REGION 4
ATLANTA, GA 30303

September 22, 2025

Mr. Matthew Baker, SRS Remedial Project Manager
Remediation and Deactivation & Decommissioning Division
U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

EPA comments: 2024 ANNUAL COMPREHENSIVE TNX AREA GROUNDWATER MONITORING AND REMEDIAL ACTION EFFECTIVENESS INTERIM REPORT (U) SEMS NUMBERS: 21, 29, SRNS-RP-2025-00676, REVISION 0 JUNE 2025

Dear Mr. Baker:

The U.S. Environmental Protection Agency, Region 4 (EPA) has reviewed the 2024Annual Comprehensive Groundwater Monitoring & RAEIR, Ous 21 & 29, dated July 28, 2025. EPA's comments are attached.

If you have any questions or require additional information, please contact Jon Richards at (404) 431-1340.

Sincerely,

JON RICHARDS Digitally signed by JON RICHARDS
Date: 2025.09.22 17:15:25 -04'00'

Jon Richards FFA RPM
Federal Facilities Branch
Superfund and Emergency Management Division

cc: C.L. Bergren, SRNS-ACP
Susan Fulmer, SCDHEC

GENERAL COMMENTS

1. The Report identifies the New TNX Seepage Basin (NTSB) as a source of groundwater contamination but does not explain why monitoring wells have not been installed in the vicinity of the NTSB. It is unclear if groundwater was previously characterized at this location. For example, based on Figure A-15 (TNX Area Water Table Elevation 4Q2024), the NTSB could be upgradient from monitoring wells TNX 5D and TGB 5 where the groundwater flow direction is unclear. In addition, since concentrations of cis-1,2-dichloroethylene (cis-1,2-DCE) are increasing at well TBG 5, it is unclear if there could be an upgradient source. *Please revise the Report to discuss the groundwater at the NTSB, including whether it has been characterized and if there could be an upgradient source for the increasing cis-1,2-DCE concentrations at monitoring well TBG 5.*

2. The Report presents inconsistent information for the soil vapor extraction (SVE) wells where MicroBlowers™ were operated. Section 2.4.2 (Soil Vapor Extraction) states that MicroBlowers™ were operated in five wells TVM 1V, TVM 3V, TVM 4U, TVX004U, and TVX007U until they were shut down in June 2023 for evaluation. This section indicates that the MicroBlowers™ were restarted in June 2024 at the same locations with the exception of TVX007U, which was moved to TVX007L in 4Q2024 due to low flow rate at TVX007U. In addition, Figure A-11 (Location of TNX Area SVE Monitoring Well System) indicates these six wells had MicroBlowers™. However, Section 3.3.1 (Soil Vapor Extraction [SVE] Operations) states that the MicroBlowers™ were reconnected to five different SVE wells to maximize volatile organic carbon (VOC) mass removal (i.e., TVM-002-U, TVM-003-U, TVM-004-V, TVX-004-L, and TVX-007-L). In addition, this section indicates the MicroBlower™ on well TVX-007-L was later moved to TVX-007-U because of low flow rate issues. Table 3-3 (Well Construction and Operation for TNX SVE Wells) also indicates wells TVM 2U, TVM 3U, TVM 4V, TVX 4L, and TVX007L were operated in 2024 with the MicroBlower™ on TVX007L moved to TVX007U in 4Q2024. It is noted that these well identifications are similar but not exactly the same as the wells previously identified (i.e., with the dashes removed). *Please revise the Report to present consistent information and SVE well identifications for the locations where MicroBlowers™ were used in 2024.*

3. The Report does not provide a data usability assessment, including discussion of how the data were verified and validated and a summary of the results of this review. Section 3.0 (Monitoring and Reporting) indicates that all data were verified and validated, but it is unclear what was included in each of these reviews. It is also unclear what percentage of data was verified/validated and what level of validation was performed. Additionally, Section 3.2 (Evaluation of Field and Analytical Results) should briefly summarize the results of the data validation (e.g., whether there were rejections of any data, or significant data qualifications). For example, Section 2.5.1.1 (Sampling Issues) discusses holding time exceedances for several samples, but it is unclear which analytical results had the exceedances and whether the data exceeding hold times should be rejected and not reported in Table B-1 (Groundwater Monitoring Results for TNX Area Wells, Second Quarter, 2024) (e.g., Table B-1 reports both the May and June results for TNX 15D). The Report should also include a discussion of the data usability (e.g., the precision of the field duplicate results). *Please revise the Report to include a data usability assessment that defines the data verification and validation that was performed and summarizes the results of these reviews (e.g., in Section 3.2), as well as the usability of the data. Please also include data validation packages as supporting documentation.*

