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

JUN 2 6 2025

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 Effectiveness Monitoring Report (EMR) for the C-Area Groundwater (CAGW) Operable Unit (OU) Removal Action (U) - July 2023 through June 2024 (SRNS-RP-2024-01334, Revision 0, November 2024) SEMS Number: 82

The U.S. Department of Energy (DOE) is submitting the subject comment responses for your review. The South Carolina Department of Environmental Services' (SCDES) approved, and U. S. Environmental Protection Agency (EPA) provided comments on March 24, 2025, and March 27, 2025, respectively. This report will not be revised; however, all comment responses will be included in the next EMR, as applicable. Please review these responses and provide your approval within thirty (30) days from 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) 952-6211 or the DOE Program Manager, Khari Bell, at (803) 679-7086.

Sincerely,

MATTHEW BAKER

Digitally signed by MATTHEW BAKER
Date: 2025.06.26 11:17:24 -04'00'

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

RDDD-25-149

Ms. Susan Fulmer
Mr. Jon Richards

JUN 2 6 2025

Enclosure:
SRS Response to the U.S. Environmental Protection Agency's Comments on the Effectiveness Monitoring Report (EMR) for the C-Area Groundwater (CAGW) Operable Unit (OU) Removal Action (U) - July 2023 through June 2024 (SRNS-RP-2024-01334, Revision 0, November 2024) SEMS Number: 82

cc 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
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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

cc w/encl:
M. McRae, TechLaw, Inc.

SRS Responses to EPA Comments on the Effectiveness Monitoring Report (EMR) for the C-Area Groundwater (CAGW) Operable Unit (OU) Removal Action (U) – July 2023 through June 2024, SEMS Number: 82, SRNS-RP-2024-01334, Revision 0, November 2024

Comments Received March 27, 2025

GENERAL COMMENT

1. The locations of the wells shown on Figure 2 (CAGW OU TCE Plume 4Q2023) and Figure 7 (CAGW OU Monitoring Stations) are not consistently and clearly labeled, such that several wells discussed in the EMR could not be located. For example, Section 3.4.2.1 (Trichloroethylene [TCE]) discusses monitoring well CRW021DR as a source area well, but this well is not identified in the TCE source area on Figure 2 (i.e., in the top right box). In addition, Figure 7 indicates well CRW021DR is the eastern source area well, but Figure 2 identifies the easternmost well as CRW020D. As another example, Section 3.4.2.2 (Tetrachloroethylene [PCE]) discusses monitoring well CRP 5C with the maximum concentrations of PCE, but this well is not identified on Figure 2. *Please revise Figures 2 and 7 to clearly and consistently label the locations of the wells discussed in the EMR.*

   Response: Agree

   Please refer to attached Figure CR-1 (revised Figure 2) for correct identification of the monitoring well locations and labels. Figure 2 has been corrected to show monitoring well CRW021DR in the TCE source area, well CRW021DR as the eastern source area well, and the inclusion of monitoring well CRP 5C consistent with Figure 7.

   Future CAGW OU groundwater reports will ensure the monitoring wells discussed in the text are consistently identified in the figures. No changes are proposed to the current report.

   Responsible Party: Rohit Goswami, (803) 989-5383, rohit.goswami@srs.gov

SPECIFIC COMMENTS

1. **Section 3.2, Groundwater Elevation Measurements and Groundwater Flow Direction, Page 9 of 118, and Figure 9, Water Table Trends Near Castor Creek, Page 44 of 118:** The text identifies the June 2020 groundwater elevation for CSB 15D as 52.5 meters (172.36 feet) above mean sea level (amsl), but Figure 9 indicates the highest water elevation for CSB 15D in 2020 was over 175 ft amsl. *Please revise the text and Figure 9 to present consistent information for the groundwater elevation at CSB 15D.*

   Response: Agree.

   The text correctly identifies the June 2020 groundwater elevation for CSB 15D as 52.5 meters (172.36 feet). Please refer to attached Figure CR-2 (revised Figure 9) that shows the correct June 2020 groundwater elevation for CSB 15D.

Future CAGW OU groundwater reports will include water level data is accurately reported for all monitoring wells discussed in the text. No changes are proposed to the current report.

Responsible Party: Rohit Goswami, (803) 989-5383, rohit.goswami@srs.gov

2. **Section 3.4.1.5, Ethylene, Pages 17 to 18 of 118, and Figure 17, Ethylene Groundwater Trends, Page 52 of 118:** The text reports concentrations for ethylene during the 4Q23 sampling period that are inconsistent with Appendix A (CAGW OU NTC RA Analytical Data 2023-2024). The text states that ethylene concentrations in the wells were between 0.92 micrograms/liter (µg/L) to 1.3 µg/L, but Appendix A only reports one detection of ethylene (0.92 µg/L) in well CRW024C. The text also reports the highest ethylene concentration at seepline location CCSL-023R as 23.1 µg/L, but Appendix A reports an ethylene concentration of 7.5 µg/L at this location. In addition, Figure 17 presents misleading information for ethylene concentrations detected in groundwater, as the trend lines representing ethylene concentrations do not differentiate between the not detected (ND) and the detected results (e.g., using solid vs. open circles as symbols for each data point). Based on Figure 17, ethylene appears to increase in 2020 and then decrease in 2022; however, the text indicates the changes in concentration are due to elevated method detection limits (MDLs*). Please revise the discussion of ethylene concentrations in Section 3.4.1.5 to be consistent with Appendix A. Also, please revise Figure 17 to differentiate between the detected and not detected results*.

   Response: Agree.

   The text correctly identifies the Ethylene concentrations for 4Q23 sampling period. Please refer to attached Figure CR-3 (revised Appendix A) that shows the correct 4Q23 groundwater concentrations. As requested, Figure CR-4 (revised Figure 17) is also attached with the non-detect data clearly labeled. It can be observed that most of the data are either J or U qualified due to the high quantitation limits for the samples.

   Future CAGW OU groundwater reports will include the correct analytical data for all monitoring wells consistent with the text in the report. No changes are proposed to the current report.

   Responsible Party: Rohit Goswami, (803) 989-5383, rohit.goswami@srs.gov

3. **Section 3.4.1.6, Methane, Page 18 of 118:** The text reports concentrations for methane during the fourth quarter 2023 (4Q23) sampling period that are inconsistent with Appendix A (CAGW OU NTC RA Analytical Data 2023-2024). The text states, "In 4Q23, wells CRW027C, CRW028C, CRW029C and CRW030C had detectable levels of methane between 4.40 ug/L and 4.50 ug/L." However, Appendix A reports methane as not detected in these wells in 4Q23. Instead, concentrations between 3.9 µg/L and 4.9 µg/L are reported for three of these wells

(i.e., CRW027C, CRW028C, and CRW030C) in May 2024. *Please revise the discussion of methane in Section 3.4.1.6 to be consistent with Appendix A.*

Response: Agree.

