SRMC®

March 25, 2025

SRMC-ESH-2025-00027
RSM Track #: 10667

Ms. Susan Fulmer
Federal Remediation Section
Bureau of Land and Waste Management
South Carolina Department of Environmental Services
2600 Bull Street
Columbia, South Carolina 29201-1208

Dear Ms. Fulmer:

2024 ANNUAL GROUNDWATER MONITORING REPORT FOR THE F- AND H-AREA RADIOACTIVE LIQUID WASTE TANK FARMS

The Industrial Wastewater Consolidated General Closure Plan for F-Area and H-Area Waste Tank Systems (SRR-CWDA-2017-00015, Revision 1) requires the Savannah River Site (SRS) to conduct groundwater monitoring during the interim period from the time the individual waste tanks are removed from service up to final closure of the F-Area and H-Area Operable Units, in accordance with the corresponding F-Area and H-Area Groundwater Sampling and Analysis Plans that have been approved by your agency. Please find the enclosed 2024 Annual Groundwater Monitoring Report for the F- and H-Area Radioactive Liquid Waste Tank Farms and the SRS responses to comments from the South Carolina Department of Environmental Services on the 2023 Annual Groundwater Monitoring Report for the F- and H-Area Radioactive Liquid Waste Tank Farms.

If you have any questions, please contact Keith Liner of my staff at (803) 208-6466.

Sincerely,

Joel R. Cantrell

Joel R. Cantrell, Director
Environment, Safety, Health, and Quality
Savannah River Mission Completion, LLC

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Attachments: 1. *2024 Annual Groundwater Monitoring Report For the F-and H-Area Radioactive Liquid Waste Tank Farms (U),* SRNS-RP-2025-00345, Revision 0, March 2025
2. SRS Responses to the South Carolina Department of Environmental Services Comments on: *2023 Annual Groundwater Monitoring Report For the F-and H-Area Radioactive Liquid Waste Tank Farms (U)*, SRNS-RP-2024-00042, Revision 0, March 2024

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SRS Responses to South Carolina Department of Environmental Services Comments on:
2023 ANNUAL GROUNDWATER MONITORING REPORT FOR THE F- AND H-AREA RADIOACTIVE LIQUID WASTE TANK FARMS (U), SEMS Numbers: 23 and 89 – Aiken, South Carolina (SRNS-RP-2024-00042, Revision 0, March 2024)
Received March 26, 2024, electronically.

General Comments

1. The report states that during the first quarter of 2022, the nonvolatile beta trigger level of 50 pCi/L for contingent radionuclide speciation analysis was exceeded at FTF 19; however, this analysis was not performed due to administrative issues. Please clarify the administrative issues and whether or not there may be a concern for future contingency sampling. For future sampling, the Department expects contingency sampling to be performed during any and all instances of the alpha and nonvolatile beta trigger levels being exceeded at FTF and HTF.

   Response: Agree

   During the first quarter of 2023, the nonvolatile beta concentration at well FTF 19 exceeded the 50 pCi/L level, which should have triggered additional analysis for specific radionuclides. The data from the first quarter sampling was not received from the lab and verified/validated by our data management until the end of June. Consequently, the additional analysis was planned for the third quarter of 2023 and was labeled as "contingent" analysis. However, when the lab conducted the nonvolatile beta analysis on the third quarter 2023 sample from FTF 19, the result (15.3 pCi/L) did not exceed the trigger level of 50 pCi/L, leading the lab to not perform the additional analysis.

   To clarify, the labeling of the analysis as "contingent" led to this administrative oversight. To address this and ensure it does not recur:

   1. **SRS will remove the word "contingent" from any future mobilizations of sampling for this project.**
   2. **SRS will request the lab to notify our data management team when the trigger level is exceeded at any well, so we can promptly mobilize for sampling of the specific radionuclides as required.**

   These steps will ensure that all instances of gross alpha and nonvolatile beta trigger levels being exceeded at FTF and HTF are properly addressed, and that additional analysis for specific radionuclides is performed as expected. No changes are proposed for the 2023 report.

   Contact: Kevin Boerstler, (803) 952-6766, kevin.boerstler@srs.gov

SRS Responses to South Carolina Department of Environmental Services Comments on:
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Specific Comments

1. Table of Contents, List of Appendices, page iii and iv. The 2023 Sample Results for F-Area Tank Farm are referred to as Attachment A and the 2023 Sample Results for H-Area Tank Farm are referred to as Attachment B in the text and are included in this report as Attachments. Please revise the Table of Contents to say List of Attachments instead of List of Appendices on pages iii and iv.

