Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

JAN 2 1 2026

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 Environmental Services
2600 Bull Street
Columbia, South Carolina 29201

Mr. Jon Richards
Savannah River Site Remedial Project Manager
Superfund and Emergency Management 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 2024 Annual Comprehensive TNX Area Groundwater Monitoring and Remedial Action Effectiveness Interim Report (U) (SRNS-RP-2025-00676, Revision 0, June 2025) and Results from the 2023-2024 Evaluation of the Soil Vapor Extraction System at the TNX Operable Unit (SRNS-RP-2025-00815, Revision 0, June 2025) SEMS Numbers: 21, 29

In accordance with the terms of the Federal Facility Agreement (FFA), the U.S. Department of Energy (DOE) is submitting the subject comment responses for your review. The South Carolina Department of Environmental Services (SCDES) provided comments on the reports on October 23, 2025; the U.S. Environmental Protection Agency's (EPA) provided comments on the reports on September 23, 2025, and October 27, 2025, respectively. A Microsoft Teams meeting was held on January 6, 2026. The meeting focused on the soil vapor extraction (SVE) evaluation at TNX Area and recommendations for the SVE system. The Savannah River Site (SRS) emailed draft responses for both reports to EPA and SCDES on December 18, 2025. The EPA and SCDES replied via email on January 7, 2026, that the draft responses were acceptable. The reports will not be revised; however, all comment responses will be included in the next report, as applicable. Upon regulatory approval of the comment responses, SRS will discontinue all SVE operations and maintenance activities for the MicroBlowers™ and BaroBalls™. SRS plans to dismantle and remove all SVE wells in Fiscal Year 2027 or 2028 depending on available funding.

Please review the enclosures and provide your approval within thirty (30) days of receipt. The effort and time that the EPA and the SCDES have provided on this operable unit are greatly appreciated.

Comments or questions from you or your staff may be directed to me at (803) 522-6427.

Sincerely,

MATTHEW BAKER

Digitally signed by MATTHEW BAKER
Date: 2026.01.21 09:40:40 -05'00'

Matthew R. Baker
Acting FFA Remedial Project Manager
DOE-Savannah River Operations Office
Remediation, Deactivation, and Decommissioning Division

RDDD-26-121

Enclosures:

1. SRS Responses to the South Carolina Department of Environmental Services' Comments on the 2024 Annual Comprehensive TNX Area Groundwater Monitoring and Remedial Action Effectiveness Interim Report (U) (SRNS-RP-2025-00676, Revision 0, June 2025) SEMS Numbers: 21, 29
2. SRS Responses to the U.S. Environmental Protection Agency's Comments 2024 Annual Comprehensive TNX Area Groundwater Monitoring and Remedial Action Effectiveness Interim Report (U) (SRNS-RP-2025-00676, Revision 0, June 2025) SEMS Numbers: 21, 29
3. SRS Response to the South Carolina Department of Environmental Services' Comment on the Results from the 2023-2024 Evaluation of The Soil Vapor Extraction System at the TNX Operable Unit (SRNS-RP-2025-00815, Revision 0, June 2025) SEMS Numbers: 21, 29
4. SRS Responses to the U.S. Environmental Protection Agency's Comments Results from the 2023-2024 Evaluation of The Soil Vapor Extraction System at the TNX Operable Unit (SRNS-RP-2025-00815, Revision 0, June 2025) SEMS Numbers: 21, 29

c w/o encl:
M. Reece, SCDES-Columbia
H. J. Porter, SCDES-Columbia
J. Blalock, SCDES-Columbia
S. French, SCDES-Columbia
R. G. Stewart, SCDES-Columbia
M. Mehta, SCDES-Columbia
G. O'Quinn, SCDES-Midlands Aiken Environmental Affairs Office
T. G. Corley, SCDES-Midlands Aiken Environmental Affairs Office
C. L. Robertson, SCDES-Midlands Aiken Environmental Affairs Office
E. G. Downing, SCDES-Midlands Aiken Environmental Affairs Office
H. L. Herlong, SCDES-Midlands Aiken Environmental Affairs Office

c w/ encl:
H. H. Cathcart, SCDES-Columbia
M. McRae, TechLaw, Inc.

