REPORT

2024 Annual Groundwater Monitoring and Corrective Action Report

RCPA Surface Impoundment, Rush Island Energy Center, Jefferson County, Missouri, USA

January 31, 2025

Project Number: 23008-24

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EXECUTIVE SUMMARY AND STATUS OF THE RCPA GROUNDWATER MONITORING PROGRAM

This annual report was developed to meet the requirements of United States Environmental Protection Agency (USEPA) 40 CFR Part 257 “Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule” (the CCR Rule). The CCR Rule requires owners or operators of existing CCR units to produce an Annual Groundwater Monitoring and Corrective Action Report (Annual Report) each year (§ 257.90(e)). Ameren Missouri (Ameren) has determined that the Coal Combustion Residuals (CCR) surface impoundments at the Rush Island Energy Center (RIEC) are subject to the requirements of the CCR Rule. This Annual Report for the RIEC Surface Impoundments describes CCR Rule groundwater monitoring activities from January 1, 2024, through December 31, 2024 including verification results related to late 2023 sampling.

Throughout 2024, the RCPA has been in Corrective Action Monitoring with Detection and Assessment Monitoring continuing concurrently. Semi-annual groundwater sampling associated with Detection Monitoring has been ongoing since it was initiated on October 17, 2017 as required by the CCR Rule. As a part of Detection Monitoring, statistical evaluations are completed after each sampling event to determine if there are any values at a Statistically Significant Increase (SSI) over background. SSIs have been determined for each sampling event and a summary of the SSIs for the past year is provided in **Table 1**.

The Assessment Monitoring program was established at the RCPA on April 15, 2018. Since that time, groundwater sampling and statistical evaluations have been completed semi-annually to determine if there are any values at a Statistically Significant Level (SSL) over the site-specific Groundwater Protection Standard (GWPS). On October 11, 2018, it was determined that arsenic and molybdenum were present at SSLs. A summary of SSLs for the past year is provided in **Table 1**.

Table 1 - Summary of 2024 RCPA Sampling Events, Previous Year Verification, and Statistical Evaluations

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt	Parameters Collected	Verified SSIs	SSLs	SSI & SSL Determination Date
November 2023 Sampling Event	Detection & Assessment Monitoring, November 6-8, 2023	December 11, 2023	Appendix III, Detected Appendix IV (See Note 1), & Major Cations and Anions	**pH:** MW-1, MW-2, MW-3 **Boron:** MW-1, MW-2, MW-3, MW-4, MW-6, MW-7(R) **Fluoride:** MW-2, MW-3, MW-4 **Sulfate:** MW-1, MW-2, MW-3 **TDS:** MW-3	**Arsenic:** MW-2, MW-3, MW-7/MW-7(R) **Molybdenum:** MW-2, MW-3	March 8, 2024
	Verification Sampling, February 13, 2024	February 28, 2024	Detected Appendix III parameters (See Note 2)			
June 2024 Sampling Event	Detection & Assessment Monitoring, June 3-7, 2024	July 11, 2024	Appendix III, Appendix IV, Major Cations and Anions, & selected MNA parameters	**pH:** MW-1, MW-2, MW-3, MW-5 **Boron:** MW-1, MW-2, MW-3, MW-4, MW-6, MW-7(R) **Fluoride:** MW-2, MW-3, MW-4 **Sulfate:** MW-1, MW-2, MW-3, MW-7(R)	**Arsenic:** MW-2, MW-3, MW-7/MW-7(R) **Molybdenum:** MW-2, MW-3	October 9, 2024
	Verification Sampling, July 31, 2024	August 18, 2024	Detected Appendix III parameters (See Note 2)			
November 2024 Sampling Event	Detection & Assessment Monitoring, November 8-13, 2024	December 13, 2024	Appendix III, Detected Appendix IV (See Note 3), & Major Cations and Anions	To be determined after statistical analysis and Verification Sampling are completed in 2025.		

Notes:
1) Testing was completed for Appendix IV analytes that were detected above the Practical Quantitation Limit (PQL) during the April 2023 sampling event.
2) Only analytes/wells that were detected above the prediction limit and that had not already been verified were tested during Verification Sampling.
3) Testing was completed for Appendix IV analytes that were detected above the PQL during the June 2024 sampling event.
4) SSI – Statistically Significant Increase.
5) SSL – Statistically Significant Level.
6) TDS – Total Dissolved Solids.
7) MNA – Monitored Natural Attenuation.

On January 9, 2019, Ameren initiated its Corrective Measures Assessment (CMA) and posted its CMA report on May 20, 2019. A public meeting was held on May 28, 2019 and responses to public comments are posted on Ameren's CCR website. On August 30, 2019, Ameren published its "Remedy Selection Report – 40 CFR § 257.97 Rush Island, Labadie, Sioux and Meramec CCR Basins" (Remedy Selection Report) that identified source control through installation of a low permeability cover system, use of Monitored Natural Attenuation (MNA), and installation of Supplemental Corrective Measures as its chosen corrective action remedial plan. The Remedy Selection Report remedial plan consists of two initial phases as follows:

1) Source control, stabilization and containment of CCR by installation of a low permeability geomembrane cap (a minimum 1 x 10^{-7} centimeters per second (cm/sec) versus 1 x 10^{-5} cm/sec required by the CCR Rule).

2) Once source control is achieved, monitor the natural attenuation of groundwater concentrations to address limited and localized CCR-related impacts. Ongoing monitoring and modelling evaluations will document that concentrations are decreasing as modelled. MNA occurs due to naturally occurring processes within the aquifer.

Ameren commenced Phase 1 of the corrective action remedial plan in August 2019 by initiating closure at the RCPA. Closure of the RCPA was completed on December 15, 2020, thereby transitioning the RCPA into the post-closure care requirements of the CCR Rule. As outlined in §257.104 (Post-closure Care Requirements) of the CCR Rule, the monitoring system and programs must be maintained for at least 30 years. After 30 years, if the unit is in Detection Monitoring, the unit may cease groundwater sampling activities, otherwise post-closure care must continue until the unit can return to Detection Monitoring in accordance with section §257.95 (Assessment Monitoring Program).

Phase 2 of the corrective measures remedial plan as outlined in the Remedy Selection Report began with the April 2021 Corrective Action Sampling event on April 22, 2021. Since that time, groundwater sampling and statistical evaluations have been completed semi-annually to determine if there are any values at the corrective action monitoring well network that are statistically exceeding the GWPS. A summary of the Corrective Action Monitoring and associated statistical results for this year is provided in **Table 2**.

Table 2 - Summary of 2024 RCPA Sampling Events and Statistical Evaluations for Corrective Action Monitoring Well Network

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt Date	Parameters Collected	Constituents Statistically Exceeding the GWPS as a Part of Corrective Action Statistical Evaluations	Date Exceedance of GWPS was determined
November 2023 Sampling Event	Phase 2 – Corrective Action Sampling November 6-9, 2023	December 19, 2023	Appendix III, Detected Appendix IV (See Note 1), & Major Cations and Anions	**Arsenic:** P05S, P17I, P17S, P19I, P21S **Lead:** P19I **Lithium:** P19I, P21D **Molybdenum:** P10S, P17D, P17I, P19D, P19I, P21D, P21I, P22D	March 18, 2024

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt Date	Parameters Collected	Constituents Statistically Exceeding the GWPS as a Part of Corrective Action Statistical Evaluations	Date Exceedance of GWPS was determined
June 2024 Sampling Event	Phase 2 – Corrective Action Sampling June 3-7, 2024	July 22, 2024	Appendix III, Appendix IV, Major Cations and Anions, & selected MNA parameters	**Arsenic:** P05S, P17I, P17S, P19I, P21S **Lithium:** P19I, P21D **Molybdenum:** P10S, P17D, P17I, P19D, P19I, P21D, P21I, P22D	October 18, 2024
November 2024 Sampling Event	Phase 2 – Corrective Action Sampling November 8-13, 2024	December 12, 2024	Appendix III, Detected Appendix IV (See Note 2), & Major Cations and Anions	To be determined after statistical analysis is completed in 2025.	

Notes:
1) Testing was completed for Appendix IV analytes that were detected above the PQL during the April 2023 sampling event.
2) Testing was completed for Appendix IV analytes that were detected above the PQL during the June 2024 sampling event.
3) MNA – Monitored Natural Attenuation.
4) GWPS – Groundwater Protection Standard.

Corrective Measures

In 2024, Rocksmith Geoengineering, LLC (Rocksmith) and WSP USA Inc. (WSP) prepared an evaluation of monitored natural attenuation (MNA) for arsenic and molybdenum in groundwater at the Rush Island Energy Center. This report is available on Ameren's publicly available CCR website and the investigation demonstrated that natural processes, including adsorption and mineral precipitation, are effectively reducing arsenic and molybdenum concentrations in groundwater at the Site. Supplemental corrective measures, such as a groundwater treatment system implemented in 2022, have further supported these reductions.

In addition to MNA as a Corrective Action Remedy at Rush Island, Ameren began operating a groundwater treatment system in February 2022 and approximately 32 million gallons of water have been treated by the system through 2024. In May 2024, Haley & Aldrich produced a Supplemental Remedy Selection Report for the RIEC, documenting that these corrective measures are effectively contributing to constituent mass reductions in groundwater near the RCPA. These corrective measures are ongoing.

Overall, Corrective Action taken by Ameren has reduced concentrations of key CCR constituents in groundwater by means of closure of the RCPA with an engineered geomembrane cover system, installation and operation of a groundwater treatment system, and MNA of impacts. In monitoring wells downgradient of the RCPA, average arsenic concentrations have decreased approximately 49%, average boron concentrations have decreased approximately 24%, and average molybdenum concentrations have decreased approximately 16% since 2018. Monitoring and further evaluation of groundwater testing results will continue, and progress will be tracked in future Annual Reports and statistical evaluations.

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1.0 INSTALLATION OR DECOMISSIONING OF MONITORING WELLS

There are currently two different networks used for monitoring the RCPA. These include the monitoring network established under §257.91 for Detection and Assessment Monitoring and the network established under §257.98 for Corrective Action Monitoring, as displayed in **Figure 1**. No new wells were installed or decommissioned in 2024. A summary of the well construction details for monitoring wells in both networks is provided in **Table 3**. Further details including well construction diagrams for these wells are provided in previous annual reports for the RCPA.

2.0 GROUNDWATER SAMPLING RESULTS AND DISCUSSION

The following sections discuss the sampling events completed for the RCPA CCR Unit in 2024. **Tables 4** and **5** provide a summary of the groundwater samples collected in 2024 including the number of samples, the date of the sample collection, and the monitoring program for which the samples were collected. **Appendix A** provides laboratory analytical data for CCR Rule sampling events.

2.1 Detection Monitoring Program

A Detection Monitoring sampling event was completed November 6-8, 2023. Verification sampling and the statistical analysis to evaluate for SSIs for the November 2023 event were not completed until 2024 and are therefore included in this report. New initial exceedances of Appendix III analytes triggered a verification sampling event, which was completed on February 13, 2024. The initial exceedances were not confirmed. **Table 6** summarizes the results and the statistical analysis of the November 2023 Detection Monitoring event.

Detection Monitoring samples were collected June 3-7, 2024, and testing was completed for all Appendix III analytes, as well as major cations and anions. New initial exceedances of Appendix III analytes triggered a verification sampling event, which was completed July 31, 2024. Two new initial exceedances were confirmed as SSIs. **Table 7** summarizes the results and the statistical analysis of the June 2024 Detection Monitoring event.

A Detection Monitoring sampling event was completed November 8-13, 2024, and testing was performed for all Appendix III analytes, as well as major cations and anions. Statistical analysis to evaluate for SSIs in the November 2024 data were not completed in 2024 and will be included in the 2025 Annual Report. **Table 8** summarizes the results of the November 2024 Detection Monitoring event.