The text correctly identifies the Methane concentrations for 4Q23 sampling period. Please refer to attached Figure CR-3 (revised Appendix A) that shows the correct 4Q23 groundwater concentrations.

Future CAGW OU groundwater reports will include correct analytical data for all monitoring wells as discussed in the text. No changes are proposed to the current report.

Responsible Party: Rohit Goswami, (803) 989-5383, rohit.goswami@srs.gov

4. **Section 3.4.1.7, Chloride, Nitrate and Sulfate, Page 20 of 118:** The text states that nitrate has been increasing since 2022 in CRW026C, but Figure 19 (CRW026C Post-RA Groundwater Trends) indicates nitrate concentrations decreased in 2024. *Please revise the text to indicate that nitrate concentrations decreased in well CRW026C in 2024.*

   Response: Clarification.

   At the beginning of the discussion on nitrate concentration trends for CRW023C and CRW26C it is stated, *'Two monitoring wells (CRW023C and CRW26C) indicated a reduction in nitrate concentrations (Figure 18 and Figure 19)'.* However, the values for 2Q24 are still higher that those measured in 2Q22. Future CAGW OU groundwater reports will be reviewed so that discussions are clearly formulated to support statements. No changes are proposed to the current report.

   Responsible Party: Rohit Goswami, (803) 989-5383, rohit.goswami@srs.gov

5. **Section 3.4.1.8, Total Organic Carbon (TOC), Page 21 of 118, and Appendix A, CAGW OU NTC RA Analytical Data 2023-2024, Page A-4 of A-6:** The last sentence states that concentrations of TOC in surface water stations CCT-01, CCT-02, and CCT-03 ranged from 1.65 milligrams/liter (mg/L) in CCT-01 to 3.33 mg/L in CCT-03, but this is inconsistent with Appendix A. The TOC results reported in Appendix A ranged from 1.34 µg/L (in CCT-01, November 2023) to 3.28 µg/L (in CCT-03, May 2024). It is also noted that the text indicates TOC results are reported as mg/L, while Appendix A indicates the TOC results are in µg/L. *Please revise Section 3.4.1.8 and Appendix A to present consistent results and units of measurement for TOC.*

Response: Agree.

TOC results should be reported as the average of 5 results TOC analyses reported by the lab. The text in section 3.4.1.8 only used the TOC results from 2Q24, and incorrectly rounded the decimal places. The correct range of TOC results (1.34 - 3.28 mg/L) for surface water stations CCT-01, CCT-02 and CCT-03 are reported in Appendix A, with the correct rounding of decimal places, but the correct units are mg/L. The correct text for the sentence in section 3.4.1.8 is the following:

"The TOC concentrations ranged from 1.34 ~~1.65~~mg/L in CCT-01 to 3.28 ~~3.33~~mg/L in CCT-03."

Future CAGW OU groundwater reports will be reviewed so that the values and units discussed in the text are correct and consistent with Appendix A. No change to the current report is proposed.

Responsible Party: Terry Killeen, (803) 952-6850, terry.killeen@srs.gov

6. **Section 3.4.1.9, BioTrap QuantArray-Chlor® Microbial Data, Page 22 of 118:** The text references microbial count charts in well CRW026C from November 2019 to June 2023 (i.e., Figures 23-34), but it is unclear why microbial count charts were not produced for the results collected during the current reporting period. Table 5 (BioTrap QuantArray® Data [4Q23 & 2Q24]) reports the microbial results collected in November 2023 and May 2024. *Please revise the EMR to include microbial count charts for the November 2023 and May 2024 results in well CRW026C.*

   Response: Agree.

   Two additional figures (attached as Figure CR-5 and Figure CR-6) for 4Q23 and 2Q24 BioTrap data should have been included in the 2024 CAGW OU groundwater report. Future reports will ensure that microbial count charts for the current reporting period are included.

   No changes to the current report are proposed.

   Responsible Party: Terry Killeen, (803) 952-6850, terry.killeen@srs.gov

7. **Section 3.4.2.3, Cis-1,2-Dichloroethylene, Page 27 of 118, and Table 3, CAGW OU and CAGW OU NTC RA Maximum Concentrations, Page 88 of 118:** The maximum result for cis-1,2-dichloroethylene (DCE) is identified for the CAGW OU as 0.55 µg/L in well CRW020D, but Table 3 identifies a concentration of 0.4 µg/L in surface water station TL01 as the maximum cis-1,2-DCE concentration for CAGW OU. *Please revise the text and Table*

3 to present consistent information for the maximum concentration of cis-1,2-DCE in the CAGW OU.

Response: Clarification.

Station TL-01 is a background surface water station for the CAGW OU monitoring network, and it is primarily impacted by the CBRP OU VOC plume. Excluding the groundwater stations monitoring the CAGW OU Removal Action discussed in section 3.4.1.3, the maximum cis-1,2-DCE concentration in groundwater was 0.55 µg/L in well CRW020D. No change to the current report is proposed.

Responsible Party: Terry Killeen, (803) 952-6850, terry.killeen@srs.gov

8. **Section 4.2, Recommendations, Page 30 of 118:** The text recommends continued annual reporting of the CAGW OU TCE plume, but it is unclear if this includes monitoring of the non-time critical removal action (NTCRA) wells. Since TCE concentrations have been increasing in the NTCRA wells, and several wells have TCE concentrations that exceed baseline conditions, all wells should be sampled annually at a minimum. *Please revise this section to clarify that the NTCRA wells will have at a minimum continued annual monitoring.*

   Response: Clarification.

   All CAGW OU NTCRA wells are included in the CAGW OU annual monitoring plan (e.g., 4Q24 Sample Event). The 2025 CAGW OU monitoring report will contain the data (primarily tritium and VOCs) collected in 4Q24 for all CAGW OU monitoring stations (wells, seepline stations and surface water stations). No change to the current report is proposed.

   Responsible Party: Terry Killeen, (803) 952-6850, terry.killeen@srs.gov

9. **Table 3, CAGW OU and CAGW OU NTC RA Maximum Concentrations, Page 96:** The fourth column is indicated to report maximum concentrations for July 2022 – June 2023, but the text indicates this table reports the maximum concentrations for the current reporting period of July 2023 – June 2024. For example, Section 3.4.1.1 (Trichloroethylene) references Table 3 in the discussion of the maximum TCE concentration in 2Q24. *Please revise Table 3 to indicate it reports the maximum concentrations in July 2023 – June 2024.*

   Response: Agree.

   The correct header for the fourth column in Table 3 of the CAGW OU RA report is the following: "Maximum July 2023 – June 2024". No change to the current report is proposed.