SRS Responses to SCDES Comments on the 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,
Savannah River Site, Aiken, South Carolina

Comments Received October 23, 2025

GENERAL COMMENTS

1. **Section 4.2, Recommendations, page 60 of 66.** The last sentence of the first paragraph states that a meeting with the Core Team to present the results and discuss the proposed recommendation of discontinuing SVE at TNX OU will be scheduled if requested. ***SCDES requests that this meeting be scheduled.***

Response: Agree

This meeting was conducted on January 6, 2025 at South Carolina Department of Environmental Services' (SCDES) request. The meeting focused on the Soil Vapor Extraction (SVE) evaluation at TNX Area and recommendations for the SVE system. Conclusions and recommendations from this meeting will be presented in the 2025 annual effectiveness report.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

Comments Received October 23, 2025

SPECIFIC COMMENTS

1. **Section 3.1.4.11, Nitrate-Nitrite as Nitrogen (NO_3/NO_2 as N), page 27 of 66.** The first paragraph states that during the 2Q2024, nitrate (NO_3)/nitrite (NO_2) as nitrogen (N) was detected in 36 monitoring wells and three surface water stations. However, Table B-1, 2Q2024 TNX Annual Groundwater and Monitoring Report, indicates NO_3/NO_2 as N was detected in a total of 35 monitoring wells and three surface water stations. ***Please correct the discrepancy between the paragraph and the table.***

Response: Agree

The text incorrectly stated nitrate/nitrite as nitrogen was detected in 36 monitoring wells. Table B-1 correctly shows 35 monitoring wells with detections. SRS will ensure future reports present the correct number of monitoring wells in the text and in Appendix B.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

2. **Section 3.1.5.1, Dissolved Oxygen, page 29 of 66.** The fourth bullet point states that at TRW 3, the DO concentration was 2.82 mg/L in 4Q2024. However, Table B-3, 4Q2024 TNX Annual Groundwater and Monitoring Report, indicates the DO concentration at TRW 3 was 2.85 mg/L. ***Please correct this discrepancy between the paragraph and the table.***

Response: Agree

The text incorrectly stated that the dissolved oxygen (DO) concentration was 2.82 milligrams per liter (mg/L) in fourth quarter of 2024 at monitoring well TRW 3. Table B-3 correctly presents the DO concentration of 2.85 mg/L. SRS will ensure future reports will present the correct data in the text and in Appendix B.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

3. **Section 3.1.5.6, Total Organic Carbon, page 33 of 66.** The last sentence of the paragraph states that TOC concentrations continue to be elevated at TBG 3, TBG 4, and TBG 5 with maximum concentrations of 2.12×10^6 µg/L, 9.37×10^6 µg/L, and 2.78×10^6 µg/L respectively, in the 4Q2024. However, Table B-3, 4Q2024 TNX Annual Groundwater and Monitoring Report, indicates the TOC concentrations at TBG 3, TBG 4, and TBG 5 were an estimated (J qualifier) at 212,000 [2.12×10^5] ug/L, 937,000 [9.37×10^5] µg/L, and an estimated (J qualifier) at 278,000 [2.78×10^5] ug/L, respectively. The values presented in the paragraph are a power of 10 different from the values presented in the table. ***Please correct this discrepancy between the paragraph and the table.***

Comments Received October 23, 2025

Response: Agree

The text incorrectly presented total organic carbon results a power of 10 greater than the actual data. Table B-3 presents the correct data for total organic carbon at TBG 3, TBG 4, and TBG 5 during the fourth quarter of 2024. SRS will ensure future reports will present the correct data in the text and in Appendix B.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

Comments Received October 23, 2025

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**SRS Responses to USEPA Comments on the 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,
Savannah River Site, Aiken, South Carolina**

Comments Received September 23, 2025

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.***

Response: Clarification

The New TNX Seepage Basin (NTSB) received process wastewater from TNX pilot-scale operations that consisted primarily of simulated nonradioactive sludge, glass frit, and laboratory sink discharges. There are no records of hazardous wastes released to the basin, including volatile organic compounds (VOCs). There were no contaminant migration constituents of concern identified for the NTSB in the *RCRA Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment for the TNX Area Operable Unit (U)* (Westinghouse Savannah River Company [WSRC] 1999), and the NTSB is not a source to groundwater contamination. The Record of Decision (ROD) for the TNX OU has been approved with no contaminant migration constituents of concern for the NTSB (WSRC 2003). Groundwater monitoring in the vicinity of the NTSB was conducted from 1984 to 2004 at four monitoring wells, YSB series (Figure CR-1). From 1984 to 2004, there were no detected exceedances of maximum contaminant levels (MCLs) for all VOCs analyzed. Trichloroethylene (TCE) was detected one time in 1988 (total of 238 VOC samples between 1988 and 2004) with a result of 2 micrograms per liter (ug/L) at location YSB 4A (MCL of 5 ug/L).