2.2 Assessment Monitoring Program

An Assessment Monitoring sampling event was completed November 6-8, 2023, and testing was completed for Appendix IV analytes that were detected above the Practical Quantitation Limit (PQL) during the previous sampling event from either the Assessment or Corrective Action Groundwater Monitoring Well Networks, as well as major cations and anions. **Table 9** summarizes the results of the November 2023 Assessment Monitoring event. The statistical evaluation for this event was completed in 2024 and is included in this report. The results from this analysis and a table that displays the site-specific GWPS for each Appendix IV constituent are provided in **Appendix B.** The statistical evaluation determined there were no new SSLs. The SSLs for the RPCA CCR Unit as of the November 2023 sampling event are:

- Arsenic at MW-2, MW-3, and MW-7/MW-7(R)
- Molybdenum at MW-2 and MW-3

An Assessment Monitoring sampling event was completed June 3-7, 2024, and testing was completed for all Appendix IV analytes, major cations and anions, and other selected MNA parameters. **Table 10** summarizes the results of the June 2024 Assessment Monitoring event. The statistical evaluation for this event was completed in 2024 and is included in this report. The results from this analysis and a table that displays the site-specific GWPS

are provided in **Appendix C**. The statistical evaluation determined that the SSLs as of June 2024 remain the same as those listed above from the November 2023 statistical evaluation.

An Assessment Monitoring sampling event was completed November 8-13, 2024, and testing was completed for Appendix IV analytes that were detected above the PQL during the June 2024 sampling event from either the Assessment or Corrective Action Groundwater Monitoring Well Networks as well as major cations and anions. **Table 11** summarizes the results of the November 2024 Assessment Monitoring event; however, statistical analysis to evaluate SSLs was not completed in 2024. Results of the statistical evaluation will be included in the 2025 Annual Report.

2.3 Corrective Action Monitoring

A Corrective Action sampling event was completed November 6-9, 2023, and testing was completed for all Appendix III analytes, Appendix IV analytes that were detected above the PQL during the previous sampling event from either the Assessment or Corrective Action Groundwater Monitoring Well Networks, and major cations and anions. A summary of the November 2023 Corrective Action sampling event results is provided in **Table 12**. The statistical evaluation for this event was completed in 2024 and is included in this report. The results from this statistical evaluation are provided in **Appendix D**. Lithium at R-P-22S is no longer an exceedance as of November 2023 Corrective Action sampling event. Other exceedances remain the same as those reported in the Corrective Action statistical evaluation of the April 2023 sampling event, included in the 2023 Annual Report. As of the November 2023 sampling event, constituents displaying statistical exceedances of the GWPS using Corrective Action statistical methods[1] at corresponding wells are as follows:

- Arsenic at R-P-05S, R-P-17I, R-P-17S, R-P-19I, and R-P-21S
- Lead at R-P-19I
- Lithium at R-P-19I and R-P-21D
- Molybdenum at R-P-10S, R-P-17D, R-P-17I, R-P-19D, R-P-19I, R-P-21D, R-P-21I, and R-P-22D

A Corrective Action sampling event was completed June 3-7, 2024, and testing was completed for Appendix III and IV analytes, major cations and anions, and other selected MNA parameters. A summary of the June 2024 Corrective Action sampling event results is provided in **Table 13**. The results from this statistical evaluation are provided in **Appendix E**. Lead at R-P-19I is no longer an exceedance as of the June 2024 Corrective Action sampling event; therefore, there are no longer any lead exceedances within the Corrective Action Network at the Site. Other exceedances remained the same for this event as those reported for the November 2023 event. As of the June 2024 sampling event, constituents statistically exceeding the GWPS at corresponding wells are as follows:

- Arsenic at R-P-05S, R-P-17I, R-P-17S, R-P-19I, and R-P-21S
- Lithium at R-P-19I and R-P-21D
- Molybdenum at R-P-10S, R-P-17D, R-P-17I, R-P-19D, R-P-19I, R-P-21D, R-P-21I, and R-P-22D

A Corrective Action sampling event was completed November 8-13, 2024, and testing was completed for Appendix III analytes, Appendix IV analytes that were detected above the PQL during the June 2024 sampling event from either the Assessment or Corrective Action Groundwater Monitoring Well Networks, as well as major cations and anions. **Table 14** summarizes the results of the November 2024 Corrective Action event; however,

[1] The statistical testing method used to evaluate the Corrective Action monitoring results is the confidence interval method, which is the same method used during Assessment Monitoring, except the null hypothesis for the confidence intervals is reversed. For Corrective Action, the Unified Guidance states that the appropriate null hypothesis is that the groundwater population (mean) exceeds the Groundwater Protection Standard (GWPS) for those constituents that exceed the GWPS under Assessment Monitoring program. Therefore, in Corrective Action the Upper Confidence Limit (UCL) is compared to the GWPS instead of the Lower Confidence Limit (LCL) [as used during Assessment Monitoring].

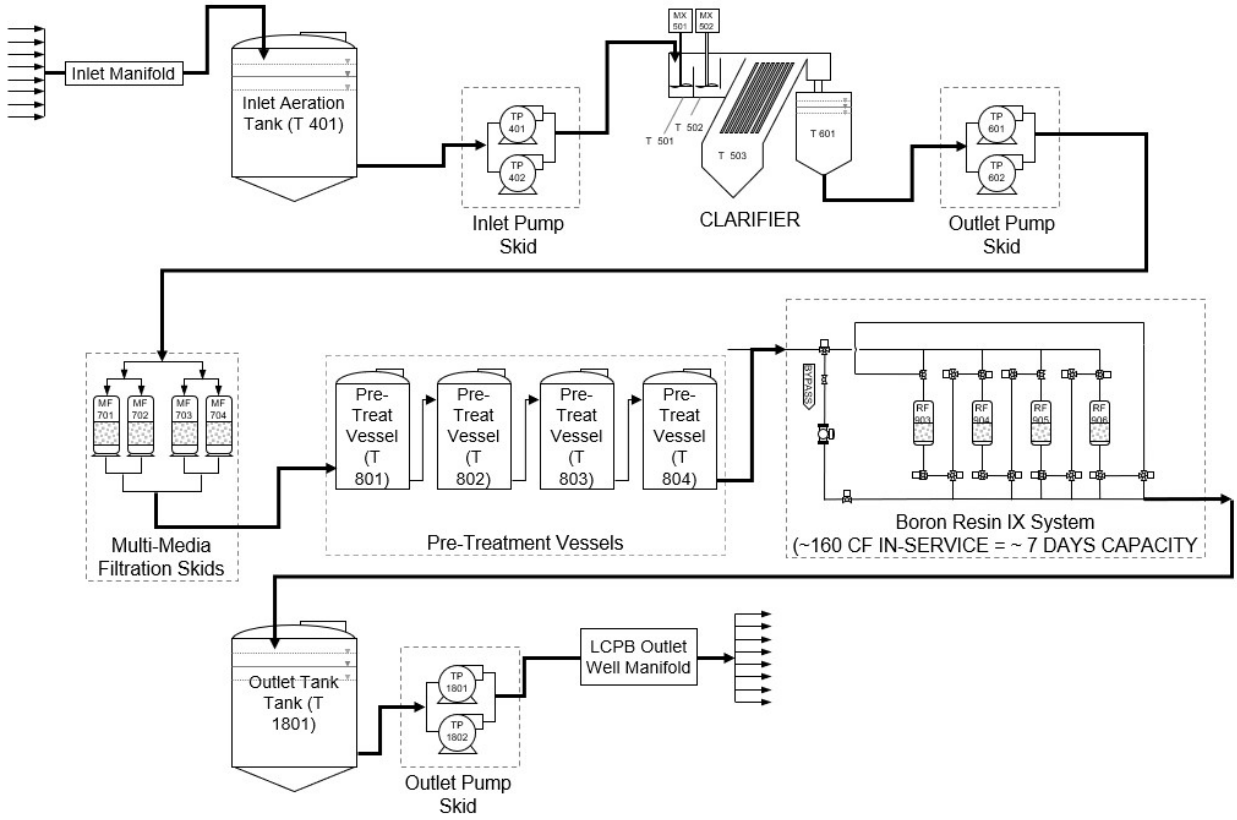
statistical analysis to evaluate statistical exceedances of the GWPS was not completed in 2024. Results of the statistical evaluation will be included in the 2025 Annual Report.

2.4 Supplemental Corrective Measures

As outlined in Ameren's Remedy Selection Report, once source control is achieved, Ameren will monitor natural attenuation of groundwater and complete supplemental corrective measures using groundwater treatment. In 2021, Ameren began implementing the supplemental corrective measure for CCR groundwater compliance using ex-situ treatment technologies of chemical precipitation and selective-ion exchange by completing a pilot study at the site. The results of this groundwater treatment pilot study displayed significant reductions in key CCR indicator concentrations. Due to the success, Ameren expanded this technology to the downgradient side (eastern side) of the RCPA and the full-scale treatment system began operation in February 2022.

The groundwater treatment system was developed to successfully capture the CCR impacted groundwater downgradient of the RCPA, treat the water by removing contaminants, and return treated water to the same hydrogeologic horizon. The process used for this treatment is illustrated in **Figure 2** below.

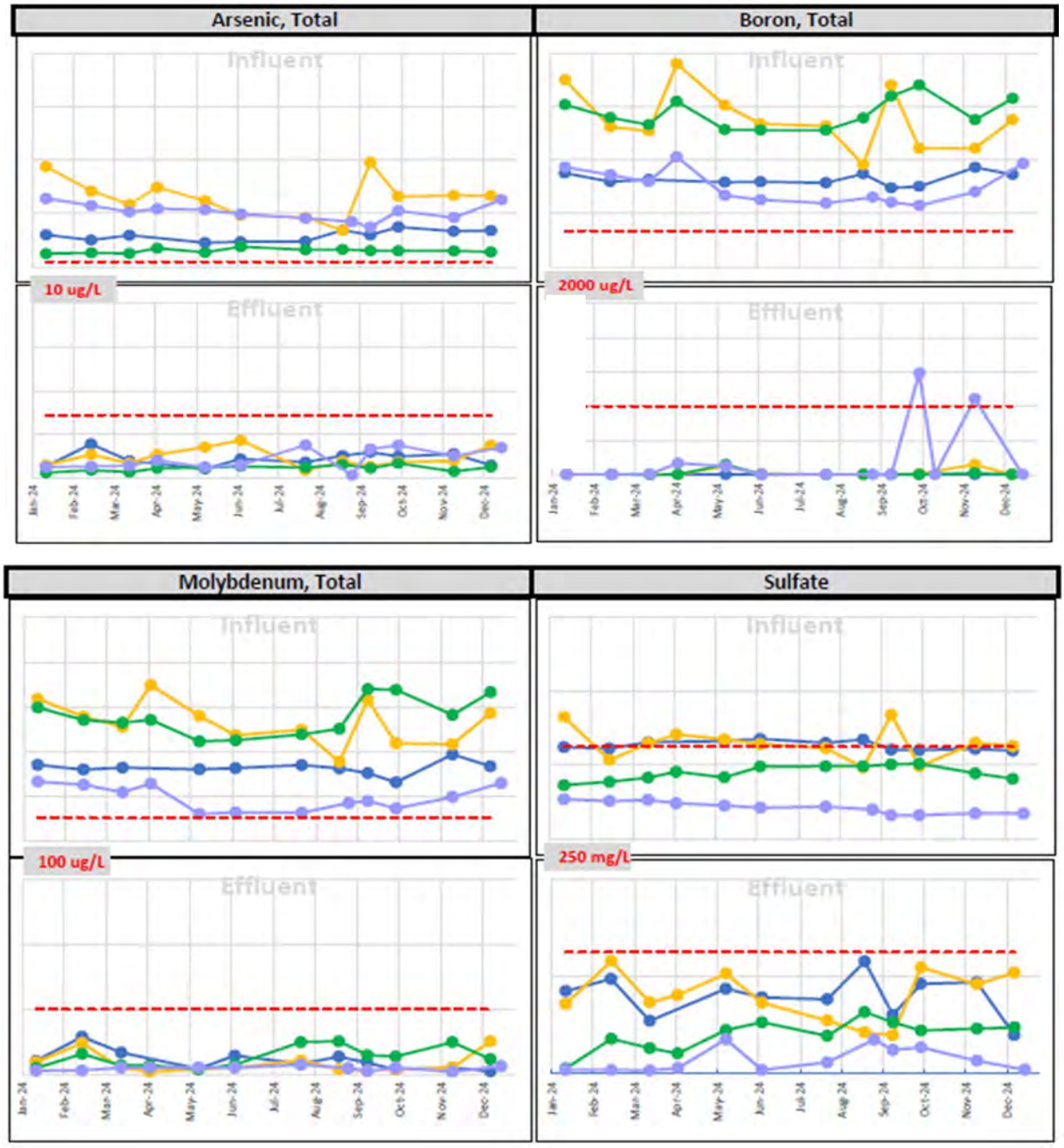
Figure 2: CCR Impacted Groundwater Treatment Process



The process is constructed to minimize waste generation and operate independently of other facilities onsite.