Responsible Party: Terry Killeen, (803) 952-6850, terry.killeen@srs.gov

10. **Appendix D, Figure D-1, November 2023 TCE Concentrations in the Upper Aquifer Zone - Middle Aquifer Zone (UAZ-MAZ) of the Upper Three Runs Aquifer, PDF Page 313:** It is unclear why the TCE plume is not shown to extend toward the west on this figure. Three wells are shown to have concentrations above 5 ug/L (i.e., the green dots) that are not included in the plume. Based on comparison with Figure 2 (CAGW OU TCE Plume 4Q2023), it appears these wells include CSB017D, an Upper Aquifer Zone well; however, without labels on the wells, it is difficult to identify the other two wells. Further, it appears that well CRW010CU is not included on this figure, and TCE was detected at 10.1 ug/L in November 2023. *Please revise Appendix D to include the wells with TCE concentrations greater than 5 ug/L in the plume. Also, please label the wells and include well CRW010CU on the figure of the UAZ-MAZ TCE plume.*

    Response: Agree.

    Figure D-1 should have included UAZ station CSB017D and MAZ station CRW010CU, which are just outside of the C-Area fence line and south of Twin Lakes, respectively. Please see attached Figure CR-7 (revised Figure D-1) which shows UAZ station CSB017D and MAZ station CRW010CU and well labels.

    Future reports will ensure that well labels are consistent with text in the report. No change to the current report is proposed.

