



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

December 04, 2020

Mr. Brian Hennessey, 730-B  
SRS Remedial Project Manager  
Savannah River Operations Office  
Area Completion Projects  
Post Office Box A  
Aiken, South Carolina 29802



Dear Mr. Hennessey:

The U.S. Environmental Protection Agency (EPA) has reviewed the Department of Energy, Savannah River Site (DOE-SRS) D Area Groundwater Operable Unit Letter Report for Calendar Year 2019, SEMS # 63, dated July 2020.

EPA approves this report with the understanding that the comments below will be addressed in the future 2021 submittal of the D Area Groundwater Operable Unit Report for Calendar Year 2020. Should you have any questions or concerns, please feel free to call me at on my cell number 404-229-9500.

Sincerely,

A handwritten signature in cursive that reads "Diedre Lloyd".

Diedre Lloyd  
Remedial Project Manager  
Restoration & Sustainability Branch  
Superfund & Emergency Management Division  
Region 4, 61 Forsyth Street  
Atlanta, GA 3030

cc: Angelia Holmes, DOE-SRS, Brian Hennessey, DOE-SRS, Phil Prater, DOE-SRS, Karen Adams, DOE-SRS, Chris Bergren, SRNS-ACP (Signed Original), Susan Fulmer, SCDHEC;

**EPA COMMENTS ON THE  
D-AREA GROUNDWATER OPERABLE UNIT LETTER REPORT  
FOR CALENDAR YEAR 2019 DATA**

**SEMS NUMBER: 63  
DATED JULY 29, 2020**

**SAVANNAH RIVER SITE  
AIKEN, SOUTH CAROLINA**

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**EPA GENERAL COMMENTS:**

1. The D-Area Groundwater Operable Unit Letter Report for Calendar Year 2019 Data, SEMS Number: 63; dated July 29, 2020 (the Report) on page 2 under the “Monitoring Results” discussion states that locations where groundwater and surface water were sampled in the D-Area Operable Unit (DAOU) is provided on Figure 1, Sampling Location for the DAG OU, Page 11. However, none of the building structures or ash basins/land disposal areas are labeled on this figure. This information is required to provide an adequate presentation of where the source areas are located, where plumes are located relative to all source areas, and to demonstrate how the monitoring network is sufficient for monitoring plume(s) stability and potential for expansion/migration. Ensure the next D-Area Groundwater (DAGW) Operable Unit (OU) groundwater monitoring report to be submitted in 2021 addresses this issue by including all pertinent figures, labeling of buildings/structures pertinent ash basins and subunits (i.e., the 484-D Powerhouse [Powerhouse Subunit], the D-Area Heavy Water Facility [Bubble Tower Subunit], the Moderator Processing Facility [Moderator Processing Subunit], D-Area Coal Pile Runoff Basin [489-D], Coal Storage Area [484-17D], 488-2D Ash Basin, and 488-1D Ash Basin, etc.).
2. The Report discussion on page 5 under the heading ‘Changes in the Monitoring Program (Effective 2019)’ states fourteen new wells out of a total of seventeen proposed wells (nine wells in the Upper Three Runs Aquifer Unit [UTRAU] and eight wells in the Gordon Aquifer [GAU] ) were installed in the first half of 2020. However, the Report does not provide a figure depicting the location of the fourteen newly installed wells, the location of the remaining three proposed three wells planned for installation, or discuss how these wells further delineate all source areas and plumes vertically and horizontally for the DAGW OU. Ensure the next DAGW OU groundwater monitoring report to be submitted in 2021 addresses these issues and please ensure provision of adequate supporting figures.
3. From review of Figure 1, Sampling Locations for the DAG OU, Page 11, it does not appear the current monitoring network provides sufficient monitoring wells to identify and bound source areas as result of 484-D Powerhouse subunit operations. As such, it is uncertain whether the powerhouse area is currently a contributing source to the vadose zone and groundwater for volatile organic compounds (VOCs), metals, and polychlorinated biphenyl (PCB) contamination. In order to adequately evaluate whether the powerhouse area is a contributing source of contamination to vadose zone and/or groundwater, ensure the 2021 DAGW OU groundwater report addresses how the new groundwater wells installed in the UTRA and GA will provide sufficient monitoring locations in and near the 484-D Powerhouse subunit.

4. Based on the contaminant plume maps (Figure 2, Tritium Concentration pCi/mL [pico Curies per milli-Liter] in the Upper Three Runs Aquifer Unit (UTRAU) and Gordon Aquifer Unit (GAU), 2Q2019; Figure 4, TCE [trichloroethylene] concentrations  $\mu\text{g/L}$  [micro grams per Liter] in the UTRAU and GAU, 2Q2019; and, Figure 6, Field pH of Groundwater and Beryllium Plume in the UTRAU and GAU, 2Q2019) and cross-section maps (Figure 3, D-Area Groundwater Cross Section A-A' for Tritium, 2Q2019; Figure 5, D-Area Groundwater Cross Section A-A' for TCE, 2Q2019; and, Figure 7, D-Area Groundwater Cross Section B-B' for pH, 2Q2019) the tritium, TCE, and metals plumes are poorly defined vertically and horizontally.
  - a. For example, Figure 4 shows monitoring wells outside of the TCE plume in all directions in the UTRAU except for southwest of the plume, west/southwest of DCB 54 and proximal to the DWP-6 piezometer.
  - b. In addition, Figure 5 indicates the TCE plume is not defined in the GAU vertically.
  - c. As another example, Figure 7 demonstrate that the beryllium (Be) and other metals plume is poorly defined vertically and horizontally. For example, a monitoring well is not located to the north/northwest of wells DCB-65 or DCB72C.
  - d. Further, the cross-section provided on Figure 7 only depicts the extent of pH data and does not indicate where Be/metals concentrations are located vertically.

The next DAGW OU groundwater monitoring report submitted in 2021 should address the issues notes above to ensure the full horizontal and vertical extent of all contaminant plumes is adequately defined.