Cis-1,2-dichloroethylene (cis-DCE) detections in the TNX Area OU groundwater are a result of TCE and tetrachloroethylene (PCE) degradation following injections of edible oil and are not from an upgradient source. This discussion is included in Section 3.2.3.2, *Cis-1,2-Dichloroethylene (cis-1,2-DCE)*, of the 2024 annual effectiveness report. Text in Section 2.1, *Unit History/Description*, of future groundwater reports will be revised for clarity such as the following:

"… Past operations processes within the TNX Area resulted in contamination of the vadose zone and groundwater. The primary source of vadose zone and groundwater contamination is from the TNX Burial Ground (TBG) subunit. ~~Sources of groundwater contamination included seepage from unlined basins (Old TNX Seepage Basin [OTSB] and New TNX Seepage Basin [NTSB]), the TNX Burying Ground (TBG), leakage from the process sewers, and leachate from other sources at TNX (e.g., temporary storage facility drums and an~~

~~equipment staging area).~~"

No change to the 2024 annual effectiveness report is proposed.

WSRC 2003. ***Record of Decision Remedial Alternative Selection for the TNX Area Operable Unit (U)*****, WSRC-RP-2003-4017, Revision 1, August 2003, Westinghouse Savannah River Company, LLC, Savannah River Site, Aiken, SC.**

WSRC 1999. ***RCRA Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment for the TNX Area Operable Unit (U)*****, WSRC-RP-96-00808, Revision 1.2, January 1999, Westinghouse Savannah River Company, LLC, Savannah River Site, Aiken, SC.**

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Agree

MicroBlowers™ were installed on soil vapor extraction (SVE) wells TVM-001-V, TVM-003-V, TVM-004-U, TVX-004-U, and TVX-007-U until June of 2023, when they were disconnected to allow for the SVE evaluation. The text in Section 2.4.2 incorrectly states that MicroBlowers™ were restarted in June 2024 at these same wells. Section 3.3.1 correctly states that MicroBlowers™ were reconnected to five SVE (TVM-002-U, TVM-003-U, TVM-004-V, TVX-004-L, and TVX-007-L) following completion of the SVE evaluation sampling. The MicroBlower™ on TVX-007-L was later moved to SVE well TVX-007-U due to low flow issues at TVX-007-L. As discussed in Section 2.4.2, Figure 11 depicts the location of the MicroBlowers™ prior to the SVE evaluation. SRS will ensure future reports accurately and

consistently present SVE MicroBlower™ locations and well nomenclature in the text, figures, and figure titles.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Clarification

Groundwater monitoring data reported for the TNX Area OU are verified and validated (V&V) level data, reviewed in accordance with the *Savannah River Site Area Completion Projects Quality Assurance Project Plan for Environmental Data Collection and Management* (Savannah River Nuclear Solutions, LLC [SRNS] 2012). This document was developed in agreement with USEPA and SCDES to integrate all technical and quality aspects of environmental data collection and management to provide consistent data objectives and document the comprehensive set of standard operating procedures for sampling, analysis, quality assurance/quality control, and data review. Additionally, the Environmental Compliance and Area Completion Projects (EC&ACP) organization has a series of administrative procedures (e.g., WSRC-C1, *Environmental Compliance & Area Completion Projects (EC&ACP) Administrative Procedures*, ER-AP-125, *EC&ACP Quality Assurance Program*) and technical memorandums that further define the requirements and responsibilities within EC&ACP for implementation of the quality program. Validation reports are typically not submitted with SRS groundwater monitoring reports, however SRS agrees the document would benefit from further discussion to summarize the validation level of the data. Future annual TNX Area OU monitoring reports will include text in Section 3.0 to summarize the validation level (V&V) of the data, report any data issues in the reporting

period, and assess the usability of the data for the reporting period.