    Responsible Party: Terry Killeen, (803) 952-6850, terry.killeen@srs.gov

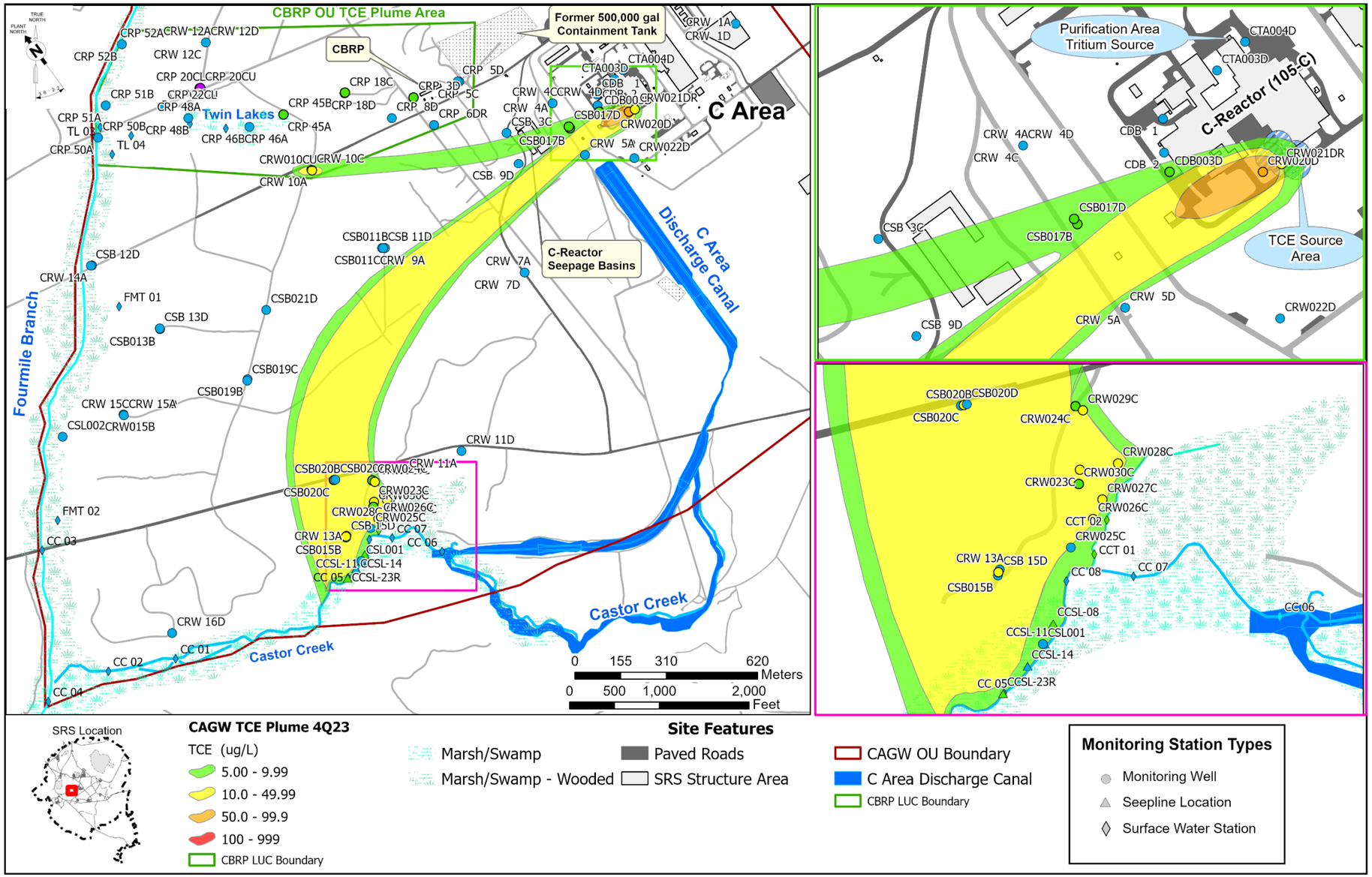


Figure CR-1 (Revised Figure 2). CAGW OU TCE Plume 4Q23

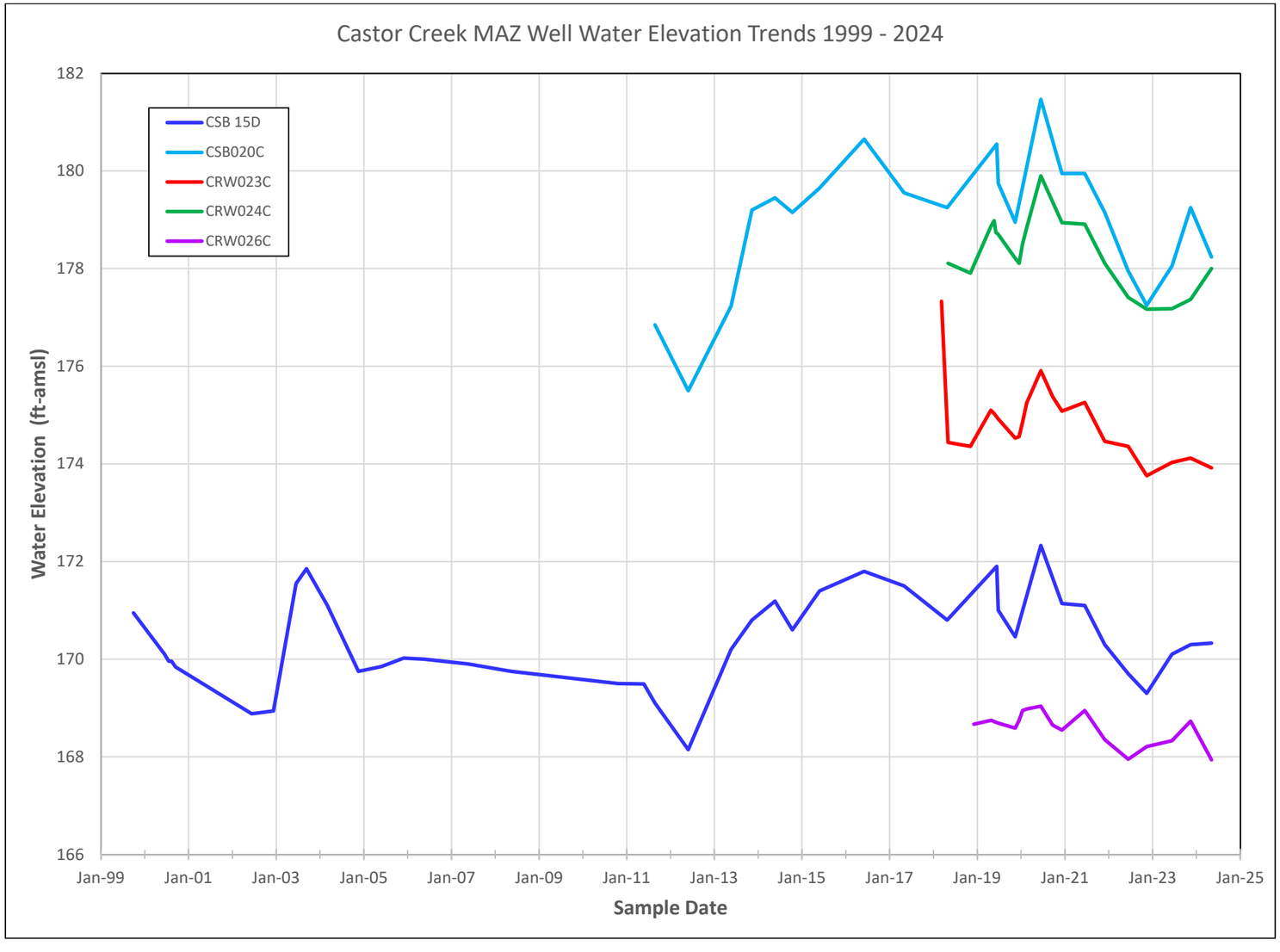


Figure CR-2 (Revised Figure 9). MAZ Water Elevations Near Castor Creek

Comments Received March 27, 2025

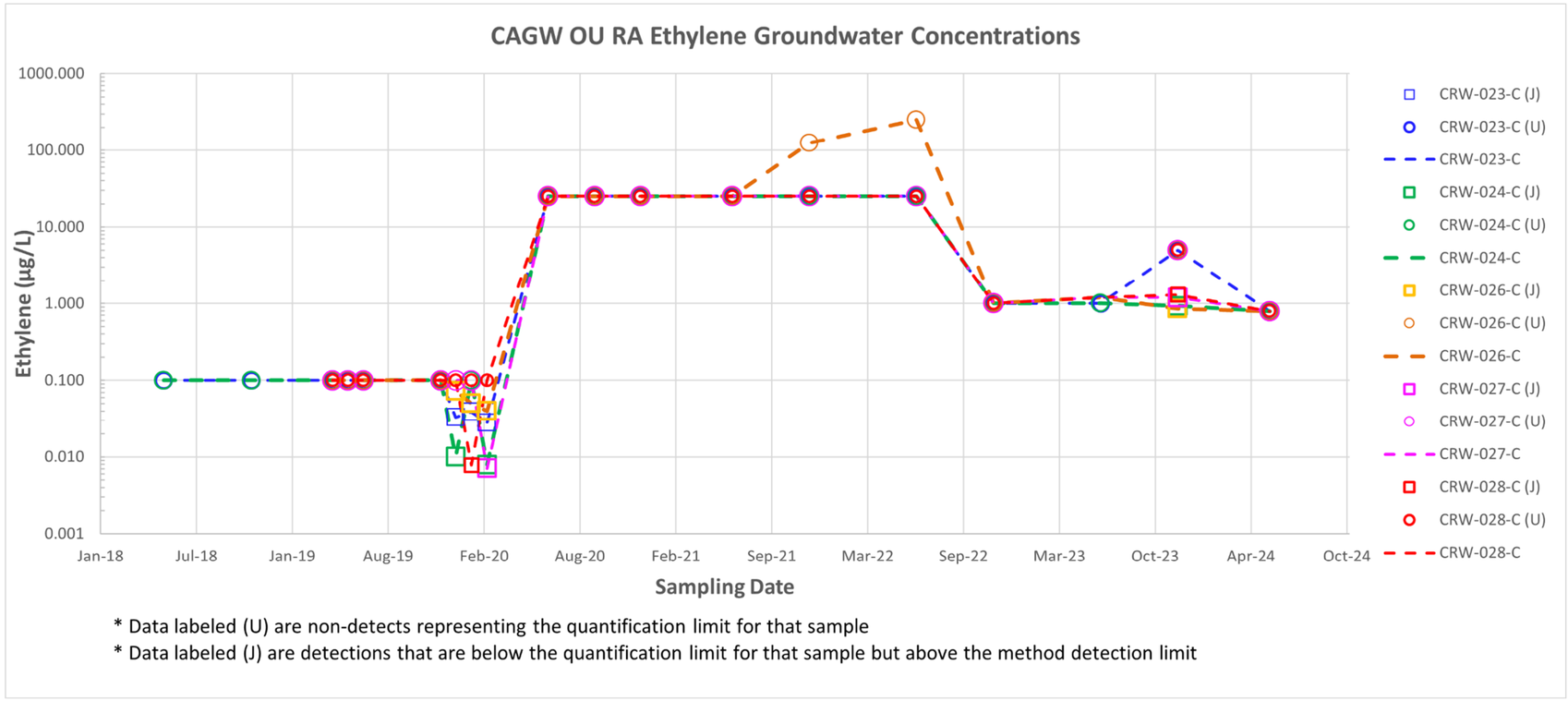
Appendix A: CAGW OU NTC RA Data																											
													N/A	CAGW RA Analytical Data													
			Field Data											Hydrocarbons		Inorganics			Organics		Radionuclides	VOC					
			SAMPLE COLLECTION DATE	DEPTH TO WATER	OXIDATION/REDUCTION POTENTIAL	OXYGEN	PH	SPECIFIC CONDUCTANCE	TOTAL ALKALINITY (AS CACO3)	TURBIDITY	WATER TEMPERATURE	SAMPLING EVENT WATER ELEVATION	FIELD CONDITIONS	ETHYLENE	METHANE	CHLORIDE	NITRATE	SULFATE	TOTAL CARBON	TOTAL ORGANIC CARBON	TRITIUM	1,2-DICHLOROETHYLENE	CHLOROETHENE (VINYL CHLORIDE)	CIS-1,2-DICHLOROETHYLENE	TETRACHLOROETHYLENE (PCE)	TRANS-1,2-DICHLOROETHYLENE	TRICHLOROETHYLENE (TCE)
			D-M-Yr	ft	mV	mg/L	pH	uS/cm	mg/L	NTU	degC	ft		ug/L	ug/L	ug/L	ug/L	mg/L	N/A	ug/L	pCi/mL	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Station	Well Use	Aquifer															10000				20		2	70	5	100	5
CRW023C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	26.24	NS	NS	NS	NS	NS	NS	NS	174.12	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	275	3.48	4.5	29	0	11.9	18.7	NS	No Comments	<EQL (5)	<EQL (10)	1860	1300	1.25	NS	<EQL (1)	526	<EQL (2)	<EQL (1)	[0.44]	<EQL (1)	<EQL (1)	21.6
			06-May-2024	26.44	267	0.81	4.1	29.3	0	1.8	19.2	173.92	No Comments	<EQL (5)	<EQL (10)	1930	1360	3.38	NS	<EQL (1)	394	[1.22]	<EQL (1)	1.22	<EQL (1)	<EQL (1)	51.1
CRW024C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	40.04	NS	NS	NS	NS	NS	NS	NS	177.37	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	268	4.89	4.6	28	0	2.2	18	NS	No Comments	[0.92]	<EQL (10)	390	238	<EQL (0.4)	NS	<EQL (1)	901	<EQL (2)	<EQL (1)	<EQL (1)	[0.38]	<EQL (1)	7.35
			06-May-2024	39.41	252	0.66	4.3	49.1	0	3.4	19.8	178	No Comments	<EQL (5)	<EQL (10)	2000	1390	0.669	NS	<EQL (1)	842	<EQL (2)	<EQL (1)	[0.36]	[0.46]	<EQL (1)	15.4
CRW025C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	12.93	NS	NS	NS	NS	NS	NS	NS	167.51	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	294	4.64	4.5	21	0	9.9	18.2	NS	No Comments	[0.96]	<EQL (10)	1950	632	1.1	NS	<EQL (1)	87.7	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	3.04
			06-May-2024	12.61	284	0.78	4.1	20.1	0	2.4	19.6	167.83	No Comments	<EQL (5)	<EQL (10)	1990	449	0.553	NS	<EQL (1)	50	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	2.06