Figure 3 below shows the RCPA groundwater treatment system influent and effluent data collected throughout 2024 for key CCR constituents in groundwater downgradient of the impoundment. The figure illustrates that effluent concentrations have generally been well below the discharge standards to groundwater throughout 2024. These discharge standards meet drinking water action levels for the applicable constituents.

Figure 3: RCPA Groundwater Treatment System Influent and Effluent Concentrations – 2024



Note: The colors of data point represent four treatment system flows monitored by the system

2.5 Evaluation of Corrective Measures

Ameren commenced Phase 1 of the corrective action remedial plan in August 2019 by initiating closure of the RCPA, which was completed on December 15, 2020. The November 2024 groundwater sampling event

represents the eighth event since closure of the RCPA was completed, and the sixth sampling event since the full-scale implementation of the groundwater treatment system.

In order to document the effectiveness of the Corrective Action Remedies (corrective measures), an evaluation of the key site CCR indicators was completed. **Figures 4-6** (right), display the site average concentrations for arsenic, molybdenum, and boron in the downgradient monitoring wells onsite at the RIEC. While there is variability in individual well results, the average annual concentrations at the site are decreasing for arsenic, boron, and molybdenum concentrations as follows:

- Arsenic – Average concentrations in the monitoring wells downgradient of the RCPA have decreased approximately 49% since 2018.
- Boron – Average concentrations in the monitoring wells downgradient of the RCPA have decreased approximately 24% since 2018.
- Molybdenum – Average concentrations in the monitoring wells downgradient of the RCPA have decreased approximately 16% since 2018.

As displayed by these figures, corrective measures taken by Ameren, including the closure of the RCPA with an engineered geomembrane cover system, installation and operation of a groundwater treatment system, and MNA have been effective in reducing concentrations of these constituents. Monitoring and further evaluation of monitoring results will continue, and progress will be tracked in future Annual Reports and statistical evaluations.

Figure 4 - Average Arsenic Concentrations

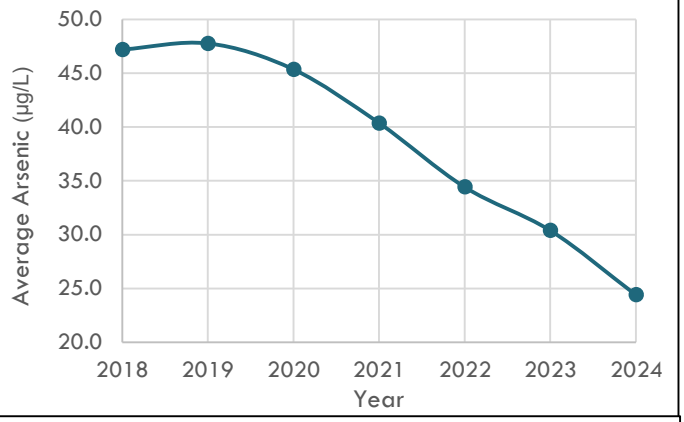


Figure 5 - Average Boron Concentrations

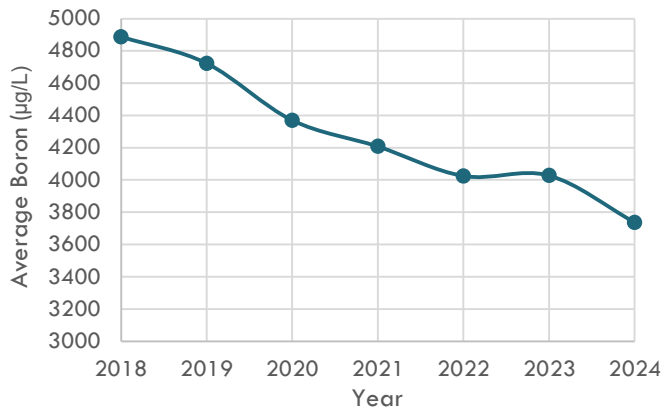
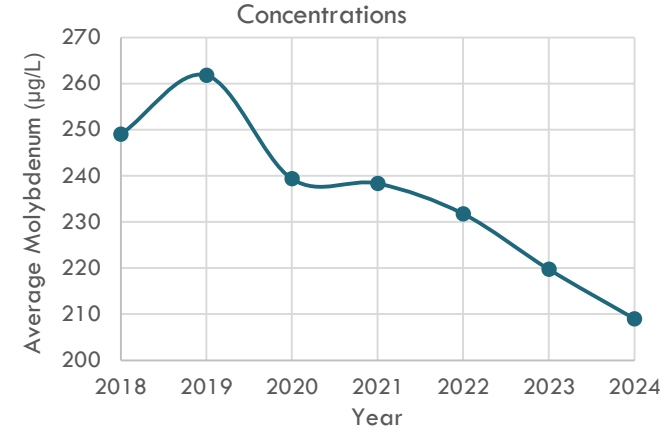


Figure 6 - Average Molybdenum Concentrations



2.6 Groundwater Elevation, Flow Rate and Direction

To meet the requirements of §257.93(c), water level measurements were taken at all monitoring wells prior to the start of groundwater purging and sampling. Static water levels were measured within a 24-hour period in each monitoring well using an electronic water level indicator.

Groundwater elevations were used to generate potentiometric surface maps included in **Appendix F**. As shown on the potentiometric surface maps, groundwater flow direction within the uppermost aquifer is dynamic and influenced by seasonal changes in water level of the adjacent Mississippi River. Water flows into and out of the alluvial aquifer as a result of fluctuating river water levels that produce “bank recharge” and “bank discharge” conditions. Overall, based on the potentiometric surface maps, a general flow direction from the west (bluffs area)

to the east (Mississippi River) is observed under normal river conditions. However, during periods of high river levels, groundwater flow directions can vary, as seen during the February and November 2024 sampling events. During these times of high river stage and temporary flow direction changes, horizontal groundwater gradients generally decrease, and little net movement of groundwater occurs.

Groundwater flow direction and hydraulic gradient were estimated for the monitoring wells at the RIEC using commercially available software. Results from this assessment indicate that while groundwater flow direction is variable and gradients are relatively low, the overall net groundwater flow at the RCPA was toward the Mississippi River. Horizontal gradients calculated by the program range from 0.00002 to 0.0015 feet/foot with an estimated net annual groundwater movement of approximately 30 feet in the prevailing downgradient direction.

Based on review and professional judgment, water levels at P31s were not used in the 2024 potentiometric surface maps due to obstructions in the casing and water level measurement reliability issues with the well discussed in the following section.

2.7 Sampling Issues

During the November 2024 sampling event, monitoring well P31S, which is sampled using a positive displacement method (i.e. a peristaltic pump), experienced issues suctioning water and obstructions in the well were observed. These conditions prevented sustained purging of the well prior to sampling using low-flow sampling methods in accordance with the Groundwater Monitoring Plan (GMP). When sampling P31S, both unfiltered and field-filtered (R-P-31S-DISS) samples were collected, and the results of each are included in **Appendix A**. Filtered and unfiltered results were evaluated in comparison with each other as well as previous sample results at P31S. Based on this evaluation, the unfiltered results were largely consistent with previous results and are included in **Table 14**.

No other notable sampling issues were encountered at RCPA in 2024.

3.0 ACTIVITIES PLANNED FOR 2025

Detection and Assessment Monitoring are scheduled to continue on a semi-annual basis in the second and fourth quarters of 2025. Statistical analysis of the November 2024 Detection and Assessment Monitoring data will be completed in 2025 and will be included in the 2025 Annual Report. As outlined in the Statistical Analysis plan for the site, updates to the statistical limits should be completed once four to eight new sample results are available. After the first semiannual sampling event in 2025, there will be at least 4 new results for each Appendix III parameter. Therefore, background updates are planned to be completed in 2025.

As part of the Phase 2 of the Remedy Selection Report's corrective measures remedial plan, Corrective Action sampling is scheduled to continue on a semi-annual basis in the second and fourth quarters of 2025. Statistical analysis of the November 2024 Corrective Action Monitoring data will be completed in 2025 and will be included in the 2025 Annual Report. Monitoring and statistical evaluation of the Corrective Action will be completed in accordance with the corrective measures remedial plan discussed in the Remedy Selection Report. Evaluation of the effectiveness of Corrective Action and Corrective Measures on CCR constituent concentrations in groundwater will continue in 2025 and be included in the 2025 Annual Report.

As mentioned in Section 2.7, there have been sampling issues at monitoring well P31S. Many of these issues are believed to be the result of obstructions in the well. In 2025, P31S is planned to be abandoned and sealed, and a new replacement well will be installed.

Tables

Table 3
Summary of Well Construction Details
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

Monitoring Well ID	Installation Date	Location		Top of Casing Elevation	Ground Surface Elevation	Top of Screen Elevation	Base of Well	Total Depth
		Northing[1]	Easting[1]	(FT MSL)[2]	(FT MSL)[2]	(FT MSL)[2]	(FT MSL)[2]	(FT BGS)[3]
CCR RULE COMPLIANCE NETWORK								
MW-1	10/31/2015	835384.2	889832.5	395.52	393.5	320.7	310.5	83.0
MW-2	11/1/2015	834261.5	890364.1	393.87	391.7	319.5	309.3	82.4
MW-3	10/31/2015	833178.4	890892.7	391.38	389.2	319.1	308.9	80.3
MW-4	10/30/2015	831647.5	890830.5	392.78	390.8	310.9	300.7	90.1
MW-5	10/29/2015	831994.9	889984.5	390.36	388.0	333.0	327.8	60.2
MW-6	10/28/2015	833111.0	888977.0	402.71	401.1	346.4	341.2	59.8
MW-7(R)	9/11/2019	834501.4	888496.4	408.22	406.0	318.7	308.6	97.4
MW-B1	10/28/2015	837602.1	887903.9	411.61	409.6	319.8	309.6	100.0
MW-B2	10/27/2015	837801.7	885337.2	397.85	395.9	318.3	308.1	87.9
CORRECTIVE ACTION MONITORING WELL NETWORK								
P05S	12/5/2012	832317.6	889749.7	392.50	390.1	365.6	345.6	44.5
P10S	12/4/2012	834545.1	888099.0	407.23	404.8	375.8	355.8	49.0
P16S	12/6/2012	835092.8	889998.3	393.39	390.9	370.9	350.9	40.0
P17D	9/6/2013	834718.8	890158.3	395.56	392.6	267.3	262.3	130.3
P17I	12/10/2013	834744.2	890148.9	394.86	392.5	333.6	328.6	63.9
P17S	11/27/2012	834736.7	890152.8	394.65	392.5	373.5	355.5	37.0
P19D	12/10/2013	833915.6	890552.2	392.08	390.3	270.3	265.3	125.0
P19I	12/10/2013	833911.3	890550.6	392.75	390.2	330.7	325.7	64.5
P19S	11/27/2012	833919.0	890546.4	393.31	390.6	368.6	348.6	42.0
P21D	12/9/2013	832902.9	891031.2	393.39	391.0	271.8	266.8	124.2
P21I	12/9/2013	832904.2	891027.0	393.53	391.2	333.4	328.4	62.8
P21S	11/28/2012	832898.0	891024.7	393.87	391.5	371.5	351.5	40.0
P22D[5]	12/7/2013	832278.2	891018.7	395.05	391.6	286.6	281.6	110.0
P22S	11/29/2012	832277.0	891007.6	394.30	392.2	373.2	353.2	39.0
P29D	12/11/2013	837804.9	885389.1	398.27	396.2	300.9	295.9	100.3
P29S	1/17/2013	837797.9	885383.8	399.11	397.0	367.0	347.0	50.0
P30S	1/16/2013	836606.9	889007.8	407.75	408.0	368.0	348.0	60.0
P31S	12/10/2012	835629.4	887488.1	408.68	406.1	374.1	354.1	52.0

Notes:
1) Horizontal Datum: State Plane Coordinates NAD83 (2000) Missouri East Zone 2401 (feet).
2) FT MSL- Feet above mean sea level.
3) FT BGS - Feet below ground surface.
4) Vertical Datum: NAVD88 (feet).
5) Monitoring well P22D repaired and modified on February 9, 2021.