For the data reported in the 2024 annual TNX Area OU report, all analytical data was V&V with no data rejected or identified as erroneous. All second quarter 2024 (2Q24) and fourth quarter 2024 (4Q24) data was successfully collected and reported and considered usable for the purposes of monitoring the TNX Area OU.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Clarification

SRS posts plume maps for the annual TNX Area OU monitoring report using the latest reported data. For the 2024 TNX Area OU report, this was 4Q24 data. Variability between second quarter and fourth quarter data is not expected to be significant and therefore, one annual plume map is sufficient for purposes of visualizing plume extent. Matrix tables and time-series plots are provided in each annual report to supplement the second quarter and fourth quarter results.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

Comments Received September 23, 2025

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.***

Response: Agree

SRS will ensure future reports include bookmarks and links for the text sections, figures, tables, and appendices.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

Comments Received September 23, 2025

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.***

Response: Agree

Figure A-2 will be revised to identify Outfall X-013A and the local surface depression that received overflow from the NTSB, as shown in Figure CR-2 of these comment responses.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

2. **Section 2.4.5, Radiologically 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.***

Response: Agree

The text refers to two localized areas, one near the TNX Burying Ground and one near the Old TNX Seepage Basin. The two areas the text is referring to are generalizations based on historical sampling data and do not define a discernable plume or consistent contaminant extent. Figure A-2 does not depict the information referred to in the text, therefore Figure A-2 will be revised in future reports to present the two localized areas. The figure will be revised similar to what is shown in Figure CR-2 of these comment responses. SRS maintains that the historical, sporadic detections are not of concern at this time, institutional controls continue to be an appropriate remedial action, and monitoring for radiological constituents will continue for TNX Area OU groundwater. Any significant changes in radiological activity that would require a recommendation for additional remedial action will be evaluated in the five year remedy review.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Agree

SRS agrees pH data for all monitoring wells in the clusters should be posted on figures referenced in the text. For example, in the pH figure, monitoring well cluster TNX 72 data was not posted for TNX 72D on Figure A-16. Although TNX 72D 4Q24 pH result was below 5, this is not believed to represent true conditions at TNX 72D. Since 2010, pH at TNX 72D has consistently remained above 5.5. The 2Q24 pH result at TNX-072-D was 5.8 and the second quarter of 2025 result 5.7. Therefore, the 4Q24 result is considered an anomaly and does not represent conditions that should be included in the pH extent in Figure A-16. SRS will ensure figures post all relevant data in future annual reports. Anomalous data that causes discrepancies between data postings and plume extent will be discussed in future reports, when appropriate.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Agree

SRS agrees that the methane results in injection well TVM 1M should have been discussed in Section 3.1.5.4 consistent with the discussion presented for other EO injection wells. Methane was detected at 2,240 microgram per liter (ug/L) in 2Q24 at well TVM 1M, which should have been included with the other edible oil injection well locations with methane results greater than 1,000 ug/L. SRS will ensure future reports include a discussion of all relevant monitoring well results.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Agree

Table B-1 and Table B-3 provide the correct data for TVR 1A (0.37 ug/L in 4Q24) and TVM 1M (23.0 ug/L in 2Q24). SRS will ensure that future reports provide accurate and consistent data in the text and appendices.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

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.***

Response: Clarification

As described in the annual report, uranium concentrations at TNX 28D did not exceed the maximum contaminant level in 2024. Although uranium is detected in TNX 28D, this detection does not define a discernable uranium plume in the TNX Area OU. Consistent with Section 3.5.2, uranium will be included with adjusted gross alpha and combined radium discussion in the Section 4.1 summary of future annual reports.

No change to the 2024 annual effectiveness report is proposed.