   Response: Agree

   The Table of Contents on pages iii and iv will be corrected in future submittals of this report to correctly label the Sample Results for F-Area Tank Farm and the Sample Results for H-Area Tank Farm as Attachments instead of Appendices. No changes are proposed for the 2023 report.

   Contact: Kevin Boerstler, (803) 952-6766, kevin.boerstler@srs.gov

2. Section 5, Conclusion, page 11. The text stated that 58 wells (12 wells at FTF and 46 wells at HTF) were sampled during 2023. However, in Section 3.0 Groundwater Monitoring at F-Area Tank Farm, page 3, the text states that 13 of 14 wells in the FTF were sampled during the first and third quarters of 2023. Attachment A confirms that 13 wells in the FTF were sampled during the first and third quarters of 2023. The sentence in the conclusion section should read "SRS performed monitoring in 2023 according to the approved plans and performed sampling in the first and third quarters at 59 wells (13 wells at FTF and 46 wells at HTF)."

   Response: Agree

   The text should have correctly stated that SRS performed monitoring at 59 wells (13 wells at FTF and 46 wells at HTF) during 2023. Future submittals of this report will take care to avoid typographical errors such as this. No changes are proposed for the 2023 report.

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3. Attachment A and Attachment B, pages A5 – A11 and pages B5 – B21. Please identify what the qualification code is and define what the qualification codes 9, 11, 18, 21, Q, V, RR1, RR2 stand for.

Response: Agree

Qualification codes are specific codes used by the laboratory to qualify data, providing context and additional information about the results obtained. They indicate any special considerations, anomalies, or conditions affecting the data to ensure proper interpretation.

The following table will be added to Attachment A and Attachment B to define the qualification codes. No changes are proposed for the 2023 report.

Qualification Codes	
Qual Codes	**Description**
(Null)	Data not remarked.
A	The result is the mean of two or more results.
C	The result is calculated.
G	The result reported is the maximum of two or more results.
H	The result is from a field kit determination and may not be accurate.
I[1]	The result is less than the SQL, but equal to or greater than the sample-specific method detection limit (ssMDL).
K[2]	The actual concentration is suspected to be less than the reported result.
L	The actual concentration is suspected to be greater than the reported result.
Q	The sample was held beyond the normal holding time prior to analysis.
T	The result is less than the criteria of detection.
V	The analyte was detected in the method blank.
Y	The result is from an unpreserved or incorrectly preserved sample; the data may not be accurate.
Z[2]	There were too many colonies present to count; the numeric value represents the filtration volume.
1	Compound identification criteria were not met.

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Qualification Codes	
2	Laboratory control sample criteria were not met.
3	Instrument performance check serial dilution criteria were not met.
4	Matrix interference was present.
5	Matrix spike concentration was ≤ 0.25× the sample concentration, and the percent recovery cannot be determined.
6	The analyte was detected in the field blank.
7	The analyte was detected in the rinsate blank.
8	The analyte was detected in the trip blank.
9	The field duplicate relative percent difference (RPD) was not within control limits.
10	Internal standard or carrier criteria were not met when affecting quantitation.
11	Matrix spike recovery was not within the control limits.
12	A tentatively identified compound is a suspected aldol-condensation product.
13	Initial or continuing calibration criteria was not met.
14	Surrogate or tracer spike recovery is out of specification.
15[2]	Graphite furnace atomic absorption quality control (QC) a. Duplicate injection criteria were not met. b. Post-digestion spike recovery was not within control limits and the sample absorbance is > 50% of the post-digestion spike absorbance.
16	The sample was analyzed by the method of standard additions.
17[2]	Graphite furnace atomic absorption QC: The post-digestion spike recovery is not within control limits and the sample absorbance is < 50% of the post-digestion spike absorbance.
18	The laboratory duplicate RPD or matrix spike (MS)/matrix spike duplicate RPD was not within control limits.
19	Analyte detected in storage blank.
21	Result is above detection, but less than SQL.
22	South Carolina Department of Environmental Services (SCDES)-required certification for analyte-method combination was not held by lab.

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Qualification Codes	
23	Result was derived beyond the calibration range of the instrument/method.
RR1	More than one copy of a result in the database.
RR2	More than one copy of a result in the database due to two methods run for a sample.

NOTES: [1] *This code is not currently used, but may be used in the future or in other SRS programs.*

[2] *This code is redundant to another code and is not used at this time.*

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