Prepared by: JSI
Checked by: GTM
Reviewed by: MNH

Table 4
Summary of Detection and Assessment Groundwater Network Sampling Dates
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

Groundwater Monitoring Wells	Date of Sample Collection				
	February 2024 Verification Sampling	June 2024 Sampling Event	July 2024 Verification Sampling	November 2024 Sampling Event	Total Number of Samples
CCR Rule Compliance Monitoring Well Network					
MW-B1	-	6/4/2024	-	11/11/2024	2
MW-B2	-	6/4/2024	-	11/13/2024	2
MW-1	-	6/3/2024	-	11/12/2024	2
MW-2	-	6/6/2024	7/31/2024	11/11/2024	3
MW-3	-	6/7/2024	-	11/13/2024	2
MW-4	-	6/5/2024	-	11/13/2024	2
MW-5	2/13/2024	6/5/2024	7/31/2024	11/8/2024	4
MW-6	2/13/2024	6/3/2024	-	11/11/2024	3
MW-7(R)	-	6/4/2024	7/31/2024	11/11/2024	3
Assessment or Detection Monitoring	Detection	Assessment/ Detection	Detection	Assessment/ Detection	NA

Notes:
1.) Detection Monitoring results provided in Tables 6-8.
2.) Verification Sampling results provided in Tables 6 & 7.
3.) Assessment Monitoring results provided in Tables 9-11.
4.) "-" No sample collected.
5.) NA - Not Applicable.

Prepared by: JTR
Checked by: JDQ
Reviewed by: MNH

Table 5
Summary of Corrective Action Groundwater Network Sampling Dates
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

Groundwater Monitoring Wells	Date of Sample Collection		
	June 2024 Sampling Event	November 2024 Sampling Event	Total Number of Samples
Corrective Action Monitoring Well Network			
P05S	6/5/2024	11/13/2024	2
P10S	6/4/2024	11/8/2024	2
P16S	6/3/2024	11/8/2024	2
P17D	6/3/2024	11/11/2024	2
P17I	6/6/2024	11/12/2024	2
P17S	6/6/2024	11/12/2024	2
P19D	6/7/2024	11/11/2024	2
P19I	6/7/2024	11/11/2024	2
P19S	6/7/2024	11/11/2024	2
P21D	6/6/2024	11/12/2024	2
P21I	6/6/2024	11/13/2024	2
P21S	6/6/2024	11/13/2024	2
P22D	6/3/2024	11/12/2024	2
P22S	6/5/2024	11/12/2024	2
P29D	6/4/2024	11/13/2024	2
P29S	6/4/2024	11/13/2024	2
P30S	6/5/2024	11/13/2024	2
P31S	6/3/2024	11/11/2024*	2
Event Type	Corrective Action	Corrective Action	NA

Notes:
1.) Corrective Action sampling results provided in Tables 12-14.
2.) * - An additional unfiltered sample (R-P-31S-DISS) was collected at this location on 11/12/2024 due to high turbidity and minimal flow rate.
3.) NA - Not applicable.

Prepared by: JTR
Checked by: JDQ
Reviewed by: MNH

Table 6
November 2023 Detection Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS						
ANALYTE	UNITS	PREDICTION LIMITS	MW-B1	MW-B2	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7(R)
November 2023 Detection Monitoring Event											
DATE	NA	NA	11/8/2023	11/8/2023	11/8/2023	11/8/2023	11/7/2023	11/6/2023	11/6/2023	11/8/2023	11/8/2023
pH	SU	6.55 - 7.39	7.02	7.36	8.23	10.91	9.26	7.27	7.43	7.37	7.20
BORON, TOTAL	µg/L	125	95.4 J	32.2 J	3,320	4,540	14,200	1,950	51.5 J	452	1,180
CALCIUM, TOTAL	µg/L	166,000	171,000	111,000	40,600	10,700	18,600	112,000	116,000	97,800	83,200
CHLORIDE, TOTAL	mg/L	69.98	67.8	31.5	28.6 J	34.1	37.9 J	11.7	2.5	3.5 J	11.8 J
FLUORIDE, TOTAL	mg/L	0.2777	ND	ND	ND	0.54 J	0.84	0.54	ND	0.39 J	ND
SULFATE, TOTAL	mg/L	46.9	14.1	8.6	202	264	318	ND	21.3	25.9	16.9 J
TOTAL DISSOLVED SOLIDS	mg/L	757	743	437	593	668	841	435	381	501	392
February 2024 Verification Sampling Event											
DATE	NA	NA							2/13/2024	2/13/2024	
pH	SU	6.55 - 7.39							7.26		
BORON, TOTAL	µg/L	125									
CALCIUM, TOTAL	µg/L	166,000									
CHLORIDE, TOTAL	mg/L	69.98									
FLUORIDE, TOTAL	mg/L	0.2777								ND	
SULFATE, TOTAL	mg/L	46.9									
TOTAL DISSOLVED SOLIDS	mg/L	757									

NOTES:
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units.
2. J - Result is an estimated value.
3. NA - Not applicable.
4. ND - Constituent was analyzed but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
5. Prediction Limits calculated using Sanitas Software.
6. Values highlighted in yellow indicate a Statistically Significant Increase (SSI).
7. Values highlighted in green indicate an initial exceedance above the prediction limit that was not confirmed by Verification Sampling (not an SSI).
8. Only analytes/wells that were detected above the prediction limit and that had not already been verified were tested during Verification Sampling.

Prepared By: GTM
Checked By: ANT
Reviewed By: MNH

Table 7
June 2024 Detection Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS						
ANALYTE	UNITS	PREDICTION LIMITS	MW-B1	MW-B2	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7(R)
June 2024 Detection Monitoring Event											
DATE	NA	NA	6/4/2024	6/4/2024	6/3/2024	6/6/2024	6/7/2024	6/5/2024	6/5/2024	6/3/2024	6/4/2024
pH	SU	6.55 - 7.39	7.05	7.35	8.02	10.75	8.71	7.37	7.52	7.27	7.25
BORON, TOTAL	µg/L	125	90.9 J	29.5 J	2,590	4,280	12,300	1,680	51.0 J	466	1,170
CALCIUM, TOTAL	µg/L	166,000	134,000	92,700	35,100	10,000	15,200	101,000	111,000	90,800	77,900
CHLORIDE, TOTAL	mg/L	69.98	60.7	37.6	23.1	96.2	29.0	10.8	2.8	4.5	16.2
FLUORIDE, TOTAL	mg/L	0.2777	ND	ND	ND	1.1	1.0	0.64	ND	ND	ND
SULFATE, TOTAL	mg/L	46.9	36.4	21.5	184	833	216	0.93 J	23.7	32.9	56.8
TOTAL DISSOLVED SOLIDS	mg/L	757	632	389	505	789	672	426	395	387 J	409
July 2024 Verification Sampling Event											
DATE	NA	NA				7/31/2024			7/31/2024		7/31/2024
pH	SU	6.55 - 7.39							7.43		
BORON, TOTAL	µg/L	125									
CALCIUM, TOTAL	µg/L	166,000									
CHLORIDE, TOTAL	mg/L	69.98				61.0					
FLUORIDE, TOTAL	mg/L	0.2777									
SULFATE, TOTAL	mg/L	46.9									79.5
TOTAL DISSOLVED SOLIDS	mg/L	757				733					

NOTES:
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units.
2. J - Result is an estimated value.
3. NA - Not applicable.
4. ND - Constituent was analyzed but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
5. Prediction Limits calculated using Sanitas Software.
6. Values highlighted in yellow indicate a Statistically Significant Increase (SSI).
7. Values highlighted in green indicate an initial exceedance above the prediction limit that was not confirmed by Verification Sampling (not an SSI).
8. Only analytes/wells that were detected above the prediction limit and that had not already been verified were tested during Verification Sampling.

Prepared By: JTR
Checked By: JTA
Reviewed By: MNH

Table 8
November 2024 Detection Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS						
ANALYTE	UNITS	MW-B1	MW-B2	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7(R)
November 2024 Detection Monitoring Event										
DATE	NA	11/11/2024	11/13/2024	11/12/2024	11/11/2024	11/13/2024	11/13/2024	11/8/2024	11/11/2024	11/11/2024
pH	SU	6.87	7.11	7.80	10.15	8.81	7.18	7.25	7.03	6.95
BORON, TOTAL	µg/L	105	40.8 J	2,790	3,350	11,200	1,720	47.9 J	1,720 J	1,880
CALCIUM, TOTAL	µg/L	142,000	108,000	45,800	15,300	18,400	114,000	115,000	88,900	83,700
CHLORIDE, TOTAL	mg/L	65.5	43.9	31.0	189	26.4	9.5	2.7	9.7	20.2
FLUORIDE, TOTAL	mg/L	0.15 J	0.19 J	0.34	0.72	1.0	0.45	ND	0.30	0.22
SULFATE, TOTAL	mg/L	36.1	16.3	198	249	160	0.90 J	19.9	13.9	97.2
TOTAL DISSOLVED SOLIDS	mg/L	660	428	596	950	681	461	417	363	418

NOTES:
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units.
2. J - Result is an estimated value.
3. NA - Not applicable.
4. ND - Constituent was analyzed but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.

Prepared By: GTM
Checked By: VAH
Reviewed By: MNH

Table 9
November 2023 Assessment Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS						
ANALYTE	UNITS	MW-B1	MW-B2	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7(R)
FIELD PARAMETERS										
DATE	NA	11/8/2023	11/8/2023	11/8/2023	11/8/2023	11/7/2023	11/6/2023	11/6/2023	11/8/2023	11/8/2023
DISSOLVED OXYGEN	mg/L	0.26	0.36	0.52	0.12	0.72	0.30	0.27	1.53	0.01
pH	SU	7.02	7.36	8.23	10.91	9.26	7.27	7.43	7.37	7.20
REDOX POTENTIAL	mV	-41.3	-78.5	91.4	-26.0	-4.3	-138.0	-151.9	-29.0	-66.0
SPECIFIC CONDUCTIVITY	mS/cm	1.250	0.704	0.788	1.080	1.191	0.763	0.631	0.527	0.683
TURBIDITY	NTU	4.95	4.97	2.02	1.41	2.93	0.90	1.81	2.52	2.04
APPENDIX IV PARAMETERS										
ANTIMONY, TOTAL	µg/L	ND	ND	0.14 J	3.3	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	22.6	3.4	3.9	277	39.1	8.0	1.5	0.90 J	123
BARIUM, TOTAL	µg/L	550	400	34.3	10.3	57.3	385	330	112	295
CHROMIUM, TOTAL	µg/L	ND	ND	ND	0.43 J	0.41 J	ND	ND	0.32 J	ND
FLUORIDE, TOTAL	mg/L	ND	ND	ND	0.54 J	0.84	0.54	ND	0.39 J	ND
LEAD, TOTAL	µg/L	ND	ND	ND	4.6 J	ND	ND	ND	ND	ND
LITHIUM, TOTAL	µg/L	64.3	11.8	ND	4.4 J	12.0	34.6	6.0 J	3.9 J	33.9
MOLYBDENUM, TOTAL	µg/L	ND	ND	145	256	722	37.7	ND	1.2 J	41.3
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	2.094	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	1.4	0.61 J	ND	ND	0.29 J	ND

NOTES
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity units.
2. J - Result is an estimated value.
3. NA - Not Applicable.
4. ND - Constituent was analyzed for but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
5. Radium [226 + 228] is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Prepared By: JSI
Checked By: GTM
Reviewed By: MNH