Responsible Party: Adam Willey, adam.willey@srs.gov, 803-646-4944

Comments Received September 23, 2025

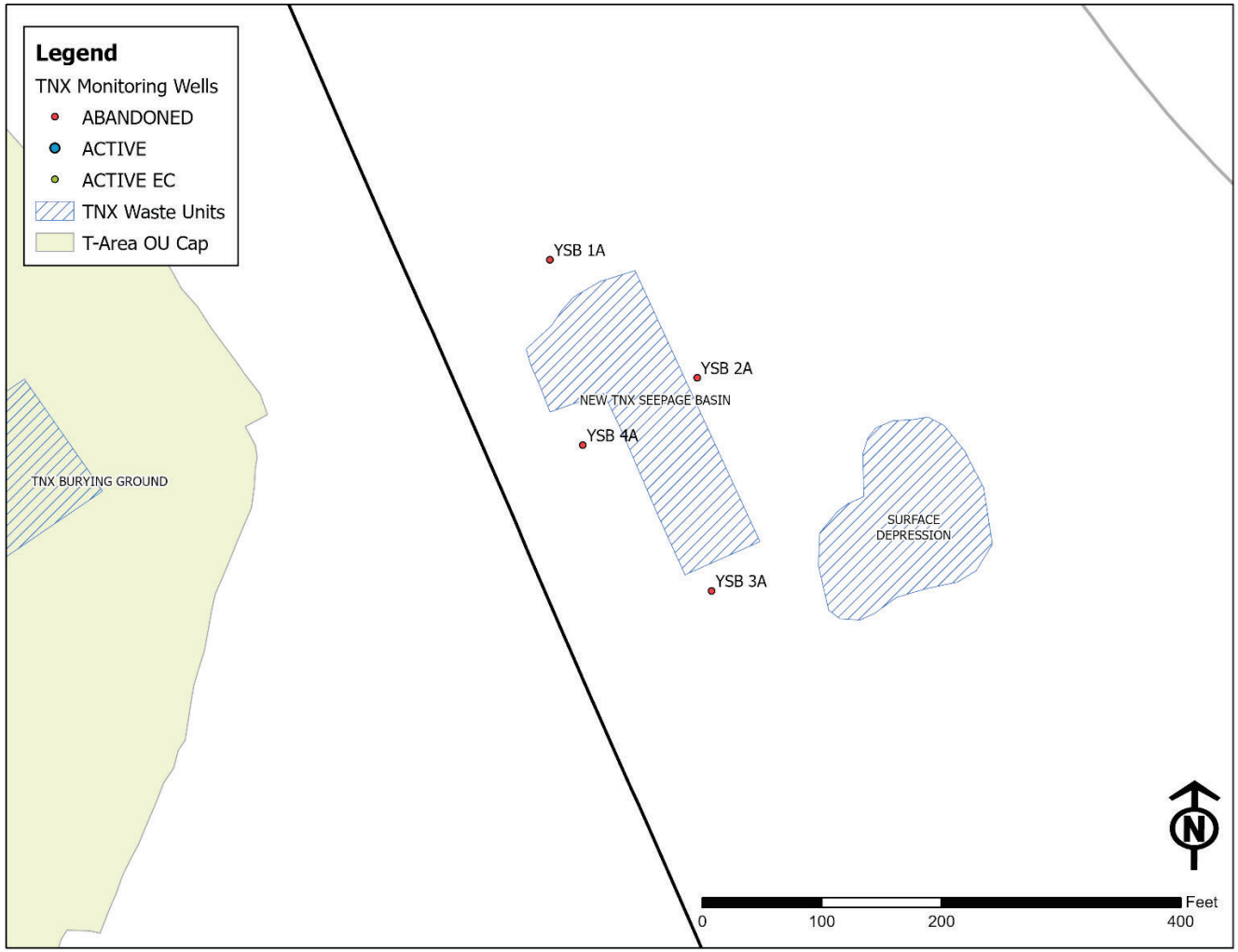


Figure CR-1. Location Map for YSB Series Monitoring Wells at the New TNX Seepage Basin

**SRS Responses to USEPA Comments on the 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,
Savannah River Site, Aiken, South Carolina**

