UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8960

September 4, 2024

Ms. Avery G. Hammett, 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 on the 2023 ANNUAL COMPREHENSIVE TNX AREA GROUNDWATER MONITORING AND REMEDIAL ACTION EFFECTIVENESS INTERIM REPORT (U) SEMS NUMBERS: 21, 29, SRNS-RP-2024-00682, REVISION 0, JUNE 2024

Dear Ms. Hammett:

EPA has reviewed the June,2024 Annual GW and RA EIR for TNX for 2023. Our comments are attached:

If you have any questions or require additional information, please contact Jon Richards at (404) 562-8648.

Sincerely,

JON RICHARDS

Digitally signed by JON RICHARDS
Date: 2024.09.04 17:22:55 -04'00'

Jon Richards, FFA RPM
Restoration & Site Evaluation Branch
Superfund and Emergency Management Division

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

GENERAL COMMENTS

1. It is unclear whether the potential sources of adjusted gross alpha exceedances are due to burial ground former radiological sources and/or are naturally occurring. The Report states that the adjusted gross alpha and combined radium detections were sporadic and likely represent naturally occurring radionuclides; however, based on the discussion of adjusted gross alpha exceedances that have not been correlating with radium-226 and excludes uranium, which indicates other alpha emitting radionuclides are likely contributing to the adjusted gross alpha activity. It is noted that the Report states if adjusted gross alpha starts to be more common, SRS will expand analysis in the wetland monitoring wells to include thorium and other alpha emitting radionuclides. *Please revise the Report to discuss if the adjusted gross alpha exceedances may be potentially due to burial ground former radiological sources.*

2. The Report states that there are no discernible and consistent radiologically contaminated groundwater plumes present and therefore no remedial action is needed to address radiological contamination in groundwater; however, it is noted that an overall objective of the groundwater remedial action is to return groundwater to beneficial use. The Report states that institutional controls (ICs) (i.e., land use controls) are the agreed remedial action for the radionuclide contaminated groundwater; however, ICs alone as a remedy may not restore radionuclide contaminated groundwater to beneficial use. As such, it appears that further remedial action in addition to ICs might be warranted to return radiologically contaminated groundwater to beneficial use. *Please revise the Report to discuss additional potential remedial action that may be necessary to restore radionuclide contaminated groundwater to beneficial use.*

3. The Report does not discuss the groundwater sampling process or procedure and how the samples were collected. In addition, the Report does not provide supporting documentation that would include sample collection procedures. *Please revise the Report to include text that discusses the process in which the groundwater samples were collected and provide the sampling procedures that were used.*

4. The current locations of the five MicroBlowers™ connected to TVM 1V, TVM 3V, TVM 4V, TVX004U, and TVX007U are not specifically identified on Figure A-10, Location of TNX Area SVE [Soil Vapor Extraction] Monitoring Well System. Although the wells are shown on the figure, the figure legend identifies these five MicroBlowers™ wells as soil vapor extraction (SVE) wells. *Please revise the Annual Report to identify the five current locations of the Microblowers™ on Figure A-10.*

5. The Report does not discuss the data validation process or protocols. The Report does not provide supporting documentation that would include data validation procedure and validation packages. The text does not indicate percentage of data that was validated and the level of validation. 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). *Please revise the Report to define the data validation process, include data validation packages as supporting documentation and revise Section 3.2 to briefly summarize the results of data validation.*

SPECIFIC COMMENTS

1. **Section 2.4.2 Soil Vapor Extraction, Page 9 of 62:** The "U" and "L" horizon identifiers are defined in this section; however, the "V" identifier is not defined. In addition, the wells on

Figure A-10 (Location of TNX Area SVE Monitoring Well System) have "V", "U" and "L" in the identifications, but the definition of those identifiers are not provided in the figure. *Please revise the text to define all the screen horizons identifiers used in the SVE wells nomenclature as well as update Figure A-10 to define the identifiers in the legend.*

2. **Section 3.1.4.2 Trichloroethylene (TCE), Page 23 of 62:** The second paragraph states that the TCE concentration for well TNX 27D was 8.86 micrograms per liter (ug/L) during the fourth quarter 2023 (4Q2023), however Table B-3 Groundwater Monitoring Results for TNX Area Wells, Fourth Quarter, 2023 lists the TCE concentration for well TNX 27D as 6.33 ug/L. *Please revise the Report with the accurate TCE concentration for well TNX 27D for 4Q2023.*

3. **Section 3.1.4.11 Nitrate-Nitrite as Nitrogen (NO_3/NO_2 as Nitrogen), Page 25 of 62:** The first paragraph states that Nitrate-Nitrite as Nitrogen results for samples TNX 28D and TNX 75D were above the maximum contaminant level (MCL) and the results were estimated, 25.8 milligrams per liter (mg/L) and 10.8 mg/L, respectively; however, the basis for the Nitrate-Nitrate as Nitrogen estimated results are unclear as they appear to be positive detections. According to Table B-1 (Groundwater Monitoring Results for TNX Area Wells, Second Quarter, 2023) all samples for Nitrate-Nitrite as Nitrogen (NO_3/NO_2 as Nitrogen) for the second quarter 2023 (2Q2023) were estimated (i.e., J qualifier was applied to the result). *Please provide text that explains why all samples results were J qualified, estimated and how this impacts the data quality for the two positive results for samples TNX 28D and TNX 75D.*

4. **Section 3.1.5.1 Dissolve Oxygen, Page 27 of 62:** The fifth bullet of the second paragraph presents dissolved oxygen (DO) sample results for TRW 4R that appear to be reversed for the 2Q2023 and 4Q2023 sample events. The text states in the 2Q2023 the DO concentration was 4.2 mg/L and was 4.1 mg/L in 4Q2023. However Table B-1 (Groundwater Monitoring Results for TNX Area Wells, Second Quarter, 2023) lists the DO result as 4.1 mg/L and Table B-3 Groundwater Monitoring Results for TNX Area Wells, Fourth Quarter, 2023 has the DO result listed as 4.2 mg/L. *Please revise the Report with the correct DO results for 2Q2023 and 4Q2023 for TRW 4R.*

5. **Section 3.1.5.2 Nitrate, Page 28 of 62:** The fourth bullet of the first paragraph does not contain a well sample identification for the listed nitrate results. *Please revise the Report to include the well identification for the nitrate results presented in the bullet.*

6. **Section 3.1.5.2 Nitrate, Page 28 of 62:** There are inconsistencies with the years presented in the first 3 bullets of the first paragraph as they reference second and fourth quarters of the year 2024. *Please revise this section and bullets to correct the year from 2024 to 2023.*

7. **Section 3.1.5.3 Sulfate, Page 28 of 62:** The fourth bullet states that the concentration of Sulfate at well TRW 3 in 2Q2023 was 1.3 mg/L, however Table B-1 (Groundwater Monitoring Results for TNX Area Wells, Second Quarter, 2023) lists the concentration for TRW 3 as 55.1 mg/L. *Please revise the report with the correct 2Q2023 Sulfate concentration for well TRW 3.*

8. **Section 3.1.5.5 Oxidation Reduction Potential, Page 29 of 62:** The first paragraph states that since 2015, oxidation reduction potential (ORP) results at well TRW 3 have remained low [< 0 millivolts (mV)], however the 2Q2023 ORP result for well TRW 3 was listed as 31 mV. *Please revise the Report to address this discrepancy that the ORP results have remained low (< 0mV) in well TRW 3.*