Table 10
June 2024 Assessment Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS						
ANALYTE	UNITS	MW-B1	MW-B2	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7(R)
FIELD PARAMETERS										
DATE	NA	6/4/2024	6/4/2024	6/3/2024	6/6/2024	6/7/2024	6/5/2024	6/5/2024	6/3/2024	6/4/2024
DISSOLVED OXYGEN	mg/L	0.34	0.49	0.84	0.85	0.29	0.41	0.49	2.59	0.39
pH	SU	7.05	7.35	8.02	10.95	8.71	7.37	7.52	7.27	7.25
REDOX POTENTIAL	mV	-96.3	-114.1	38.3	-108.0	-134.4	-104.1	-107.6	21.1	-118.7
SPECIFIC CONDUCTIVITY	mS/cm	1.152	0.714	0.792	1.109	1.001	0.779	0.638	0.576	0.717
TURBIDITY	NTU	2.67	7.44	0.77	2.94	1.35	3.91	3.99	3.86	1.45
APPENDIX IV PARAMETERS										
ANTIMONY, TOTAL	µg/L	ND	ND	ND	3.2	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	20.8	2.7	4.3 J	269	39.1	8.4	1.5	0.54 J	118
BARIUM, TOTAL	µg/L	406	348	30.4	10.1	47.9	358	324	120	284
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	1.0	ND	ND	ND	1.1
CADMIUM, TOTAL	µg/L	ND	ND	0.053 J	0.36 J	0.31 J	ND	ND	ND	ND
CHROMIUM, TOTAL	µg/L	ND	0.37 J	0.34 J	0.56 J	0.66 J	ND	0.32 J	0.47 J	ND
COBALT, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	ND	ND	ND	1.1	1.0	0.64	ND	ND	ND
LEAD, TOTAL	µg/L	ND	ND	ND	6.1 J	ND	ND	ND	ND	ND
LITHIUM, TOTAL	µg/L	53.7	10.5	4.6 J	ND	13.7	33.9	7.6 J	4.8 J	29.7
MERCURY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	ND	ND	110	218	727	30.3	ND	ND	37.0
RADIUM [226 + 228]	pCi/L	ND	ND	1.555 J	ND	ND	ND	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	1.3	0.53 J	ND	ND	0.56 J	ND
THALLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity units.
2. J - Result is an estimated value.
3. NA - Not Applicable.
4. ND - Constituent was analyzed for but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
5. Radium [226 + 228] is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Prepared By: GTM
Checked By: JTR
Reviewed By: JSI

Table 11
November 2024 Assessment Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS						
ANALYTE	UNITS	MW-B1	MW-B2	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7(R)
FIELD PARAMETERS										
DATE	NA	11/11/2024	11/13/2024	11/12/2024	11/11/2024	11/13/2024	11/13/2024	11/8/2024	11/11/2024	11/11/2024
DISSOLVED OXYGEN	mg/L	1.65	0.33	0.11	0.06	0.19	0.08	0.18	0.83	0.38
pH	SU	6.87	7.11	7.80	10.15	8.81	7.18	7.25	7.03	6.95
REDOX POTENTIAL	mV	-133.4	-109.1	95.8	48.5	24.2	38.1	-44.8	-93.4	-141.5
SPECIFIC CONDUCTIVITY	mS/cm	1.149	0.834	0.936	1.396	1.067	0.786	0.637	0.626	0.745
TURBIDITY	NTU	2.45	4.66	1.38	1.27	3.56	3.78	9.39	1.35	3.15
APPENDIX IV PARAMETERS										
ANTIMONY, TOTAL	µg/L	ND	ND	0.13 J	1.7	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	16.5	3.1	3.4	179	36.5	7.2	1.5	0.81 J	109
BARIUM, TOTAL	µg/L	445	392	36.8	15.4	56.8	390	341	189	297
BERYLLIUM, TOTAL	µg/L	ND	0.12 J	ND	ND	0.15 J	0.17 J	ND	ND	ND
CHROMIUM, TOTAL	µg/L	0.36 J	0.36 J	0.35 J	0.31 J	0.58 J	0.35 J	0.44 J	0.33 J	ND
FLUORIDE, TOTAL	mg/L	0.15 J	0.19 J	0.34	0.72	1.0	0.45	ND	0.30	0.22
LITHIUM, TOTAL	µg/L	57.1	10.7	ND	4.8 J	17.5	36.3	4.6 J	6.0 J	28.8
MOLYBDENUM, TOTAL	µg/L	ND	ND	121	65.1	519	34.0	ND	1.7 J	35.7
RADIUM [226 + 228]	pCi/L	1.842 J	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	0.20 J	0.44 J	0.37 J	ND	ND	0.21 J	ND

NOTES
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity units.
2. J - Result is an estimated value.
3. NA - Not Applicable.
4. ND - Constituent was analyzed for but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
5. Radium [226 + 228] is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Prepared By: GTM
Checked By: VAH
Reviewed By: MNH

Table 12
November 2023 Corrective Action Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

ANALYTE	UNITS	P05S	P10S	P16S	P17D	P17I	P17S	P19D	P19I	P19S	P21D	P21I	P21S	P22D	P22S	P29D	P29S	P30S	P31S
FIELD PARAMETERS																			
DATE	NA	11/6/2023	NS	11/8/2023	11/8/2023	11/8/2023	11/8/2023	11/7/2023	11/7/2023	11/7/2023	11/7/2023	11/7/2023	11/7/2023	11/6/2023	11/6/2023	11/9/2023	11/9/2023	11/8/2023	NS
DISSOLVED OXYGEN	mg/L	0.14	NS	0.45	0.64	0.11	2.21	1.01	0.20	1.28	0.52	0.81	0.15	0.73	0.13	1.26	0.25	2.96	NS
REDOX POTENTIAL	mV	-153.1	NS	104.2	-164.1	-99.3	114.9	-153.9	-77.1	12.8	-45.2	-100.3	-130.5	-87.0	-28.2	36.1	-86.2	106.7	NS
SPECIFIC CONDUCTIVITY	mS/cm	0.645	NS	0.791	0.906	1.176	1.882	1.060	0.915	0.588	2.647	0.788	0.946	0.917	1.223	1.023	0.843	1.098	NS
TURBIDITY	NTU	17.70	NS	3.83	1.33	2.33	4.48	0.72	1.00	1.83	1.19	0.94	16.00	4.03	2.90	0.68	9.87	4.96	NS
APPENDIX III PARAMETERS																			
BORON, TOTAL	µg/L	4,410	NS	615	8,200	2,570	1,760	9,710	3,790	195	4,270	4,500	614	9,310	601	99.8 J	85.0 J	927	NS
CALCIUM, TOTAL	µg/L	67,100	NS	116,000	46,300	10,500	121,000	42,400	19,300	96,300	111,000	36,900	141,000	21,700	184,000	91,600	154,000	169,000	NS
CHLORIDE, TOTAL	mg/L	25.2	NS	5.0 J	30.6	73.5 J	61.0 J	75.2	16.3	1.2	711	75.0	14.5	28.9	33.8	156	31.3	39.0	NS
pH	SU	7.25	NS	7.22	7.84	10.30	7.12	7.79	9.23	7.00	7.45	8.22	6.97	7.55	6.83	7.34	7.05	7.08	NS
SULFATE, TOTAL	mg/L	19.7	NS	64.3 J	265	347	299	190	104	31.9	123 J	84.8	7.1	112	150	31.1	5.0	129	NS
TOTAL DISSOLVED SOLIDS	mg/L	360	NS	486 J	645	825	1,320	753	685	127	1,720	511	588	595	816	548	533	745	NS
APPENDIX IV PARAMETERS																			
ANTIMONY, TOTAL	µg/L	ND	NS	0.13 J	ND	0.37 J	0.36 J	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
ARSENIC, TOTAL	µg/L	195	NS	1.8	1.2	39.7	24.5	0.54 J	29.2	8.1	0.56 J	6.0	97.9	11.2	2.9	1.0	24.4	1.3	NS
BARIUM, TOTAL	µg/L	210	NS	128	100	16.9	139	128	69.4	177	126	75.4	279	68.4	160	156	382	107	NS
CHROMIUM, TOTAL	µg/L	0.34 J	NS	ND	ND	0.75 J	0.37 J	ND	0.38 J	0.41 J	0.33 J	0.40 J	ND	2.0 J	0.41 J	ND	ND	0.32 J	NS
FLUORIDE, TOTAL	mg/L	0.34	NS	ND	0.32 J	1.3 J	ND	1.6	0.47	0.33	0.90	0.86	0.32	2.1	ND	ND	ND	ND	NS
LEAD, TOTAL	µg/L	ND	NS	ND	ND	6.5 J	ND	ND	ND	ND	ND	ND	ND	6.4 J	ND	ND	ND	ND	NS
LITHIUM, TOTAL	µg/L	15.2	NS	26.7	40.2	4.4 J	36.7	20.9	134	19.6	164	24.0	19.6	24.0	54.6	59.5	19.4	47.5	NS
MOLYBDENUM, TOTAL	µg/L	6.0 J	NS	16.3 J	687	145	14.0 J	690	68.5	5.5 J	245	319	2.5 J	335	8.9 J	ND	ND	ND	NS
RADIUM [226 + 228]	pCi/L	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
SELENIUM, TOTAL	µg/L	0.23 J	NS	0.27 J	0.26 J	1.7	5.9	0.20 J	0.20 J	ND	ND	0.44 J	0.22 J	1.2 J	0.27 J	ND	ND	10.2	NS
ADDITIONAL PARAMETERS																			
ALKALINITY	mg/L	308 J	NS	396	165	172	696	224 J	354 J	308 J	228 J	200 J	512 J	306 J	526 J	303	475	449	NS
IRON, TOTAL	µg/L	11,000	NS	301	2,330	235	1,260	2,310	31.9 J	4,780	2,420	402	28,700	1,480	3,520	3,290	16,500	487	NS
MAGNESIUM, TOTAL	µg/L	23,300	NS	29,900	9,970	280	25,500	6,310	420	17,600	39,000	4,620	39,700	3,170	45,200	29,700	27,800	29,200	NS
MANGANESE, TOTAL	µg/L	263	NS	65.5	389	4.8 J	3,160	310	2.7 J	777	787	82.9	1,310	67.5	532	118	707	111	NS
POTASSIUM, TOTAL	µg/L	5,930	NS	3,180	7,500	2,290	2,600	4,190	43,200	4,920	10,300	6,760	4,360	4,330	7,600	5,840	4,820	6,540	NS
SODIUM, TOTAL	µg/L	34,200	NS	31,200	147,000	258,000	328,000	202,000 J	180,000	8,930	400,000	142,000	32,500	183,000	64,100	89,800	18,900	55,100	NS

NOTES
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity units.
2. J - Result is an estimated value.
3. ND - Constituent was analyzed for but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
4. Radium [226 + 228] is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.
5. NA - Not Applicable.
6. NS - Not Sampled.

Prepared By: JSI
Checked By: GTM
Reviewed By: MNH

Table 13
June 2024 Corrective Action Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