Comments Received September 23, 2025

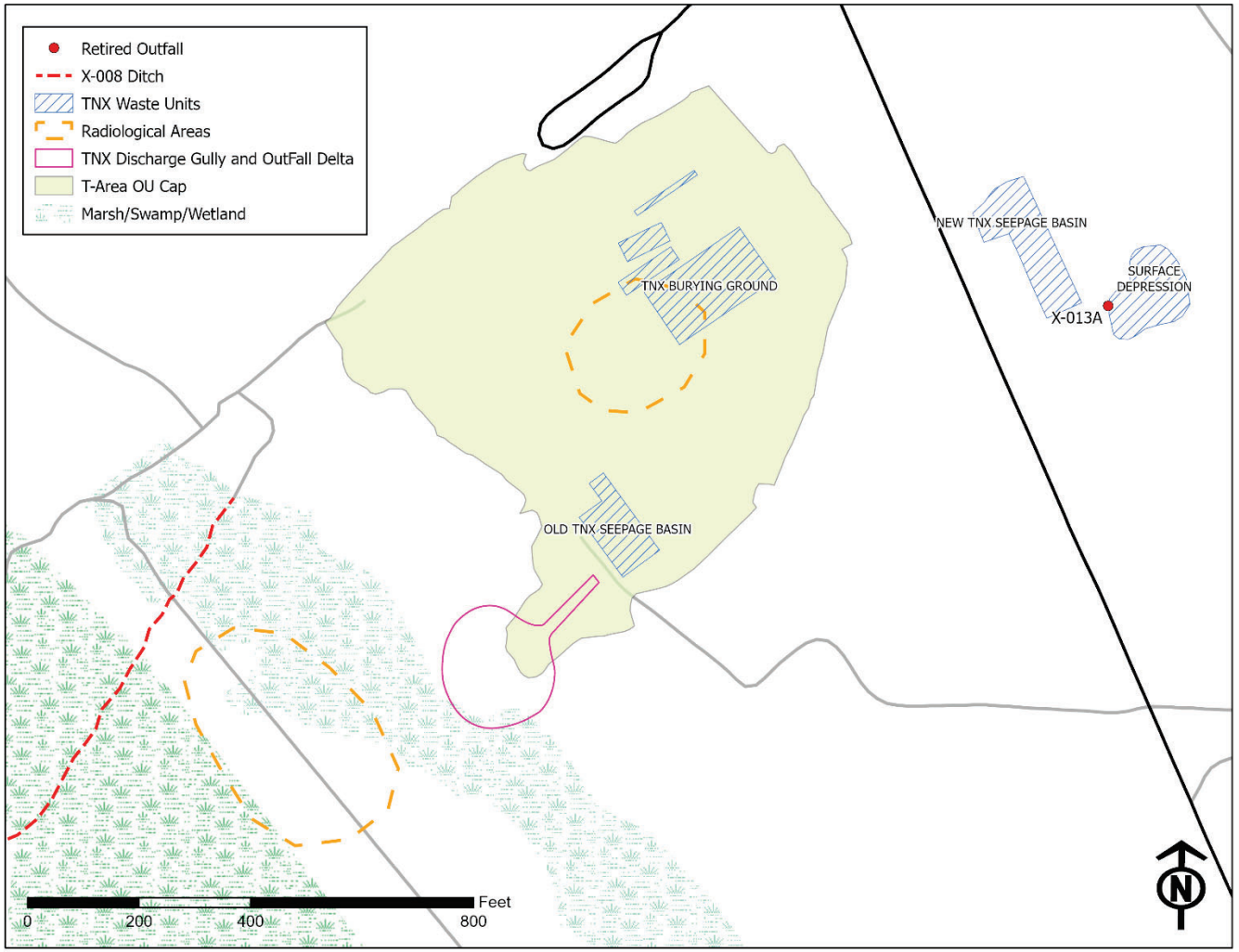


Figure CR-2. Revised Figure A-2

SRS Responses to SCDES Comments on the 2023-2024 Evaluation of the Soil Vapor Extraction System at the TNX Operable Unit, SEMS Numbers: 21, 29, SRNS-RP-2025-00815, Revision 0, June 2025
Savannah River Site, Aiken, South Carolina

Comments Received October 23, 2025

GENERAL COMMENTS

1. 1. Section 7.0, Recommendations, page 17 of 36. The last sentence of this paragraph states that a meeting with the Core Team to present these results and discuss the recommended shutdown of the SVE system at TNX OU will be scheduled if requested. SCDES requests that this meeting be scheduled.

Response: Agree

A meeting was conducted on January 6, 2026. The meeting focused on the Soil Vapor Extraction (SVE) evaluation at TNX Area and recommendations for the SVE system. Conclusions and recommendations from this meeting will be presented in the 2025 annual effectiveness report.