CRW026C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	8.22	NS	NS	NS	NS	NS	NS	NS	168.73	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	89	5.71	6.4	73	13	1.8	16.6	NS	No Comments	[0.85]	616	2060	625	[0.312]	NS	<EQL (1)	523	2.53	<EQL (1)	2.53	<EQL (1)	<EQL (1)	35.4
			06-May-2024	9.01	100	2.57	5.5	54	25	7.3	18.3	167.94	No Comments	<EQL (5)	1100	1850	432	[0.291]	NS	[0.986]	339	6.86	<EQL (1)	6.86	<EQL (1)	<EQL (1)	43.2
CRW027C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	6.27	NS	NS	NS	NS	NS	NS	NS	171.14	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	158	6.11	4.9	29	0	2.8	16.4	NS	No Comments	[1.2]	[4.4]	1910	1260	1.02	NS	<EQL (1)	158	[1.03]	<EQL (1)	1.03	<EQL (1)	<EQL (1)	40.1
			06-May-2024	6.02	374	4.76	4.7	27	0	1.8	17.7	171.39	No Comments	<EQL (5)	[4.3]	1780	1180	0.573	NS	<EQL (1)	96.7	[0.74]	<EQL (1)	[0.74]	<EQL (1)	<EQL (1)	29.2
CRW028C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	5.68	NS	NS	NS	NS	NS	NS	NS	174.76	No Comments	NS	NS	NS	NS	NS	NS	<EQL (1)	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	143	5.82	6.2	26	9	8.3	17.1	NS	No Comments	[1.3]	[4.4]	1880	1000	0.575	NS	<EQL (1)	27.2	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	26.1
			06-May-2024	6.29	371	4.16	4.8	26	0	4.1	18.7	174.15	No Comments	<EQL (5)	[3.9]	1970	1010	0.772	NS	<EQL (1)	20.8	<EQL (2)	<EQL (1)	[0.41]	<EQL (1)	<EQL (1)	39.9
CRW029C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	38.2	NS	NS	NS	NS	NS	NS	NS	177.47	No Comments	NS	NS	1860	1260	[0.336]	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	245	4.5	5.6	31	6	4.9	18.6	NS	No Comments	[1.2]	[4.5]	1900	1260	[0.357]	NS	<EQL (1)	741	<EQL (2)	<EQL (1)	[0.34]	<EQL (1)	<EQL (1)	15.1
			06-May-2024	38.76	318	3.89	5.2	32	2	0.9	18.8	176.91	No Comments	<EQL (5)	<EQL (10)	2090	1300	0.442	NS	<EQL (1)	480	[1.04]	<EQL (1)	1.04	<EQL (1)	<EQL (1)	42.9
CRW030C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	25.9	NS	NS	NS	NS	NS	NS	NS	173.46	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	280	4.4	5	23	0	1.6	18.7	NS	No Comments	[1.2]	[4.5]	1740	1100	0.934	NS	<EQL (1)	282	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	5.99
			06-May-2024	25.6	225	5.7	4.4	27	0	3.4	19.5	173.76	No Comments	<EQL (5)	[4.9]	1770	1120	1.02	NS	<EQL (1)	216	<EQL (2)	<EQL (1)	[0.5]	<EQL (1)	<EQL (1)	21.2
CSB 15D	Monitoring Well	MAZ_UTRAU	15-Nov-2023	29.4	NS	NS	NS	NS	NS	NS	NS	170.33	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	242	4.3	5.7	24	12	3.1	18.4	NS	No Comments	[1.2]	<EQL (10)	2290	868	[0.295]	NS	<EQL (1)	228	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	27.8
			06-May-2024	29.37	278	0.97	4.8	25.1	0	1.7	19.3	170.36	No Comments	<EQL (5)	<EQL (10)	2340	892	0.451	NS	<EQL (1)	199	<EQL (2)	<EQL (1)	<EQL (1)	[0.38]	<EQL (1)	30.2

