figure 9 (Monitoring Well Network for the Gordon Aquifer Unit, Page 30 of 100); however, the symbol is not defined in the legends. This omission is also found on Figures 15, 16, 17, 18, 23, 26, 28, 31, 32, 38 and 42. In addition, Figure 30 (Steel Creek Sampling Access Road completed in January 2023, Page 58 of 100) shows the constructed Steel Creek Sampling Access Road; however, it is unclear whether the gray patterned box symbols shown on the noted figures represent the newly constructed access road. *Please revise the figure legends to define the grey patterned box symbol.*

SPECIFIC COMMENTS

1. **Section 3.2, Groundwater Elevation Measurements and Groundwater Flow Direction, Page 7 of 100:** The last paragraph indicates that certain wells are excluded from the well elevation data due to being dry or obvious outliers; however, this section does not state the number of wells or identify which wells were excluded. *Please revise the text to list the wells that were not included in the well elevation data.*

2. **Section 3.3, Groundwater and Surface Water Results, Page 7 of 100:** This paragraph states, "Sample results above the maximum contamination level (MCL) for tritium and/or TCE from April 2021 to March 2022 are listed in Table 3;" however, the text does not provide the MCL for tritium or TCE, 20 picocuries per milliliter (pCi/mL) and 5 micrograms per liter (µg/L), respectively, for comparative purposes of results that are over the MCLs. *Please revise the text to include the MCLs for tritium and TCE.*

3. **Section 3.3, Groundwater and Surface Water Results, Page 7 of 100:** The first paragraph states, "All analytical sampling results for analytes are included in Appendix B along with the respective MCLs or regional screening levels (RSLs);" however, the text does not discuss the groundwater or surface water results that exceed RSLs. *Please revise this section to discuss the relevant RSL values that were exceeded.*

4. **Section 3.3.1.1, Upper Aquifer Zone, Page 9 of 100:** This section states, "As water level rises, tritium residual that has remained in the soil above the water table is released into the groundwater;" however, the text does not discuss the expected potential effects and impacts this additional release of mass has on the estimated cleanup timeframes. *Please revise the text to discuss the additional release of tritium mass that occurs as the water table rises and whether this impacts cleanup timeframes.*

5. **Section 3.3.1.3, Gordon Aquifer Unit, Page 11 of 100:** It is unclear if the lack of detection of tritium in nearby GAU monitoring wells could be attributed to the depth of the well screens in the surrounding GAU wells, which are shallower than the well screen in deep GAU well screen PSB002AL. The text states the lack of tritium detection in nearby GAU wells could be attributed to increased horizontal groundwater flow rate, dilution/dispersion, and radioactive decay; however, it is unclear if the nearby GAU wells are installed at a sufficient depth to monitor plume migration in the vicinity of PSB002AL. *Please revise the text to discuss if the nearby GAU wells are installed at a sufficient depth to monitor the tritium plume migration.*

6. **Section 3.3.2.2, Lower Aquifer Zone, Pages 14-15 of 100**: The text states "TCE migration horizontally in the LAZ is parallel to upper Steel Creek and therefore is not anticipated to discharge to surface water in the near term"; however, LAZ data from monitoring locations across from, and to the north of, Steel Creek are not presented to support the assertion that migration in the LAZ is parallel to Steel Creek. As such, it is unclear if TCE contamination is migrating to the north, below Steel Creek. *Please revise the text to discuss how potential TCE contamination migration to the north across Steel Creek is being assessed.*

7. **Section 3.3.3, Additional Screening Level Exceedances, Page 15 of 100:** The first paragraph states, "In addition to tritium and TCE exceedances, there were 14 detections in additional analytes above their respective screening levels for 1Q22;" however, this section does not provide the screening levels for the respective exceedances. *Please revise the text to list the additional analytes and the respective screening levels that were exceeded.*

8. **Section 4.0, Summary and Recommendations, Page 18 of 100:** The paragraph regarding TCE states, "Previous data for chlorinated volatile organic compounds (cVOCs) collected from this well group did not indicate the presence of cVOCs. However, it has been multiple years since cVOC data was collected;" however, since cVOC migration appears to be occurring, data from this well group is needed to further define the plume. *Please revise the text to define the well group and discuss whether future sampling from these wells will be included in the PAGW monitoring well network.*