4. It is unclear why the Report includes a figure of the trichloroethylene (TCE) plume in groundwater for the fourth quarter of 2024 (4Q2024) but does not include a figure for the TCE concentrations in

the second quarter of 2024 (2Q2024). There were four monitoring wells with TCE concentrations that exceeded the maximum contaminant level (MCL) in the 2Q2024 and only two wells with exceedances of the TCE MCL in the 4Q2024. *Please revise the Report to include a figure of the TCE plume in the 2Q2024.*

5. The Report contains multiple text sections, figures, tables, and appendices for a total of 540 pages, but the document is not bookmarked with links for each portion of the Report. It would be helpful if the different referenced items were bookmarked for ease of navigation through the document. *Please revise the Report to include bookmarks and links for the text sections, figures, tables, and appendices.*

SPECIFIC COMMENTS

1. **Section 2.1.3, New TNX Seepage Basin (NTSB), Page 3 of 66:** The overflow from periods of unusually high drainage is indicated to flow through Outfall X-013A, located on the southeast corner of the NTSB, and a local surface depression; however, these features are not identified on Figure A-2 (Location of TNX Waste Units). In addition, it is unclear if these features are shown on Figure A-3 (Location of TNX Area Interim Remedial Action / Effectiveness Monitoring Strategy Well System during Startup and Initial Operations). *Please revise the figures to identify Outfall X-013A and the local surface depression that received overflow from the NTSB.*

2. **Section 2.Unitsdiologically Contaminated Groundwater, Page 13 of 66:** This section indicates that radionuclide constituents previously exceeded MCLs at two localized areas, one southwest of the TBG and one in the wetlands southwest of the OTSB, near the TNX OD, but these areas are not shown on a figure (e.g., the referenced Figure A-2, Location of TNX Waste Units does not identify these areas). Since the Report concludes that the uranium, adjusted gross alpha, and combined radium detections in the wetlands are sporadic, it would be useful to show where the radiologically contaminated groundwater was previously known to be present. *Please revise the Report to show where the radiologically contaminated groundwater was previously located to support the statement that contamination is now sporadic.*

3. **Section 3.1.3, pH, Page 24 of 66, and Figure A-16, TNX Area Field pH of Groundwater, 4Q2024, Page A-24 of A-46:** The text identifies 10 wells with pH that was less than 5 in 4Q024 (i.e., TBG 3, TIR 1L, TIR 1M, TIR 1U, TNX 9D, TNX 11D, TNX 15D, TNX 24D, TNX 72D, and XSB006R) and references Figure A-16 to show the locations of the pH plume; however, three of these wells and pH results are not shown on Figure A-16 (i.e., TIR 1L, TIR 1U, and TNX 72D). For example, a pH plume is not noted at the location of TNX 72M, and well TNX 72D is not identified on the figure. *Please revise the Report to show all locations of the wells identified with pH values less than 5 for the plume shown on Figure A-16.*

4. **Section 3.1.5.4, Methane, Pages 31 to 32 of 66:** This section should also discuss the methane results in injection well TVM 1M similar to the discussion presented for the other edible oil (EO) injection wells. Based on Table B-1 (Groundwater Monitoring Results for TNX Area Wells, Second Quarter, 2024), methane was elevated at 2,240 ug/L in 2Q2024. *Please revise this section to discuss methane in injection well TVM 1M.*

5. **Section 3.2.3.1, Trichloroethylene (TCE), Page 42 of 66:** The text states that the TCE concentration for well TVR 1A was 0.66 micrograms per liter (ug/L) during the 4Q2024 and the TCE concentration for well TVM 1M in the 2Q2024 was 28.0 ug/L; however Table B-3 (Groundwater Monitoring Results for TNX Area Wells, Fourth Quarter, 2024) lists the TCE

concentration for well TVR 1A as 0.37 ug/L and Table B-1 (Groundwater Monitoring Results for TNX Area Wells, Second Quarter, 2024) lists the TCE concentration for well TVM 1M as 23 ug/L. *Please revise the text to be consistent with the TCE concentrations for wells TVR 1A and TVM 1M reported in Tables B-1 and B-3.*

6. **Section 4.0, Summary/Recommendations, Page 59 of 66:** This section does not include the uranium results in groundwater. As noted in Section 3.2.5.2 (Wetlands), uranium concentrations at TNX 28D have a slowly increasing trend and the upgradient source of uranium concentrations at TNX 28D is unclear. This increasing trend and unknown source should be included in the summary, and any recommendations for how it will be addressed should be provided. *Please revise Section 4.0 to discuss the uranium results in TNX groundwater.*