Responsible Party: Branden Kramer, (803) 925-6378, branden.kramer@srs.gov

SRS Responses to USEPA Comments on the 2023-2024 Evaluation of the Soil Vapor Extraction System at the TNX Operable Unit, SEMS Numbers: 21, 29, SRNS-RP-2025-00815, Revision 0, June 2025
Savannah River Site, Aiken, South Carolina

Comments Received October 27, 2025

GENERAL COMMENTS

1. The SVE Report concludes by recommending that SVE should be discontinued at the TNX Operable Unit (OU), owing to the decline in mass removal rates of volatile organic compounds (VOCs) from the subsurface; however, there are no criteria presented with which to compare the results such that the potential for exposure risks could be determined. Vapor Intrusion Screening Levels (VISLs), calculated using EPA's VISL calculator (online at https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-level-calculator), as per OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air (EPA 2015), should be prepared for each detected constituent of potential concern (COPC) at a hazard quotient of 0.1 and a target risk of 1E-06, and the maximum concentration compared to the VISLs. If all COPCs are below the screening levels, this is another line of evidence that the SVE system has performed as intended and can be discontinued. *Please revise the SVE Report to calculate VISLs for each COPC and tabulate the results to substantiate that the system can be shut off.*

Response: Clarification

The goal of the TNX Operable Unit (OU) SVE system is to reduce VOC concentrations in the vadose zone to limit contaminant migration to groundwater. As documented in the approved Record of Decision, the T-Area OU cap and associated land use controls (LUCs) are the approved remedial actions implemented to protect human receptors from exposure to contaminated media. The Land Use Control Implementation Plan (LUCIP) for the TNX Area OU (WSRC-RP-2003-4173, Rev. 1, April 2004), states that LUCs will remain in place to ensure the integrity of the engineered cap, prevent workers from excavating contaminated media, and prevent residential use through property notices/restrictions. Vapor intrusion was not identified as a viable exposure pathway as there are no inhabitable buildings at the TNX OU and indoor air quality is not a pathway of concern. SRS does not believe that comparing vadose zone soil vapor concentration to vapor intrustion screening levels is warranted.

The LUCIP restricting exposure to workers limits the collection of soil samples at the TNX OU. Comparing soil sample results to cleanup criteria is a common way SRS has shown the effectiveness of a SVE system. Soil sample results were used at the A-Area Miscellaneous Rubble Pile (AMRP) OU and A-Area Burning Rubble Pit/Miscellaneous Chemical Basin/Metals Burning Pit (ABRP/MBC/MBP) OU to show SVE systems were effective at removing mass from the targeted zone. A comparison of the soil vapor concentrations and mass removal rates at the AMRP and ABRP/MCB/MBP OU to those at TNX OU can be made to help justify SVE shutdown at TNX OU. Amendment 1 provides the maximum TCE and PCE concentrations and the total annual mass removed for each of the waste units and/or subunits. The maximum TCE soil vapor concentration observed at TNX OU is similar in magnitude to TCE at the other waste units while the maximum PCE soil vapor concentration at TNX OU is significantly lower. The comparison of mass between waste units has TNX OU with the lowest mass total. The

low soil vapor concentrations and mass at TNX OU are good indications that residual mass within the treatment area is low. With the understanding of the soil vapor concentrations and mass at the AMRP and ABRP/MCB/MBP OU, it is possible to assume soil concentrations beneath the TNX OU would also be at low concentrations. SRS believes soil vapor concentrations at TNX OU are low and the comparison to other OUs confirms this observation supporting that the SVE system at TNX OU has performed as intended.

There might be concerns that the SVE evaluation at TNX OU may have missed some residual mass in the vadose zone. Residual vadose zone mass that migrates to the groundwater will be intercepted by the edible oil (EO) remediation system at TNX OU. EO was deployed in the water table and capillary fringe or "smear" zone beneath the SVE at TNX OU to degrade VOC contamination via reductive dechlorination and/or bioremediation. The presense of the EO remediation in the water table would remediate any vadose zone mass that has escaped the SVE system and migrated into the groundwater. Additional EO will be deployed in the future based on increasing VOC concentrations at groundwater monitoring wells.

No change to the 2023-2024 SVE Evaluation is proposed.