ANALYTE	UNITS	P05S	P10S	P16S	P17D	P17I	P17S	P19D	P19I	P19S	P21D	P21I	P21S	P22D	P22S	P29D	P29S	P30S	P31S
FIELD PARAMETERS																			
DATE	NA	6/5/2024	6/4/2024	6/3/2024	6/3/2024	6/6/2024	6/6/2024	6/7/2024	6/7/2024	6/7/2024	6/6/2024	6/6/2024	6/6/2024	6/3/2024	6/5/2024	6/4/2024	6/4/2024	6/5/2024	6/3/2024
DISSOLVED OXYGEN	mg/L	0.12	0.89	0.57	1.32	0.32	2.03	0.70	0.35	0.81	0.96	1.08	0.70	0.26	0.14	0.75	0.50	0.45	0.61
REDOX POTENTIAL	mV	-128.1	-28.6	84.6	-147.0	-135.2	-63.6	-143.7	-111.4	-65.4	-121.9	-101.6	-63.5	-135.2	-43.9	-75.3	-125.4	3.9	-106.0
SPECIFIC CONDUCTIVITY	mS/cm	0.640	0.787	0.778	0.919	1.229	1.080	0.970	0.922	0.722	3.712	0.745	0.814	0.915	1.133	1.090	0.868	1.060	0.465
TURBIDITY	NTU	19.4	4.80	3.73	0.61	2.69	6.45	0.70	2.87	4.56	2.68	4.41	18.5	2.92	13.6	0.51	4.61	5.00	8.77
APPENDIX III PARAMETERS																			
BORON, TOTAL	µg/L	2,880	2,410	162	7,500	2,200	2,440	9,350	3,800	148	3,250	4,520	105	8,900	499	85.3 J	79.6 J	815	300
CALCIUM, TOTAL	µg/L	70,700	93,600	113,000	41,200	8,290	79,600	32,500	18,000	122,000	135,000	25,200	117,000	20,200	145,000	90,500	120,000 J	144,000	65,500
CHLORIDE, TOTAL	mg/L	16.3	14.4	1.7	28.6	73.0	30.3	54.1	19.9	0.80 J	999	29.4	1.2	35.0	33.3	138	13.0	47.1	9.0
pH	SU	7.27	7.11	6.84	7.59	10.10	7.26	7.57	9.35	6.86	7.47	8.26	6.89	7.62	6.92	7.21	7.25	7.08	7.40
SULFATE, TOTAL	mg/L	2.9	52.5	23.5	257	277	246	201	158	50.3	156	80.6	22.6	121	164	28.3	ND	157	28.9
TOTAL DISSOLVED SOLIDS	mg/L	347	465	426	568	777	695	646	637	457	1,310	449	445	628	713	588	426	660	272
APPENDIX IV PARAMETERS																			
ANTIMONY, TOTAL	µg/L	ND	ND	ND	ND	ND	0.14 J	ND	0.32 J	ND	ND	ND	ND	0.14 J	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	175	8.2	1.5	1.2	39.3	26.7	0.56 J	33.3	5.2	0.44 J	5.7	27.2	11.1	5.8	1.1	43.5	0.95 J	16.9
BARIUM, TOTAL	µg/L	246	145	109	95.6	13.9	95.5	103	66.8	198	186	51.9	222	85.6	140	136	336	94.6	144
BERYLLIUM, TOTAL	µg/L	0.26 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17 J	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	ND	0.20 J	0.054 J	0.24 J	0.088 J	0.13 J	0.27 J	0.11 J	ND	0.11 J	0.095 J	0.050 J	0.14 J	0.12 J	ND	ND	ND	ND
CHROMIUM, TOTAL	µg/L	0.46 J	0.51 J	ND	ND	0.47 J	0.40 J	0.46 J	0.59 J	0.44 J	ND	0.39 J	ND	1.6	ND	ND	0.55 J	0.33 J	ND
COBALT, TOTAL	µg/L	ND	1.5 J	ND	ND	ND	ND	ND	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	ND	ND	ND	0.24	ND	0.88	2.0	0.96	ND	0.16 J	0.50	ND	1.8	ND	ND	ND	ND	ND
LEAD, TOTAL	µg/L	ND	ND	ND	ND	8.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LITHIUM, TOTAL	µg/L	14.3	20.2	21.1	37.2	3.8 J	26.9	19.5	135	24.1	224	19.7	13.4	22.7	49.3	52.7	10.0	38.1	10.7
MERCURY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	5.2 J	46.4	7.8 J	620	129	133	697	135	2.0 J	266	240	1.0 J	313	13.4 J	ND	ND	2.5 J	7.2 J
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	1.9	0.26 J	0.70 J	0.63 J	0.30 J	0.55 J	ND	ND	0.37 J	ND	1.0	0.21 J	ND	ND	0.22 J	ND
THALLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADDITIONAL PARAMETERS																			
ALKALINITY	mg/L	357	370	444	176	200	302	260	317	411	251	275	468	329	464	323	484	399	225
IRON, FERRIC, TOTAL	mg/L	12.3	0.69	0.14	2.1	ND	4.9	0.49	ND	4.0	3.0	ND	9.4	ND	5.5	3.3	15.7	0.51	4.0
IRON, FERROUS, TOTAL	mg/L	0.31 J	0.044 J	ND	0.15 J	0.48 J	0.30 J	1.4 J	0.15 J	0.22 J	0.52 J	0.45 J	0.46 J	2.4 J	0.17 J	ND	0.14 J	ND	0.082 J
IRON, TOTAL	µg/L	12,600	735	143	2,230	234	5,220	1,920	96.8	4,250	3,490	276	9,900	1,710	5,670	3,310	15,800	525	4,110
MAGNESIUM, TOTAL	µg/L	24,400	13,900	29,800	8,840	163	18,100	4,610	411	20,200	48,600	2,770	24,100	2,620	33,100	27,800	27,400	24,100	11,400
MANGANESE, TOTAL	µg/L	298	696	4.1 J	365	4.1 J	904	251	3.4 J	1,260	948	52.1	1,380	83.2	693	123	497	154	1,130
POTASSIUM, TOTAL	µg/L	5,850	4,440	2,080	6,990	1,990	4,030	3,680	40,800	5,020	12,700	5,600	3,130	4,020	6,560	5,160	4,590	6,430	3,950
SODIUM, TOTAL	µg/L	21,600	46,600	9,480	135,000	241,000	119,000	187,000	170,000	6,620	475,000	128,000	11,200	183,000	58,400	77,600	12,500	55,000	11,400
SULFIDE, TOTAL	mg/L	0.028 J	ND	ND	0.035 J	2.5	ND	0.021 J	0.55	0.063	ND	0.048 J	ND	0.073	ND	ND	ND	ND	ND

NOTES

1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity units.
2. J - Result is an estimated value.
3. ND - Constituent was analyzed for but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
4. Radium [226 + 228] is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.
5. NA - Not Applicable.

Prepared By: GTM
Checked By: JTR
Reviewed By: MNH

Table 14
November 2024 Corrective Action Monitoring Results
RCPA Surface Impoundment
Rush Island Energy Center, Jefferson County, MO

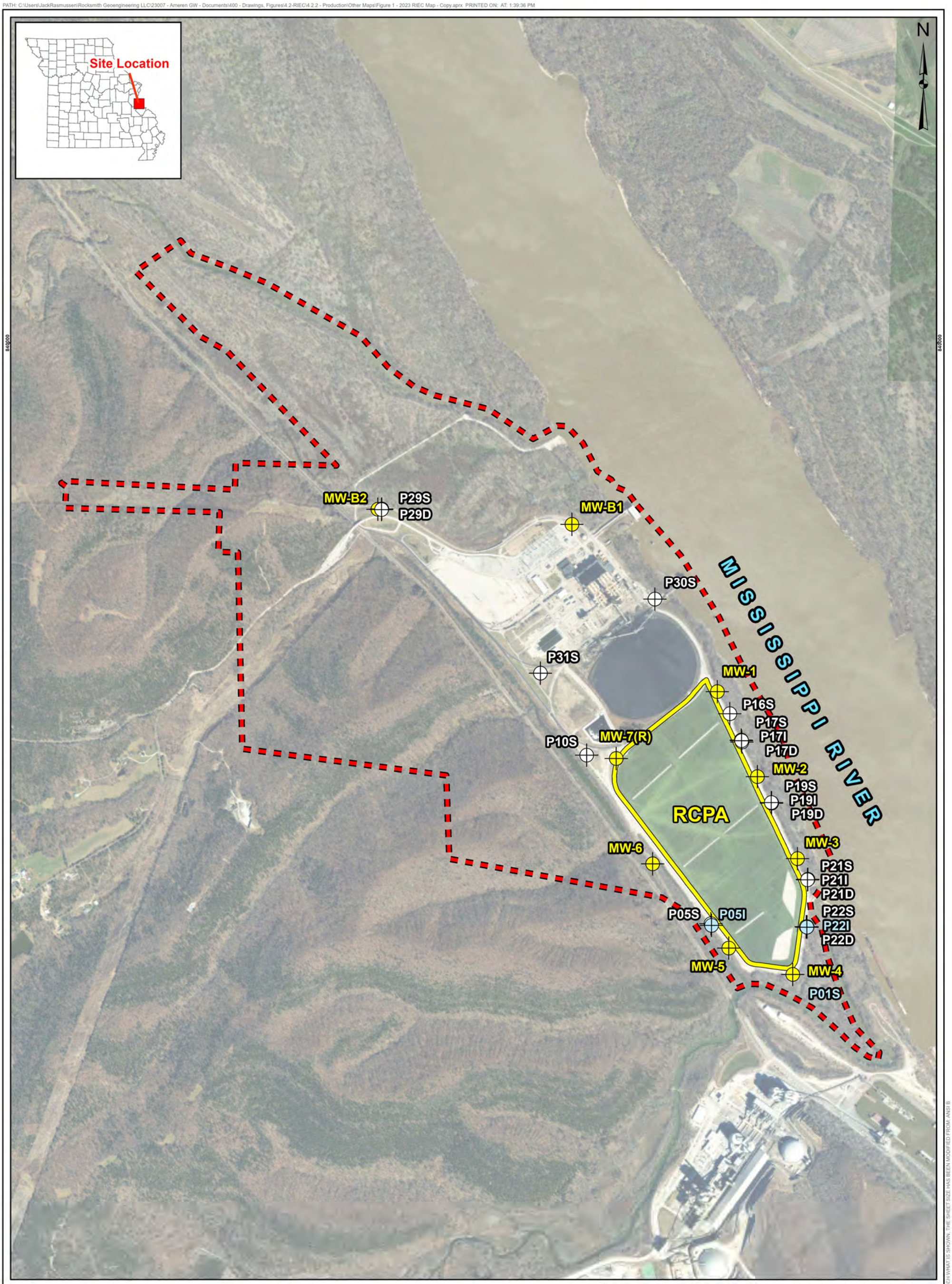
ANALYTE	UNITS	P05S	P10S	P16S	P17D	P17I	P17S	P19D	P19I	P19S	P21D	P21I	P21S	P22D	P22S	P29D	P29S	P30S	P31S
FIELD PARAMETERS																			
DATE	NA	11/13/2024	11/8/2024	11/8/2024	11/11/2024	11/12/2024	11/12/2024	11/11/2024	11/11/2024	11/11/2024	11/12/2024	11/13/2024	11/13/2024	11/12/2024	11/12/2024	11/13/2024	11/13/2024	11/13/2024	11/11/2024
DISSOLVED OXYGEN	mg/L	0.15	1.54	0.47	0.21	0.70	0.56	0.08	0.04	0.46	0.09	1.85	0.18	0.26	0.13	0.11	0.05	5.54	4.03
REDOX POTENTIAL	mV	-13.4	118.8	-145.9	1.6	92.6	124.3	-9.4	69.7	20.1	50.0	-36.1	20.6	-180.1	-49.2	68.5	52.2	162.4	11.9
SPECIFIC CONDUCTIVITY	mS/cm	0.647	0.979	0.838	0.960	1.327	1.214	0.916	0.916	0.631	3.928	0.826	0.884	0.945	1.270	1.256	0.809	1.190	0.407
TURBIDITY	NTU	9.05	2.72	2.69	1.31	1.74	4.39	1.31	2.07	2.66	1.38	2.89	10.3	2.77	12.6	0.83	6.31	2.98	77.1
APPENDIX III PARAMETERS																			
BORON, TOTAL	µg/L	4,090	1,220	368	6,960	2,120	2,430	9,200	4,540	168	2,980	5,840	126	8,780	678	113	70.1 J	828	255
CALCIUM, TOTAL	µg/L	66,900	138,000	116,000 J	44,400	14,800	99,600	32,200	15,700	110,000	156,000	30,500	130,000	22,100	158,000	84,800	120,000 J	170,000	65,700
CHLORIDE, TOTAL	mg/L	23.9	9.9	2.8 J	62.2	141	35.3	30.5	24.2	1.5	1,230	80.0	2.0	44.0	42.2	226	17.3	38.2	20.0
pH	SU	7.18	6.82	6.98	7.57	9.47	7.04	7.58	9.42	6.81	7.02	7.96	6.60	7.56	6.76	7.28	6.97	6.88	7.32
SULFATE, TOTAL	mg/L	13.6	59.6	36.0	243	256	251	196	198	15.1	141	83.6	23.6	104	144	34.4	10.8	128	36.5
TOTAL DISSOLVED SOLIDS	mg/L	399	625	481	656	828	825	667	659	392	2,090	492	489	613	751	647	482	703	311
APPENDIX IV PARAMETERS																			
ANTIMONY, TOTAL	µg/L	ND	ND	ND	ND	0.12 J	0.15 J	ND	0.28 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15 J
ARSENIC, TOTAL	µg/L	168	2.2	1.4	1.0	28.2	9.8	0.69 J	42.9	6.0	0.72 J	6.3	8.3	12.8	4.2	0.86 J	19.6	1.0	34.6
BARIUM, TOTAL	µg/L	166	206	119	97.9	29.6	98.0	97.0	57.7	242	201	68.8	217	81.1	148	117	320	106	201
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15 J	ND	0.13 J	ND	ND	0.15 J
CHROMIUM, TOTAL	µg/L	18.6	1.2 J	0.32 J	ND	0.52 J	0.32 J	ND	0.54 J	ND	ND	3.2	0.39 J	1.3	0.39 J	0.34 J	0.51 J	0.30 J	2.1
FLUORIDE, TOTAL	mg/L	0.28 J	0.22 J	0.31 J	0.63 J	1.6	1.0	2.0	1.1	0.26	0.25	1.1	0.28	2.3	0.24	0.25	0.26	0.29	ND
LITHIUM, TOTAL	µg/L	16.7	26.4	25.2	36.9	4.8 J	31.1	19.2	73.5	22.3	237	20.3	12.9	24.7	44.1	67.1	18.3	44.9	8.0 J
MOLYBDENUM, TOTAL	µg/L	2.4 J	31.3	12.4 J	564	108	107	753	213	2.6 J	234	414	1.2 J	304	10.6 J	1.1 J	ND	1.2 J	9.8 J
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.030	ND	ND	ND	ND	ND	ND	2.530	ND
SELENIUM, TOTAL	µg/L	ND	ND	0.43 J	0.19 J	0.78 J	0.82 J	0.23 J	0.72 J	ND	ND	0.43 J	ND	0.84 J	0.66 J	ND	ND	2.5	0.30 J
ADDITIONAL PARAMETERS																			
ALKALINITY	mg/L	303	479	423	173	162	361	257	268	360	247	203	430	298	502	300	427	447	202
IRON, TOTAL	µg/L	9,470	224	48.8 J	2,310	136	542	1,840	120	4,130	3,810	422	2,340	1,170	3,800	2,620	5,100	153	4,360
MAGNESIUM, TOTAL	µg/L	22,000	17,800	29,500	9,030	1,000	22,700	4,510	274	18,000	53,600	3,680	26,600	2,710	35,400	30,500	25,900	28,500	11,800
MANGANESE, TOTAL	µg/L	246	377	8.9	380	11.1	1,960	265	3.2 J	1,100	1,160	73.3	594	76.4	479	77.8	357	29.2	2,810
POTASSIUM, TOTAL	µg/L	5,930	5,380	2,700	7,060	2,770	4,020	3,480	31,800	4,600	13,100	5,850	3,560	3,860	6,710	6,700	4,870	5,920	3,200
SODIUM, TOTAL	µg/L	24,800	54,400	18,400	145,000	253,000	139,000	177,000	174,000	6,530	502,000	130,000	12,900	178,000	63,800	94,600	13,800	51,800	10,700

