



Department of Energy
Savannah River Operations Office
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JAN 12 2021

Ms. Susan B. Fulmer, P. G., Manager
Federal Remediation Section
Division of Site Assessment, Remediation and Revitalization
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Mr. Jon Richards
Savannah River Site Remedial Project Manager
Superfund Division
U. S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303

Dear Ms. Fulmer and Mr. Richards:

SUBJECT: Savannah River Site's Responses to the Regulatory Comments on the 2020 Effectiveness Monitoring Report (EMR) for Monitored Natural Attenuation (MNA) at the L-Area Southern Groundwater (LASG) Operable Unit (OU) (U) (SRNS-RP-2020-00332, Revision 0, June 2020) SEMS Number: 77

In accordance with the terms of the Federal Facility Agreement, the U.S. Department of Energy (DOE) is submitting the subject comment responses for your review. The South Carolina Department of Health and Environmental Control (SCDHEC) and the U.S. Environmental Protection Agency (EPA) provided comments on this report on October 21, 2020 and October 28, 2020, respectively. This report will not be revised; however, all comment responses will be included in the next report, as applicable. Please review these responses and provide your approval thirty (30) days from receipt. The time and effort that the SCDHEC and the EPA have given on the subject operable unit are greatly appreciated.

Comments or questions from your staff may be directed to me at (803) 952-8365, or the DOE Project Manager, Mr. Philip Prater, at (803) 952-9333.

Sincerely,

Brian T. Hennessey

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Hennessey
Date: 2021.01.12 08:26:10 -05'00'

Brian T. Hennessey
SRS Remedial Project Manager
Infrastructure and Area Completion Division

IACD-21-116

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Ms. Susan Fulmer
Mr. Jon Richards

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Enclosures:

1. SRS Responses to U.S. Environmental Protection Agency Comments on the 2020 Effectiveness Monitoring Report (EMR) for Monitored Natural Attenuation (MNA) at the L-Area Southern Groundwater (LASG) Operable Unit (OU) (U) (SRNS-RP-2020-00332, Revision 0, June 2020) SEMS Number: 77
2. SRS Responses to South Carolina Department of Health and Environmental Control Comments on the 2020 Effectiveness Monitoring Report (EMR) for Monitored Natural Attenuation (MNA) at the L-Area Southern Groundwater (LASG) Operable Unit (OU) (U) (SRNS-RP-2020-00332, Revision 0, June 2020) SEMS Number: 77

cc w/o encl:

J. Blalock, SCDHEC-Columbia
S. French, SCDHEC-Columbia
M. Reece, SCDHEC-Columbia
G. K. Taylor, SCDHEC-Columbia
T. Fuss, SCDHEC-Aiken Environmental Affairs Office
G. N. O'Quinn, SCDHEC - Aiken Environmental Affairs Office
B. Cameron, SCDHEC-Aiken Environmental Affairs Office
R. H. Pope, EPA-Atlanta

cc w/ encl:

M. McRae, TechLaw, Inc.

Specific Comments

1. Table 2-1, LASG OU MNA Monitoring Network, page 9. Station LSW031DL is listed in this table as a LUC Boundary Monitoring Well; Table B-1, which shows MCL exceedances for tritium at this location, lists it as a Monitoring Well. Based on the information provided in Section 4.3.1 stating that no tritium exceedances were observed in any of the LUC boundary wells, it appears that Table 2-1 should be revised.

Response: Agree

Table 2-1, LASG OU MNA Monitoring Network on page 9 incorrectly lists the Southeast Plume Monitoring Well LSW031DL as a LUC Boundary Monitoring Well. Future reports/letters will ensure this well is listed as a Monitoring Well and not a LUC Boundary Monitoring Well. This is also in accordance with the *Addendum to the Monitored Natural Attenuation Effectiveness Monitoring Plan for the L-Area Southern Groundwater Operable Unit (NBN) (U)*, SRNS-RP-2012-00857, Rev 1, May 2013. No changes to the 2020 EMR are proposed.

Contact: Ashley Shull; Ashley.Shull@srs.gov (803) 952-7090

2. Section 4.3.1, Tritium, page 21. The fourth sentence of this section states: “The KSZ monitoring wells were all below their KSZCLs and also below MCLs.” However, according to Table B-1, there was a tritium MCL exceedance (23.8 pCi/L) at KSZ monitoring well LDB 3 in March 2018. Please address this discrepancy.