Figure CR-3 (Revised Appendix A). CAGW OU NTC RA Analytical Data 2023-2024

Comments Received March 27, 2025

Appendix A: CAGW OU NTC RA Data													CAGW RA Analytical Data												
												N/A													
			Field Data										Hydrocarbons		Inorganics			Organics		Radionuclides	VOC					
			SAMPLE COLLECTION DATE	DEPTH TO WATER	OXIDATION/REDUCTION POTENTIAL	OXYGEN	PH	SPECIFIC CONDUCTANCE	TOTAL ALKALINITY (AS CACO3)	TURBIDITY	WATER TEMPERATURE	SAMPLING EVENT WATER ELEVATION	FIELD CONDITIONS	ETHYLENE	METHANE	CHLORIDE	NITRATE	SULFATE	TOTAL CARBON	TOTAL ORGANIC CARBON	TRITIUM	1,2-DICHLOROETHYLENE	CHLOROETHENE (VINYL CHLORIDE)	CIS-1,2-DICHLOROETHYLENE	TETRACHLOROETHYLENE (PCE)	TRANS-1,2-DICHLOROETHYLENE	TRICHLOROETHYLENE (TCE)
			D-M-Yr	ft	mV	mg/L	pH	uS/cm	mg/L	NTU	degC	ft		ug/L	ug/L	ug/L	ug/L	mg/L	N/A	ug/L	pCi/mL	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Station	Well Use	Aquifer															10000				20		2	70	5	100	5
CSB020C	Monitoring Well	MAZ_UTRAU	15-Nov-2023	39.7	NS	NS	NS	NS	NS	NS	NS	179.25	No Comments	NS	NS	NS	NS	NS	NS	<EQL (1)	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	256	4.2	5.3	29	0	8.4	18.4	NS	No Comments	[1.3]	<EQL (10)	2540	1440	[0.312]	NS	<EQL (1)	189	<EQL (2)	<EQL (1)	<EQL (1)	[0.41]	<EQL (1)	26.4
			06-May-2024	40.71	301	0.67	4.1	27.5	0	3.1	19	178.24	No Comments	<EQL (5)	<EQL (10)	2480	1330	0.51	NS	<EQL (1)	162	<EQL (2)	<EQL (1)	<EQL (1)	[0.4]	<EQL (1)	28.6
CCSL-08	Seepline	MAZ_UTRAU	15-Nov-2023	0	NS	NS	NS	NS	NS	NS	NS	157.4	No Comments	NS	NS	NS	NS	NS	NS	<EQL (1)	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	303	6.9	4.8	22	0	14.3	16.6	NS	No Comments	<EQL (5)	<EQL (10)	2190	533	0.634	NS	<EQL (1)	63.9	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	5.43
			06-May-2024	0.1	227	5.87	4.8	30	0	7.3	19.7	157.3	No Comments	<EQL (5)	<EQL (10)	2200	450	0.452	NS	[0.345]	42.9	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	4.33
CCSL-11	Seepline	MAZ_UTRAU	15-Nov-2023	1.31	NS	NS	NS	NS	NS	NS	NS	157.29	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	287	6.8	6.1	43	10	168	12.3	NS	No Comments	<EQL (5)	<EQL (10)	2460	738	0.606	NS	<EQL (1)	61.4	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)
			06-May-2024	1.15	215	6.15	5.8	200	21	6.3	20.8	157.45	No Comments	<EQL (5)	<EQL (10)	2480	560	0.793	NS	1.07	23.7	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)
CCSL-14	Seepline	MAZ_UTRAU	15-Nov-2023	0.9	NS	NS	NS	NS	NS	NS	NS	156.9	No Comments	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	280	6.3	5	25	1	220	13.8	NS	No Comments	<EQL (5)	<EQL (10)	2220	591	[0.362]	NS	<EQL (1)	88.4	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	3.83
			06-May-2024	0.93	201	5.3	5.7	27	5	85.1	19.8	156.87	No Comments	<EQL (5)	<EQL (10)	2350	678	[0.385]	NS	<EQL (1)	80.2	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	3.01
CCSL-23R	Seepline	MAZ_UTRAU	15-Nov-2023	3.7	NS	NS	NS	NS	NS	NS	NS	154.61	No Comments	NS	NS	2390	592	3.12	NS	NS	174	NS	NS	NS	NS	NS	NS
			27-Nov-2023	NS	262	6.5	4.6	27	0	68.5	13.9	NS	No Comments	[23.1]	<EQL (10)	2410	596	2.93	NS	[1.63]	173	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	5.59
			06-May-2024	2.66	230	5.87	4.3	37	0	12.8	19.2	155.65	No Comments	<EQL (5)	<EQL (10)	2350	785	2.13	NS	1.8	133	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	7.25
CC 05	Surface Water		14-Nov-2023	NS	276	5.99	4.3	23	0	1.5	13.6	NS	No Comments	<EQL (5)	[3.9]	2260	556	0.757	NS	<EQL (1)	15.1	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	[0.94]
			07-May-2024	NS	207	0.66	5.6	25.3	7	1.9	18.8	NS	No Comments	<EQL (5)	[7.8]	2290	514	0.78	NS	1.11	11.9	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	[0.72]
CC 07	Surface Water		14-Nov-2023	NS	213	5.2	5.6	23	5	2.3	13.9	NS	No Comments	<EQL (5)	<EQL (10)	2240	566	0.781	NS	<EQL (1)	<EQL (1.8)	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	[0.74]
			07-May-2024	NS	209	0.87	5.6	22.1	9	3	18.4	NS	No Comments	[0.8]	[5.8]	2280	534	0.811	NS	[0.778]	<EQL (1.53)	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	[0.54]
CC 08	Surface Water		14-Nov-2023	NS	243	6.03	4.2	23	0	1.9	13.9	NS	No Comments	<EQL (5)	<EQL (10)	2250	567	0.772	NS	<EQL (1)	13.5	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	1.25
			07-May-2024	NS	198	1.24	5.4	22.7	4	2.6	18.1	NS	No Comments	<EQL (5)	[8.2]	2320	521	0.811	NS	[0.746]	[0.732]	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	[0.63]
CCT 01	Surface Water		14-Nov-2023	NS	160	5.15	5.8	25	15	8.9	14.9	NS	No Comments	[1.1]	50.8	2170	556	0.405	NS	[1.34]	183	<EQL (2)	<EQL (1)	[0.44]	<EQL (1)	<EQL (1)	9.84
			07-May-2024	NS	118	7.8	6.8	190	36	4.4	18.8	NS	No Comments	<EQL (5)	77.3	2230	478	[0.38]	NS	1.65	134	[0.68]	<EQL (1)	[0.68]	<EQL (1)	<EQL (1)	8.53
CCT 02	Surface Water		14-Nov-2023	NS	197	5.12	5.4	20	3	16.9	14	NS	No Comments	<EQL (5)	<EQL (10)	2360	307	0.517	NS	[2.4]	16.6	<EQL (2)	<EQL (1)	[0.39]	<EQL (1)	<EQL (1)	7.6
			07-May-2024	NS	140	5.8	5.6	4.5	11	4.5	18.8	NS	No Comments	<EQL (5)	[5.8]	2410	260	0.431	NS	2.92	10.9	<EQL (2)	<EQL (1)	<EQL (1)	<EQL (1)	<EQL (1)	5.71
CCT 03	Surface Water		14-Nov-2023	NS	216	4.86	5.4	20	3	2.1	14	NS	No Comments	<EQL (5)	<EQL (10)	2470	213	0.573	NS	[2.57]	[1.61]	<EQL (2)	<EQL (1)	[0.56]	<EQL (1)	<EQL (1)	5.59
			07-May-2024	NS	157	5.1	5.4	24	9	2.3	19.2	NS	No Comments	<EQL (5)	[9.2]	2470	191	0.445	NS	3.28	[1.51]	<EQL (2)	<EQL (1)	[0.44]	<EQL (1)	<EQL (1)	4.59

