



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

May 20, 2022

ENVIRONMENTAL COMPLIANCE &

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

MAY 23 2022

AREA COMPLETION PROJECTS

**2021 ANNUAL GROUNDWATER MONITORING REPORT FOR THE F- AND
H-AREA RADIOACTIVE LIQUID WASTE TANK FARMS (U), SEMS
NUMBER: 23 & 89, SRNS-RP-2022-00076, REVISION 0, MARCH 2022**

Dear Mr. Hennessey:

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the Annual Groundwater Monitoring Report for the F- and H-Areas. Attached are our comments:

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

Sincerely,

**JON
RICHARDS**

Digitally signed by
JON RICHARDS
Date: 2022.05.23
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GENERAL COMMENTS

1. Section 3.0 (Groundwater Monitoring at F-Area Tank Farm, Nonvolatile Beta, Page 5 of 34) states the nonvolatile beta observed at FTF 28, FTF 19, and FTF 12R appears to be attributed mainly to technetium-99; further this section notes that the Tc-99 results are greater than the nonvolatile beta results due to volatilization that occurs during the drying step in the nonvolatile beta analysis. The potential loss of any radionuclide during the drying step of the nonvolatile beta analysis calls into question the accuracy of the method. Accordingly, please provide the following information: 1) a description of how accurate the nonvolatile analysis is if some of the nonvolatile radioactivity is lost during the drying step; 2) the analytical methods and associated means of detection used for nonvolatile beta and technetium-99 analyses; and 3) additional information about how it can be confirmed that the nonvolatile beta analysis is not causing the loss of other potential beta-emitting radionuclides, such as strontium-90 or any other potential fission product radionuclides.

SPECIFIC COMMENTS

1. **Section 3.0, Groundwater Monitoring at F-Area Tank Farm, Page 3 of 34:** Section 3.0 states, “In 2022, Savannah River Site (SRS) installed a new well (FBG002D) to monitor background water concentrations in the Upper Aquifer Zone (UAZ) at the F-Area Tank Farm (FTF);” however, this section does not describe how it was determined that GW well FBG002D will sufficiently fill the data gap from FBG001D as a background well since according to Figure 8, it is located on the opposite side of the Upper Three runs Aquifer (UTRA) Groundwater Divide compared to location of FBG001D. Please revise the text to include a discussion on how it was determined that the location of FBG002D will sufficiently fill the data gap as a background well based on the current location across the groundwater divide.
2. **Section 4.0, Groundwater Monitoring at H-Area Tank Farm, Cadmium and Chromium, Page 9 of 34:** The number of cadmium results is unclear. The text in the Cadmium and Chromium subsection states, “Out of 100 samples, 97 results for cadmium were non-detect. The five remaining results were qualified as ‘J’;” however, the total number of samples do not add up to 100. As stated, if there are 100 samples and 97 are non-detect, then three samples should be remaining. Please revise this section to include the correct number of non-detect and remaining samples for cadmium results.