Healthy People. Healthy Communities.

December 20, 2022

Mr. Brian T. Hennessey, SRS Remedial Project Manager
Infrastructure and Area Completion Division
U. S. Department of Energy
Savannah River Operations Office
Post Office Box A
Aiken, South Carolina 29802

Re: 2021 Annual Comprehensive TNX Area Groundwater Monitoring and Remedial Action Effectiveness Interim Report (U), SEMS Numbers: 21, 29 (SRNS-RP-2022-00627, Revision 0, August 2022) received August 30, 2022.

Dear Mr. Hennessey:

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/DHEC 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: 2022.12.20 14:39:40 -05'00'

Susan B. Fulmer, P.G., Manager
Federal Remediation Section
Division of Site Assessment, Remediation, Revitalization
Bureau of Land and Waste Management

cc: C. L. Bergren, SRNS-ACP (Signed Original)
Travis Fuss, Aiken Environmental Affairs Office (via email)
Jon Richards, EPA Region IV
Heather Cathcart, BLWM

South Carolina Department of Health and Environmental Control Comments on:
2021 Annual Comprehensive TNX Area Groundwater Monitoring and
Remedial Action Effectiveness Interim Report (U), SEMS Numbers: 21, 29
(SRNS-RP-2022-00627, Revision 0, August 2022) received August 30, 2022.

General Comment

1. Section 8.2, Recommendations, page 60 provides recommendations regarding a potential new monitoring well located between TNX 28D and the TNX 72 cluster, in response to a previous DHEC comment on the 2017 Annual Comprehensive TNX Area Groundwater Monitoring and Remedial Action Effectiveness Interim Report. DHEC recommends scheduling a meeting with DOE and EPA prior to the submittal of the 2022 report to further discuss the possibility of a new monitoring well in this area (or well cluster, as needed). As discussed in the 2021 report and in DHEC's comments on the 2017 report, TNX 72S and TNX 72M have a history of being dry, which has limited the ability to monitor potential contaminant discharge into the wetland area adjacent to the Savannah River. TNX 28D has demonstrated generally increasing contaminant concentrations over several past monitoring events, indicating that the plume may be migrating downgradient toward the wetland area and the Savannah River. Additionally, DHEC generally agrees with the evaluation and recommendations provided by EPA in General Comment 1 of their comments on the 2021 report. DHEC recommends that a new well or well cluster near the edge of the wetlands, downgradient from TNX 28D, upgradient from the TNX 72 cluster, and cross-gradient from TNX 16D, be further evaluated and discussed by DHEC, EPA, and DOE.

Specific Comments

1. Section 3.3, Edible Oil Treatment, page 11. For the discussion on the 2015 edible oil treatment injections, please reference Figure A-11 in the sentence that mentions the ten (10) existing monitoring wells that were used for the injections.

2. Section 3.5, Radiologically Contaminated Groundwater, page 12. Please include a figure that shows the locations of the two localized areas where groundwater monitoring wells indicate exceedances of MCLs for radionuclides as discussed in this section.

3. Section 5.4, Analytical Results, pages 24-26 and Tables B-1 and B-2. There are a few apparent discrepancies between the number of detections for some constituents discussed in Section 5.4 and those listed in Tables B-1 and B-2. Specifically, Section 5.4 states the number detections for TCE 2Q2021, ethylene 2Q2021, uranium 2Q2021, and uranium 4Q2021 as 18, 7, 18 and 21, respectively. Tables B-1 and B-2 list the number of detections for those same constituents as 17, 6, 17 and 19. Please clarify or correct these discrepancies.

4. Appendix F, Proposal to Evaluate the Soil Vapor Extraction Wells at the TNX Operable Unit, pages F-1 through F-14. Please provide additional information on the sampling and analysis procedures for the proposed SVE evaluation unless already summarized in a separate document. Specifically, please specify the following: the type and volume of containers that will be used to collect samples for VOC analysis (e.g., Tedlar bags, Summa canisters); if samples will be collected in Summa canisters or similar containers, the time duration over which the sample will be collected; any QA/QC samples to be collected (e.g., equipment blanks, trip blanks, duplicates); and the analytical method to be used for analysis of the VOCs listed in Table F-1.

5. Appendix F, Section 3.0, Proposal, page F-5. Please address the following comments regarding soil gas sampling procedures for the SVE wells.

    a. It is unclear how the sample delivery line will be connected to each SVE well head, and how the sampling train will be laid out regarding fittings, connections to the pump and sampling container, etc. Please describe the general soil vapor sampling train layout and how this will be connected to the well head to ensure a leak-free connection.

    b. While monitoring with a carbon dioxide meter may give a general indication that vapor is being pulled from the subsurface and not ambient air, it does not appear that this method will ensure a leak-free seal at the well head and confirm that no ambient air is being introduced into the sample. Please ensure that a leak test or other appropriate test is performed prior to sampling to ensure no ambient air is introduced into the sample, and please provide additional details regarding these procedures.

    c. Soil gas sampling procedures typically call for purging the sample delivery line prior to sample collection. Please include in Appendix F a brief description of the purging procedures to be followed prior to sampling.

    d. As discussed in a previous comment, the method by which the sampling train will be connected to each SVE well head is unclear. In addition to this comment, if the SVE well is required to be uncapped to connect the soil vapor sampling assembly, please consider the possibility that ambient air could be introduced into the well, especially if the MicroBlowers are still operating or if any residual vacuum is present in the well. If this is the case, please also evaluate whether additional purging of the SVE well will be needed to ensure that no ambient air is introduced into the sample.

e. The description of the initial sampling event with the MicroBlowers operating is unclear, since the report text indicates that the five MicroBlowers are rotated between SVE wells. During the initial sampling event prior to shutdown of the MicroBlowers, please clarify whether the MicroBlowers will stay connected to the same five SVE wells throughout the event (and specify which wells the MicroBlowers are connected to), or if the MicroBlowers will be connected to each SVE well prior to sampling to evaluate the effect on VOC concentrations while the MicroBlowers are operating at each individual well.

f. The report text indicates that SVE wells not connected to the MicroBlowers are equipped with BaroBalls which allow for venting of subsurface vapors. Please identify which SVE wells to be sampled for the evaluation will be equipped with BaroBalls and explain whether this will have any effect on the ability to collect a representative soil vapor sample from each SVE well or if this will factor in to the final SVE evaluation.