Figure CR-3 (Revised Appendix A). CAGW OU NTC RA Analytical Data 2023-2024 (continued/end)



* Data labeled (U) are non-detects representing the quantification limit for that sample
* Data labeled (J) are detections that are below the quantification limit for that sample but above the method detection limit

Figure CR-4 (Revised Figure 17). Ethylene Groundwater Trends

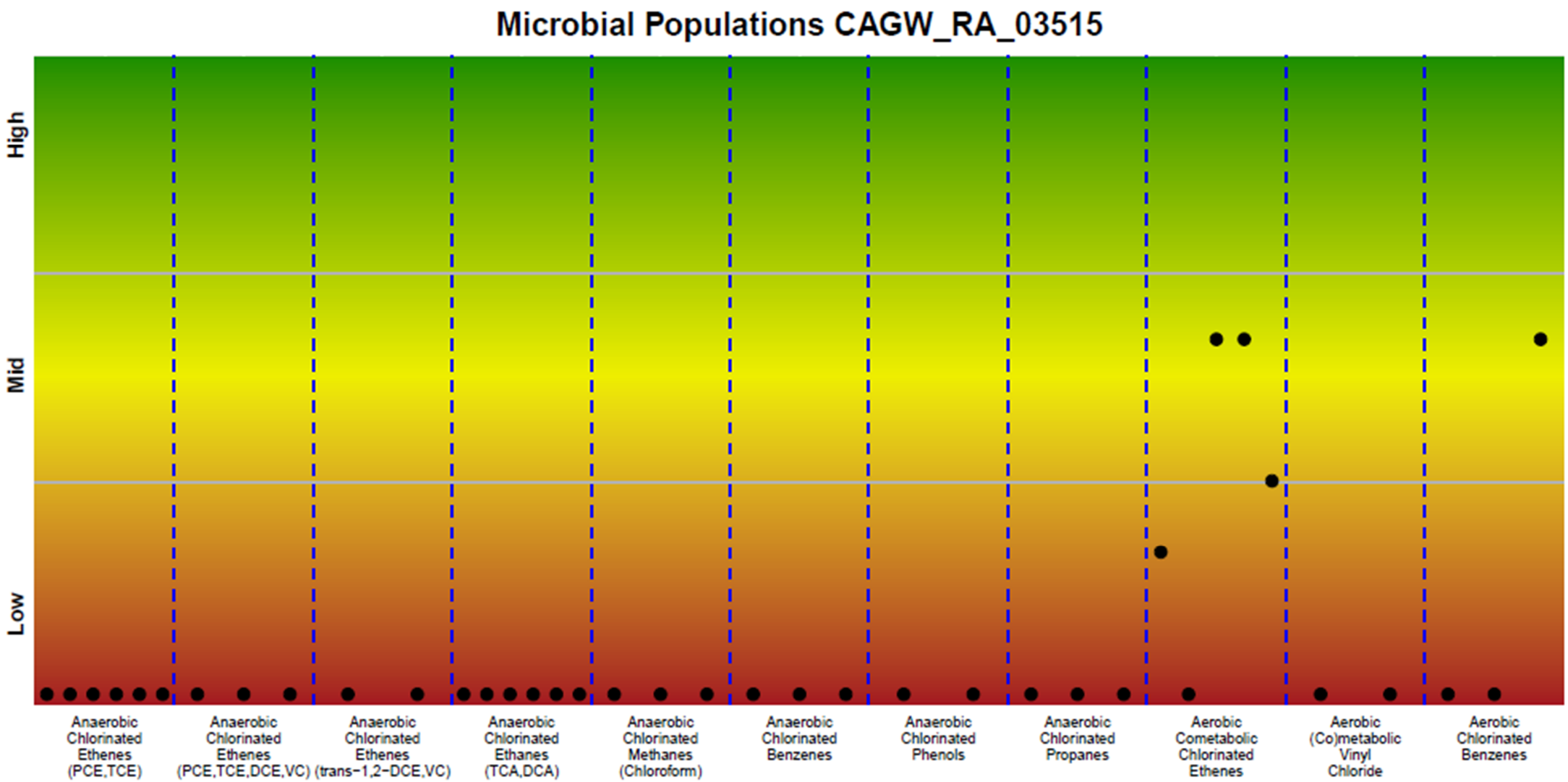


Figure CR-5. CRW026C Microbial Activity November 2023