Response: Agree/Clarification

An incorrect statement was made regarding tritium concentrations at KSZ monitoring well LDB 3 in Section 4.3.1, *Tritium*. Tritium concentrations were above the tritium groundwater MCL of 20 pCi/mL during March 2018, but below in all the following eight sampling events. Monitoring well LDB 3 is sampled quarterly for non-LASG OU purposes (it is only required annually during CY4Q for LASG); however, all the data is published in the LASG OU report. No changes to the 2020 LASG OU EMR are proposed.

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TECHNICAL REVIEW COMMENTS

1. Section 4.0 Monitoring and Reporting, Page 12 of 40: It is not clearly understood whether the monitoring results of the L-Area Oil and Chemical Basin (LAOCB) and the L-Reactor Seepage Basin (LRSB) which are included as part of the LASG OU monitoring program would be reported in timely manner, particularly if unexpected results occur. For example, the text in the last paragraph states the next performance monitoring sampling for the LAOCB and the LRSB is scheduled for 2020 and will be reported in the next LASG OU data sampling summary report to be submitted in 2022. For clarity, revise the 2020 EMR for MNA at the L-Area Southern Groundwater (LASG) Operable Unit (OU) 77, SRNS-RP-2020-00332, Revision 0, dated June 2020 (2020 MNA Report) to indicate whether the sampling results of the LAOCB and LRSB monitoring will be submitted in a summary report to regulators prior to the LASG OU 2022 data sampling report.

Response: Clarification

The monitoring of groundwater at the LAOCB (i.e., wells LCO 2DL and LCO 6DL for carbon-14, cobalt-60, strontium-90, tritium, non-volatile beta, and gross-alpha, uranium isotopes if gross-alpha exceeds the trigger limit of 15 pCi/L, and monitoring of LRSB [well LSB 4 for strontium-90]) is not part of the LASG OU MNA Record of Decision/remedy for tritium and VOCs. Monitoring at the LAOCB and LRSB is performed to confirm the efficacy of the in-situ stabilization and low permeability covers at the LAOCB and LRSB surface units for the 5-Year Remedy Reviews for those surface units. This monitoring is included with the LASG OU since groundwater monitoring is already performed in the area or at the same wells. In the event MCLs are exceeded, a confirmation sample will be collected, and if confirmed, the Core Team will be notified shortly afterwards.

The Addendum to the Monitored Natural Attenuation Effectiveness Monitoring Plan for the L-Area Southern Groundwater Operable Unit (NBN) (U), SRNS-RP-2012-00857, Rev 1, May 2013 generally states the following in association with the LAOCB and LRSB monitoring:

If concentrations exceed MCLs for any of the monitored constituents, a confirmation sample will be collected within 30 days of receipt of the data. If the confirmation sample also exceeds MCLs, then a Core Team meeting will be convened to discuss the results and determine what follow up action is required.

As stated in the 2020 LASG EMR, the results will be submitted in the next LASG OU data report. Also, the data will be supplied in the upcoming December 2021 Rev 0 of the Geosynthetic or Stabilization/Solidification Cover Systems Phase of the Sixth Five-Year Remedy Review Report. No changes to the 2020 EMR are proposed; however, future LASG OU reports/letters will also list the upcoming Five-Year Remedy Review Reports that the data will be reported in. In addition, a statement of the above mentioned MCL exceedance confirmation sampling and potential Core Team notification will be added.

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2. Section 4.3.2 Tetrachloroethylene (PCE), Page 29 of 40: It is currently uncertain whether the trend in PCE concentrations in well LSW 25DL is slowly declining as indicated in the text. For example, based on the Time Series Plot for Tetrachloroethylene (PCE) Station for LSW 25DL, Page C-10 of C-62, a declining PCE concentration trend in well LSW 25DL is not readily observed and appears to be stable or no trend. Statistical analysis (e.g., Mann Kendall) of the time-series data would help to quantify the trend results. Revise the 2020 MNA Report to address this issue.

Response: Clarification

The decreasing concentration statement was included because PCE concentrations at LSW 25DL have shown a slowly decreasing trend since 2014 and have been relatively stable since sampling began in 2004. This well is located mid-plume, downgradient from the original PCE source areas, and is in the plume migration path towards L Lake. The Mann-Kendall trend test of the whole PCE data set at LSW 25DL does not show a trend; however, the Mann-Kendall trend test shows a decreasing trend over the last seven year period using data from 2013 to date and exhibits an ordinary least squares (OLS) Regression Slope of -2.0.

No changes to the 2020 EMR are proposed; however, future LASG OU reports/letters will also list the timeframe of stated trends, and Mann-Kendall trend tests will be performed for wells that do not show clear data trends.

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