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2. It is unclear whether the SVE remedial action should remain on standby until the TNX OU long-term monitoring (LTM) groundwater results support, as a line of evidence that contaminant migration is no longer occurring from the vadose zone to the water table. The SVE Report recommends that select SVE wells be kept for use in the future for neat edible oil injections if needed; however, it appears that TNX OU LTM groundwater results will be used to determine if another deployment of neat edible oil to the capillary fringe will be needed to address future contaminant migration from the vadose zone to the water table. As such, the SVE remedial action should remain on standby until the TNX OU LTM groundwater results support that contaminant migration is no longer occurring. *Please revise the SVE Report to indicate that the SVE remedial action should remain on standby until the TNX OU LTM groundwater results provide another line of evidence that contaminant migration is no longer occurring from the vadose zone to the water table.*

Response: Clarification

SRS believes that a portion of the SVE wells at TNX OU should remain in standby while the remaining SVE wells are abandoned. Standby would be defined as all SVE equipment being dismantled and removed and a locking and expanding cap being placed in the well casing to prevent the SVE well from venting. The wells identified to remain in standby (i.e., TVM-001-V, TVM-002-U, TVM-003-U, TVM-004-U, TVX-001-L, TVX-002-L, TVX-003-L, TVX-004-L, TVX-005-L, TVX-006-L, and TVX-007-L) were the only

well or the deepest well at each location. Keeping the deepest wells is important for future SVE use or use for deploying edible oil (EO). Contaminant mass in the vadose zone, if present, is going to continue to move vertically toward the water table. In the future, if it were determined that SVE needed to be restarted, the deep SVE wells would be optimally placed to capture any remaining contaminant mass in the vadose zone. In previous EO injections, SRS has utilized the deepest SVE wells to inject neat oil into the capillary fringe or "smear" zone of the water table aquifer. If future EO injections are warranted, SRS would use similar logic utilizing the deepest SVE wells.

SVE wells screened in the upper vadose zone would be less likely to be utilized in future remediation at TNX OU; therefore, the shallow vadose SVE wells (i.e., TVM-001-U, TVM-002-V, TVM-003-V, TVM-004-V, TVX-002-U, TVX-004-U, TVX-005-U, TVX-006-U, and TVX-007-U) are proposed for abandonment.

SRS agrees that the TNX OU groundwater monitoring wells can be utilized to determine if the eleven SVE wells placed in standby should be returned to service to support either EO injections, SVE, or can be abandoned.

No change to the 2023-2024 SVE Evaluation is proposed.

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SPECIFIC COMMENTS

1. **Figure 1, Location of SVE Wells at TNX Area OU, PDF Page 19 of 36:** The nomenclature used to identify SVE wells in the figure is inconsistent with the nomenclature used in the text. For example, SVE wells identified as TVM 1U, TVM 1V, TCM 2U, TVM 2V, TVM 3U, TVM 3V, TVM 4U, TVM 4V and TVX 1L are shown on the figure; however, the text identifies these wells as TVM-001-U, TVM-001-V, TVM-002-U, TVM-002-V, TVM-003-U, TVM-003-V, TVM-004-U, TVM-004-V and TVX-001-L. Also, SVE wells are identified on the figure as TVX002 L, TVX002 U, TVX003 L, TVX004 L, TVX004 U, TVX005 L, TVX005 U, TVX006 U, TVX006 L, TVX007 L and TVX007 U; however, the text identifies these wells as TVX-002-L, TVX-002-U, TVX-003-L, TVX-004-L, TVX-004-U, TVX-005-L, TVX-005-U, TVX-006-U, TVX-006-L, TVX-007-L and TVX-007-U. *Please revise the figure so the nomenclature used to identify SVE wells is consistent with the identifications used in the text.*

Response: Agree

Well names were not consistent between Figure 1 and the rest of the document. SRS will be more diligent in future reports to reduce the likelihood of this type of mistake from recurring.

No change to the 2023-2024 SVE Evaluation is proposed.

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SRS Responses to USEPA Comments on the 2023-2024 Evaluation of the Soil Vapor Extraction System at the TNX Operable Unit, SEMS Numbers: 21, 29, SRNS-RP-2025-00815, Revision 0, June 2025
Savannah River Site, Aiken, South Carolina

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Amendment 1. Comparison of Soil Vapor Concentrations and Mass Removal Rates between FFA Waste Units.

FFA Waste Unit	**Max TCE (ppmv)**	**Max PCE (ppmv)**	**Total Mass Removed (lb/yr)**	**Time (year)**
TNX OU	0.553	0.0462	0.603	2023-2024
AMRP OU	0.301	0.42	3.6	2019-2020
ABRP/MCB/MBP OU				
ABRP	0.725	N/A	0.923	2024
MCB	0.96	1.61	2.346	2024
N/A - PCE was not a constituent of concern at the ABRP subunit				