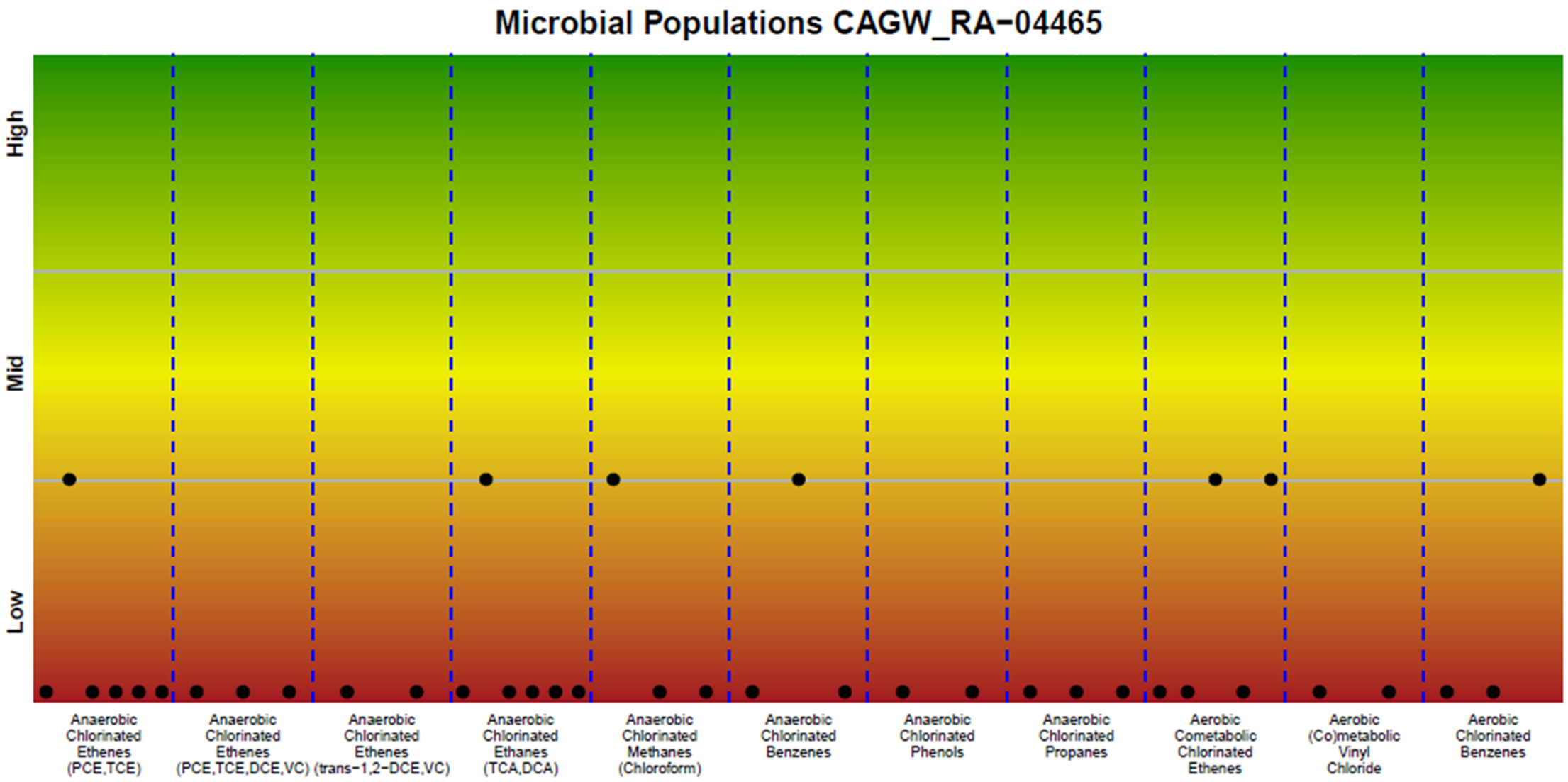


Figure CR-6. CRW026C Microbial Activity May 2024

Comments Received March 27, 2025

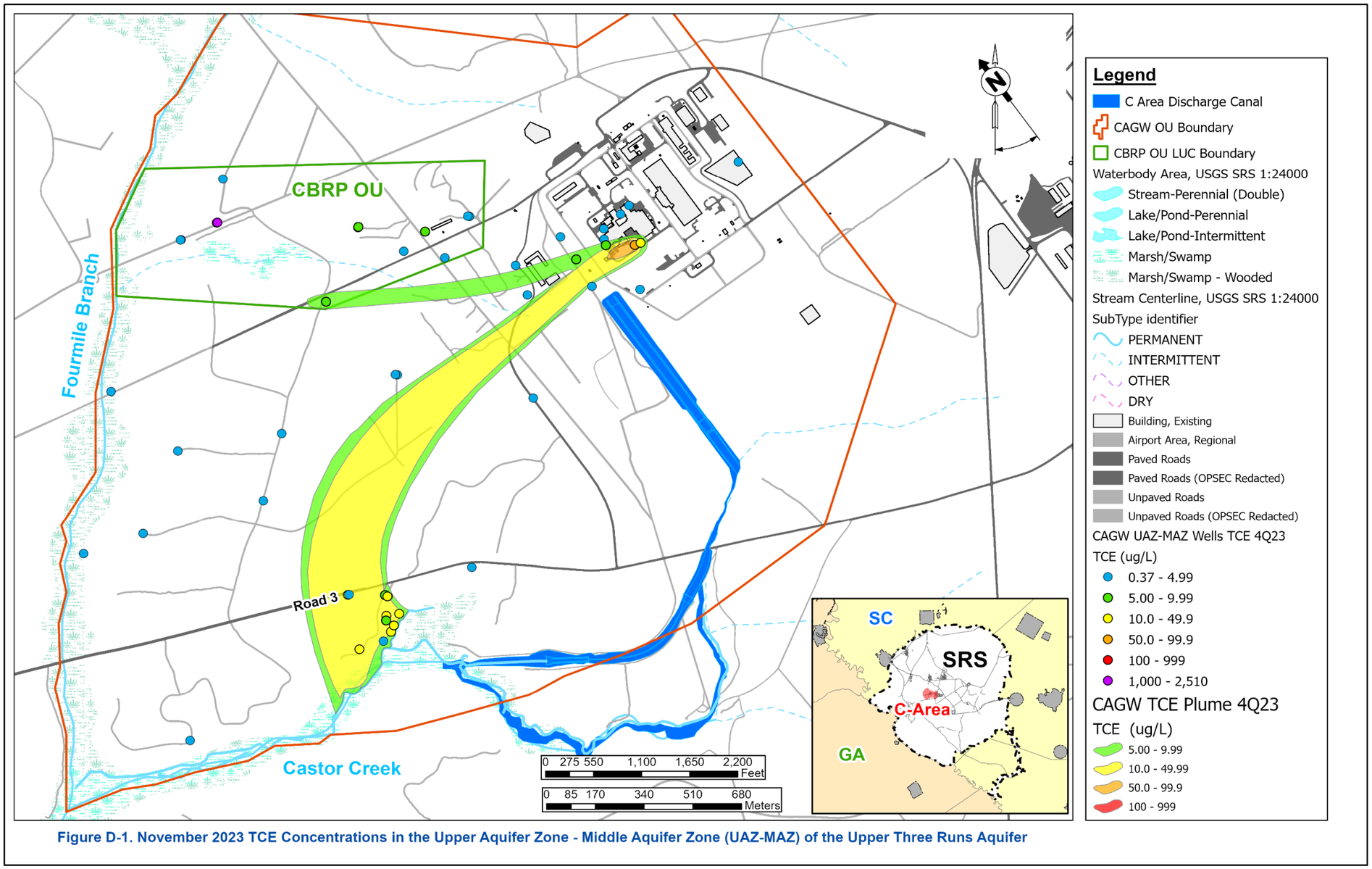


Figure D-1. November 2023 TCE Concentrations in the Upper Aquifer Zone - Middle Aquifer Zone (UAZ-MAZ) of the Upper Three Runs Aquifer

Figure CR-7 (Revised Figure D-1). November 2023 TCE Concentrations in the Upper Aquifer Zone – Middle Aquifer Zone (UAZ-MAZ) of the Upper Three Runs Aquifer