NOTES
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity units.
2. J - Result is an estimated value.
3. ND - Constituent was analyzed for but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
4. Radium [226 + 228] is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.
5. NA - Not Applicable.

Prepared By: GTM
Checked By: JTR
Reviewed By: MNH

Figures

PATH: C:\Users\JackRasmussen\Rocksmith Geoengineering LLC\23007 - Ameren GW - Documents\400 - Drawings, Figures\4.2-RIEC\4.2.2 - Production\Other Maps\Figure 1 - 2023 RIEC Map - Copy.aprx PRINTED ON: AT: 1:39:36 PM



LEGEND

- Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Monitoring Well Networks

- Corrective Action Monitoring Well
- RCPA Detection and Assessment Monitoring Well
- Monitoring Well Used for Water Levels Only

NOTES

1.) ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.

REFERENCES

1.) AMEREN MISSOURI RUSH ISLAND ENERGY CENTER, RUSH ISLAND PROPERTY CONTROL MAP, JANUARY 2012.
2) COORDINATE SYSTEM: NAD 1983 STATE PLANE MISSOURI EAST FIPS 2401 FEET.

0 1,000 2,000 3,000 4,000
Feet

RUSH ISLAND ENERGY CENTER GROUNDWATER MONITORING PROGRAMS AND WELL LOCATION MAP

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
RUSH ISLAND ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	GTM	YYYY-MM-DD	2024-01-15
PREPARED	GTM	PROJECT No.	23008-24
REVIEW	JSI		
APPROVED	MNH		

FIGURE 1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
1 in
0

Appendix A
Laboratory Analytical Data

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

February 28, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on February 14, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.

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Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-5
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212023-1
Oklahoma Certification #: 2022-057
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-12
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60447274001	**R-MW-6**	Water	02/13/24 13:29	02/14/24 05:44
60447274002	**R-DUP-1**	Water	02/13/24 00:00	02/14/24 05:44
60447274003	**R-FB-1**	Water	02/13/24 13:40	02/14/24 05:44

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60447274001	**R-MW-6**	EPA 300.0	RKA	1	PASI-K
60447274002	**R-DUP-1**	EPA 300.0	RKA	1	PASI-K
60447274003	**R-FB-1**	EPA 300.0	RKA	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Sample: R-MW-6 **Lab ID: 60447274001** Collected: 02/13/24 13:29 Received: 02/14/24 05:44 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**<0.12**	mg/L	0.20	0.12	1		02/27/24 14:35	16984-48-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Sample: R-DUP-1 **Lab ID: 60447274002** Collected: 02/13/24 00:00 Received: 02/14/24 05:44 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**<0.12**	mg/L	0.20	0.12	1		02/27/24 15:26	16984-48-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Sample: R-FB-1 **Lab ID: 60447274003** Collected: 02/13/24 13:40 Received: 02/14/24 05:44 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**<0.12**	mg/L	0.20	0.12	1		02/27/24 15:39	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

QC Batch: 884610
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60447274001, 60447274002, 60447274003

METHOD BLANK: 3501962 Matrix: Water
Associated Lab Samples: 60447274001, 60447274002, 60447274003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.12	0.20	0.12	02/27/24 10:34	

METHOD BLANK: 3502714 Matrix: Water
Associated Lab Samples: 60447274001, 60447274002, 60447274003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.12	0.20	0.12	02/28/24 08:37	

LABORATORY CONTROL SAMPLE: 3501963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

LABORATORY CONTROL SAMPLE: 3502715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3501964 3501965

Parameter	Units	60447274001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	<0.12	2.5	2.5	1.5	1.5	56	56	80-120	1	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3502025 3502026

Parameter	Units	60447276001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.43	2.5	2.5	3.1	3.2	106	109	80-120	2	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

SAMPLE DUPLICATE: 3502024

Parameter	Units	60447274001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	<0.12	<0.12		15	

SAMPLE DUPLICATE: 3502027

Parameter	Units	60447276001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.43	0.45	4	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-VERIFICATION SAMP.
Pace Project No.: 60447274

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60447274001	**R-MW-6**	EPA 300.0	884610		
60447274002	**R-DUP-1**	EPA 300.0	884610		
60447274003	**R-FB-1**	EPA 300.0	884610		

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Pace	DC#_Title: ENV-FRM-LENE-0009_Samp	WO#: 60447274
	Revision: 2	Effective Date: 01/12/20

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T298 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 0.6 **Corr. Factor** -0.3 **Corrected** 0.3

Date and initials of person examining contents: PV 2/16/24

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:**	☐Yes ☐No ☑N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A — Required Client Information:

Company:	Rocksmith Geoengineering, LLC
Address:	5233 Roanoke Drive
	St. Charles, MO 63304
Email To:	mark.haddock@rocksmithgeo.com
Phone: 314-974-5678	Fax:
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Mark Haddock
Copy To:	Jeffery Ingram, Grant Morey
Purchase Order No.:	COC #
Project Name:	Ameren RCPA - Verification Sampling
Project Number:	COC#7

Section C — Invoice Information:

Attention:	
Company Name:	Rocksmith
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	15856, line 1

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MO

Section D — Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: Y/N	Fluoride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	R-MW-6	WT	G			2-13-24	1329		1	1									✓		60447274
2	R-DUP-1	WT	G				—		1	1									✓		
3	R-FB-1	WT	G				1340		1	1									✓		
4	R-MS-1	WT	G				1329		1	1									✓		Collected @ R-MW-6
5	R-MSD-1	WT	G				1329		1	1									✓		"
6		WT	G																		
7		WT	G																		
8		WT	G																		
9		WT	G																		
10		WT	G																		
11		WT	G																		
12		WT	G																		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / Rocksmith	2-13-24	1545	[signature] PASE	2/14	0544	0.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/13/24

Temp In °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Client: Rocksmith Geoeng Profile # 15856-1

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																				3											
2																					1											
3	↓																				1											
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: **WO#: 60447274**

PM: JLS Due Date: 02/28/24

CLIENT: Rocksmith

Memorandum

March 5, 2024

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008
CC:	Mark Haddock, Jeffrey Ingram		
From:	Grant Morey	**Email:**	Grant.Morey@Rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA – Data Package 60447274**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a matrix spike/matrix spike duplicate (MS/MSD) criterion was not met, the associated sample result was qualified as an estimate (J, J+ for estimates based high, and J- for estimates based low).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA Verification
Project Number: 23008
Reviewer: G. Morey
Validation Date: 3/5/2024

Laboratory: Pace Analytical
SDG #: 60447274
Analytical Method (type and no.): EPA 300.0 (Fluoride)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names R-MW-6, R-DUP-1, R-FB-1

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			2/13/2024
b) Sampling team indicated?	x			GTM
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?	x			
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?		x		
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☐	☒	☐	
b) Were analytes detected in the field blank(s)?	☐	☒	☐	
c) Were analytes detected in the equipment blank(s)?	☐	☐	☒	
d) Were analytes detected in the trip blank(s)?	☐	☐	☒	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	☒	☐	☐	
b) Were the proper analytes included in the LCS?	☒	☐	☐	
c) Was the LCS accuracy criteria met?	☒	☐	☐	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	☒	☐	☐	R-DUP-1 collected @ R-MW-6
b) Were field dup. precision criteria met (note RPD)?	☒	☐	☐	
c) Were lab duplicates analyzed (note original and duplicate samples)?	☒	☐	☐	
d) Were lab dup. precision criteria met (note RPD)?	☒	☐	☐	

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	☐	☐	☒	
b) Was the %D within control limits?	☐	☐	☒	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	☐	☒	☐	See Notes
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☒	
b) Was MSD accuracy criteria met?	☐	☒	☐	See Notes
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☒	
c) Were MS/MSD precision criteria met?	☒	☐	☐	

Comments/Notes:

MS/MSD:

3501964/3501965: MS/MSD recoveries low for fluoride, associated with sample -001. Result qualified as estimate.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-MW-6	Fluoride	0.12	UJ	MS/MSD recoveries low

Signature: Grant Morey Date: 3/5/2024

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

July 11, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA
Pace Project No.: 60454265

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between June 05, 2024 and June 08, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.

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CERTIFICATIONS

Project: AMEREN RCPA
Pace Project No.: 60454265

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 2000302023-6
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60454265001	**R-MW-1**	Water	06/03/24 11:37	06/05/24 06:10
60454265002	**R-MW-6**	Water	06/03/24 12:23	06/05/24 06:10
60454265003	**R-MW-7(R)**	Water	06/04/24 14:38	06/05/24 06:10
60454265004	**R-MW-B1**	Water	06/04/24 15:47	06/05/24 06:10
60454265005	**R-MW-B2**	Water	06/04/24 10:12	06/05/24 06:10
60454265006	**R-DUP-1**	Water	06/03/24 00:00	06/05/24 06:10
60454265007	**R-FB-1**	Water	06/04/24 14:53	06/05/24 06:10
60454265008	**R-MS-1**	Water	06/04/24 12:23	06/05/24 06:10
60454265009	**R-MSD-1**	Water	06/04/24 12:23	06/05/24 06:10
60454265010	**R-MW-2**	Water	06/06/24 12:01	06/06/24 18:30
60454265011	**R-MW-4**	Water	06/05/24 16:05	06/06/24 18:30
60454265012	**R-MW-5**	Water	06/05/24 14:44	06/06/24 18:30
60454265013	**R-MW-3**	Water	06/07/24 09:53	06/08/24 05:12

