SC DEPARTMENT of ENVIRONMENTAL SERVICES

Susan Fulmer, P.G.
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

July 15, 2025

Mr. Matthew R. Baker, Acting FFA Remedial Project Manager
Remediation and Deactivation & Decommissioning Division
U. S. Department of Energy
Savannah River Operations Office
Post Office Box A
Aiken, South Carolina 29802

Re: Groundwater Report for the P-Area Groundwater (PAGW) Operable Unit (OU) (U) – April 2023 through March 2024 Data, SEMS Number: 81 (SRNS-RP-2024-01436, Revision 0, February 2025) received March 19, 2025.

Dear Mr. Baker:

The Department has completed its review of the above referenced document pursuant to the Savannah River Site Federal Facility Agreement. The attached comments were generated as a result of this review. These comments must be addressed prior to final approval of the above referenced document. As specified in Section XXII, Review/Comment on Documents, the appropriate technical staff will be available to participate in a joint DOE/EPA/SCDES comment resolution meeting to discuss these comments, if necessary.

To schedule a meeting to resolve the attached comments or to obtain further information, please contact me at (803) 898-4331.

Sincerely,

Susan B. Fulmer Digitally signed by Susan B. Fulmer
Date: 2025.07.15 10:14:36 -04'00'

Susan B. Fulmer, P.G., Manager
Federal Remediation Section
Division of Site Assessment, Remediation, Revitalization

cc: C. L. Bergren, SRNS-ACP (Signed Original)
Gregg O'Quinn, BRLS – Aiken
Jon Richards, EPA Region IV
Heather Cathcart, BLWM

South Carolina Department of Environmental Services Comments on:
Groundwater Report for the P-Area Groundwater (PAGW) Operable Unit (OU) (U)
April 2023 through March 2024 Data, SEMS Number: 81
(SRNS-RP-2024-01436, Revision 0, February 2025) received March 19, 2025.

General Comments

1. Throughout the report, there is language stating that the Lower Aquifer Zone (LAZ) tritium plume/aquifer is not currently discharging to surface water due to the depth of the LAZ aquifer relative to surface water elevations. However, the LAZ trichloroethylene (TCE) plume discussion at the end of Section 3.3.2.2 states that the LAZ TCE plume is expected to eventually discharge to Steel Creek. The report should be revised to clarify this expectation of surface water discharge from the LAZ aquifer since according to the report only the UAZ aquifer is currently discharging to surface water.

2. Figure 17, which shows the monitoring well network coverage for the Upper Aquifer Zone (UAZ) tritium plume, and Figure 23, which shows the monitoring well network coverage for the LAZ tritium plume, indicate potential data gaps for adequate characterization of each plume. For the UAZ tritium plume, the south-southwest edge of the plume appears to be estimated as there are no UAZ monitoring wells beyond PGW028DU or PGW018C, which indicate MCL exceedances of 310 pCi/mL and 49.3 pCi/mL respectively. For the LAZ tritium plume, the western edge of the plume also appears to be undefined as there are no LAZ monitoring wells beyond PGW027C/DL, which indicate MCL exceedances of 242 pCi/mL and 328 Ci/mL respectively. Regarding the LAZ tritium plume network coverage, according to language in several sections of the report, the LAZ aquifer does not discharge to Steel Creek, implying the potential for the tritium plume in this aquifer to migrate beyond and beneath Steel Creek. These potential data gaps in the UAZ and LAZ tritium plume monitoring well networks should be addressed in the report, and whether further groundwater investigation is warranted.

Specific Comments

1. Section 3.3.1.1, Upper Aquifer Zone, pages 9-10. The next-to-last paragraph in this section discusses tritium concentrations in monitoring wells west of the P-Area Reactor Building Complex. Tritium concentrations in well P003L are described as decreasing since 2007, but later in the same paragraph are stated as experiencing a significant increase since 2014. Well P003L is also shown in Figure 21 as undetected until 2019. Please clarify these statements and ensure this well is not described as having decreasing Tritium levels.

2. Section 3.3.1.1, Lower Aquifer Zone, page 11. It is stated that tritium at well PGW026C is above the maximum contaminant level, and this contamination is separate from the plumes in the LAZ. However, a description of where this tritium originated is not provided. Please clarify whether this tritium detection has historically been above the MCL, been increasing, and possible origin.

3. Section 3.3.1.3, Gordon Aquifer Unit, page 12. The first paragraph of this section states: "Groundwater samples were collected throughout the GAU at borings near and around

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the PRSBs during two separate investigations with no detections of tritium. Based on the outcome of these investigations, additional GAU monitoring wells were installed around this location to monitor the movement of the tritium plume." These two sentences appear to contradict each other; i.e., there does not appear to be a need for installation of wells to monitor a plume that was not detected. Please clarify.

4. Table 1, Monitoring Well Network for the P-Area Groundwater Operable Unit and Table 2, Water Level Data for P-Area Groundwater Operable Unit Monitoring Wells, pages 91 through 102. Table 1 lists monitoring wells PAO002DL, PAO002DU, PMP004DL, PMP007DL and PMP008DL as wells that were added to the synchronous water level list, yet these wells are not included in Table 2 for water level data. Also, monitoring well LSW 20A is listed in Table 2 but not in Table 1 for the monitoring well network. Please revise these tables accordingly.