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60454265001	**R-MW-1**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265002	**R-MW-6**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265003	**R-MW-7(R)**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265004	**R-MW-B1**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265005	**R-MW-B2**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265006	**R-DUP-1**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265007	**R-FB-1**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265008	**R-MS-1**	EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60454265009	**R-MSD-1**	EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60454265010	**R-MW-2**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265011	**R-MW-4**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265012	**R-MW-5**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454265013	**R-MW-3**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-1 **Lab ID: 60454265001** Collected: 06/03/24 11:37 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**30.4**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:49	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:49	7440-41-7	
Boron	**2590**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:49	7440-42-8	
Calcium	**35100**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:49	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:49	7440-48-4	
Iron	**29.1J**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:49	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:49	7439-92-1	
Lithium	**4.6J**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:49	7439-93-2	
Magnesium	**4310**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:49	7439-95-4	
Manganese	**29.8**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:49	7439-96-5	
Molybdenum	**110**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:49	7439-98-7	
Potassium	**6060**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:49	7440-09-7	
Sodium	**113000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:49	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:37	7440-36-0	
Arsenic	**4.3**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:37	7440-38-2	
Cadmium	**0.053J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:37	7440-43-9	
Chromium	**0.34J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:37	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:37	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:27	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**151**	mg/L	20.0	10.5	1		06/10/24 14:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**505**	mg/L	10.0	10.0	1		06/07/24 10:57		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.017J**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-1 **Lab ID: 60454265001** Collected: 06/03/24 11:37 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**23.1**	mg/L	10.0	5.3	10		06/26/24 11:36	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/24/24 23:08	16984-48-8	N2
Sulfate	**184**	mg/L	10.0	5.5	10		06/26/24 11:36	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-6 **Lab ID: 60454265002** Collected: 06/03/24 12:23 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**120**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:00	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:00	7440-41-7	
Boron	**466**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:00	7440-42-8	
Calcium	**90800**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:00	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:00	7440-48-4	
Iron	**95.4**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:00	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:00	7439-92-1	
Lithium	**4.8J**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:00	7439-93-2	
Magnesium	**12600**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:00	7439-95-4	
Manganese	**57.0**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:00	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:00	7439-98-7	
Potassium	**1130**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:00	7440-09-7	
Sodium	**12400**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:00	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:05	7440-36-0	
Arsenic	**0.54J**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:05	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:05	7440-43-9	
Chromium	**0.47J**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:05	7440-47-3	
Selenium	**0.56J**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:05	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:29	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**301**	mg/L	20.0	10.5	1		06/10/24 14:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**387**	mg/L	10.0	10.0	1		06/07/24 10:58		D6
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.089**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-6 **Lab ID: 60454265002** Collected: 06/03/24 12:23 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	M1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**4.5**	mg/L	1.0	0.53	1		06/24/24 23:35	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/24/24 23:35	16984-48-8	N2
Sulfate	**32.9**	mg/L	2.0	1.1	2		06/25/24 00:58	14808-79-8	M1

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-7(R) **Lab ID: 60454265003** Collected: 06/04/24 14:38 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**284**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:05	7440-39-3	
Beryllium	**1.1**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:05	7440-41-7	
Boron	**1170**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:05	7440-42-8	
Calcium	**77900**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:05	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:05	7440-48-4	
Iron	**16900**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:05	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:05	7439-92-1	
Lithium	**29.7**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:05	7439-93-2	
Magnesium	**22500**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:05	7439-95-4	
Manganese	**350**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:05	7439-96-5	
Molybdenum	**37.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:05	7439-98-7	
Potassium	**5390**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:05	7440-09-7	
Sodium	**21500**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:05	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:13	7440-36-0	
Arsenic	**118**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:13	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:13	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:13	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:13	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:36	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**325**	mg/L	40.0	21.0	2		06/11/24 13:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**409**	mg/L	10.0	10.0	1		06/07/24 11:02		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**16.8**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.17J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-7(R) **Lab ID: 60454265003** Collected: 06/04/24 14:38 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**16.2**	mg/L	1.0	0.53	1		06/25/24 12:12	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 12:12	16984-48-8	N2
Sulfate	**56.8**	mg/L	10.0	5.5	10		06/26/24 16:54	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-B1 **Lab ID: 60454265004** Collected: 06/04/24 15:47 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**406**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:07	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:07	7440-41-7	
Boron	**90.9J**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:07	7440-42-8	
Calcium	**134000**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:07	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:07	7440-48-4	
Iron	**21000**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:07	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:07	7439-92-1	
Lithium	**53.7**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:07	7439-93-2	
Magnesium	**42800**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:07	7439-95-4	
Manganese	**1030**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:07	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:07	7439-98-7	
Potassium	**8310**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:07	7440-09-7	
Sodium	**26300**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:07	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:19	7440-36-0	
Arsenic	**20.8**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:19	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:19	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:19	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:19	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:19	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:38	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**522**	mg/L	40.0	21.0	2		06/11/24 14:02		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**632**	mg/L	13.3	13.3	1		06/07/24 11:02		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**20.9**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.15J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-B1 **Lab ID: 60454265004** Collected: 06/04/24 15:47 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**60.7**	mg/L	10.0	5.3	10		06/25/24 12:39	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 12:25	16984-48-8	N2
Sulfate	**36.4**	mg/L	10.0	5.5	10		06/25/24 12:39	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-B2 **Lab ID: 60454265005** Collected: 06/04/24 10:12 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**348**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:08	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:08	7440-41-7	
Boron	**29.5J**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:08	7440-42-8	
Calcium	**92700**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:08	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:08	7440-48-4	
Iron	**8690**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:08	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:08	7439-92-1	
Lithium	**10.5**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:08	7439-93-2	
Magnesium	**16400**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:08	7439-95-4	
Manganese	**227**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:08	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:08	7439-98-7	
Potassium	**1710**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:08	7440-09-7	
Sodium	**19700**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:22	7440-36-0	
Arsenic	**2.7**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:22	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:22	7440-43-9	
Chromium	**0.37J**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:22	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:22	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:40	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**333**	mg/L	40.0	21.0	2		06/11/24 14:08		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**389**	mg/L	10.0	10.0	1		06/07/24 11:03		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**8.6**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.076J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-B2 **Lab ID: 60454265005** Collected: 06/04/24 10:12 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**37.6**	mg/L	10.0	5.3	10		06/25/24 13:07	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 12:53	16984-48-8	N2
Sulfate	**21.5**	mg/L	10.0	5.5	10		06/25/24 13:07	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-DUP-1 **Lab ID: 60454265006** Collected: 06/03/24 00:00 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**31.1**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:10	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:10	7440-41-7	
Boron	**2660**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:10	7440-42-8	
Calcium	**35900**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:10	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:10	7440-48-4	
Iron	**57.4**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:10	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:10	7439-92-1	
Lithium	**3.8J**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:10	7439-93-2	
Magnesium	**4410**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:10	7439-95-4	
Manganese	**30.9**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:10	7439-96-5	
Molybdenum	**114**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:10	7439-98-7	
Potassium	**6160**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:10	7440-09-7	
Sodium	**117000**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:10	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:24	7440-36-0	
Arsenic	**17.4**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:24	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:24	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:24	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:24	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:43	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**151**	mg/L	20.0	10.5	1		06/10/24 14:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**471**	mg/L	10.0	10.0	1		06/07/24 11:00		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.043J**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-DUP-1 **Lab ID: 60454265006** Collected: 06/03/24 00:00 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**25.4**	mg/L	10.0	5.3	10		06/25/24 13:34	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 13:21	16984-48-8	N2
Sulfate	**215**	mg/L	20.0	11.0	20		06/26/24 17:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-FB-1 **Lab ID: 60454265007** Collected: 06/04/24 14:53 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**<0.64**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:17	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:17	7440-41-7	
Boron	**<6.4**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:17	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:17	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:17	7440-48-4	
Iron	**11.7J**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:17	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:17	7439-92-1	
Lithium	**<3.7**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:17	7439-93-2	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:17	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:17	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:17	7439-98-7	
Potassium	**<69.7**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:17	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:17	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:27	7440-36-0	
Arsenic	**<0.13**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:27	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:27	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:27	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:27	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:50	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		06/11/24 14:13		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**8.5**	mg/L	5.0	5.0	1		06/07/24 11:03		B
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0077J**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-FB-1 **Lab ID: 60454265007** Collected: 06/04/24 14:53 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.53**	mg/L	1.0	0.53	1		06/25/24 13:48	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 13:48	16984-48-8	N2
Sulfate	**<0.55**	mg/L	1.0	0.55	1		06/25/24 13:48	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-2 **Lab ID: 60454265010** Collected: 06/06/24 12:01 Received: 06/06/24 18:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**10.1**	ug/L	5.0	0.64	1	06/12/24 11:47	06/17/24 12:19	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/12/24 11:47	06/17/24 12:19	7440-41-7	
Boron	**4280**	ug/L	100	6.4	1	06/12/24 11:47	06/17/24 12:19	7440-42-8	
Calcium	**10000**	ug/L	200	26.9	1	06/12/24 11:47	06/17/24 12:19	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/12/24 11:47	06/17/24 12:19	7440-48-4	
Iron	**90.4**	ug/L	50.0	9.1	1	06/12/24 11:47	06/17/24 12:19	7439-89-6	B
Lead	**6.1J**	ug/L	10.0	3.8	1	06/12/24 11:47	06/17/24 12:19	7439-92-1	
Lithium	**<3.7**	ug/L	10.0	3.7	1	06/12/24 11:47	06/17/24 12:19	7439-93-2	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	06/12/24 11:47	06/17/24 12:19	7439-95-4	
Manganese	**4.6J**	ug/L	5.0	0.39	1	06/12/24 11:47	06/17/24 12:19	7439-96-5	
Molybdenum	**218**	ug/L	20.0	1.0	1	06/12/24 11:47	06/17/24 12:19	7439-98-7	
Potassium	**3180**	ug/L	500	69.7	1	06/12/24 11:47	06/17/24 12:19	7440-09-7	
Sodium	**214000**	ug/L	500	115	1	06/12/24 11:47	06/17/24 12:19	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**3.2**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:35	7440-36-0	
Arsenic	**269**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:35	7440-38-2	
Cadmium	**0.36J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:35	7440-43-9	
Chromium	**0.56J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:35	7440-47-3	
Selenium	**1.3**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:35	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:22	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**264**	mg/L	40.0	21.0	2		06/12/24 15:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**789**	mg/L	13.3	13.3	1		06/11/24 10:29		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		07/08/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.29**	mg/L	0.20	0.041	1		07/05/24 14:15	15438-31-0	1e,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-2 **Lab ID: 60454265010** Collected: 06/06/24 12:01 Received: 06/06/24 18:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**7.1**	mg/L	1.0	0.31	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**96.2**	mg/L	50.0	26.4	50		06/19/24 20:48	16887-00-6	
Fluoride	**1.1**	mg/L	0.20	0.12	1		06/19/24 20:30	16984-48-8	N2
Sulfate	**833**	mg/L	50.0	27.5	50		06/19/24 20:48	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-4 **Lab ID: 60454265011** Collected: 06/05/24 16:05 Received: 06/06/24 18:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**358**	ug/L	5.0	0.64	1	06/12/24 11:47	06/17/24 12:21	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/12/24 11:47	06/17/24 12:21	7440-41-7	
Boron	**1680**	ug/L	100	6.4	1	06/12/24 11:47	06/17/24 12:21	7440-42-8	
Calcium	**101000**	ug/L	200	26.9	1	06/12/24 11:47	06/17/24 12:21	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/12/24 11:47	06/17/24 12:21	7440-48-4	
Iron	**8040**	ug/L	50.0	9.1	1	06/12/24 11:47	06/17/24 12:21	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/12/24 11:47	06/17/24 12:21	7439-92-1	
Lithium	**33.9**	ug/L	10.0	3.7	1	06/12/24 11:47	06/17/24 12:21	7439-93-2	
Magnesium	**20300**	ug/L	50.0	20.1	1	06/12/24 11:47	06/17/24 12:21	7439-95-4	
Manganese	**449**	ug/L	5.0	0.39	1	06/12/24 11:47	06/17/24 12:21	7439-96-5	
Molybdenum	**30.3**	ug/L	20.0	1.0	1	06/12/24 11:47	06/17/24 12:21	7439-98-7	
Potassium	**5200**	ug/L	500	69.7	1	06/12/24 11:47	06/17/24 12:21	7440-09-7	
Sodium	**29800**	ug/L	500	115	1	06/12/24 11:47	06/17/24 12:21	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:38	7440-36-0	
Arsenic	**8.4**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:38	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:38	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:38	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:38	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:24	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**437**	mg/L	20.0	10.5	1		06/11/24 16:14		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**426**	mg/L	10.0	10.0	1		06/10/24 13:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**7.6**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.48**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H3,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-4 **Lab ID: 60454265011** Collected: 06/05/24 16:05 Received: 06/06/24 18:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**10.8**	mg/L	1.0	0.53	1		06/19/24 21:06	16887-00-6	
Fluoride	**0.64**	mg/L	0.20	0.12	1		06/19/24 21:06	16984-48-8	N2
Sulfate	**0.93J**	mg/L	1.0	0.55	1		06/19/24 21:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-5 **Lab ID: 60454265012** Collected: 06/05/24 14:44 Received: 06/06/24 18:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**324**	ug/L	5.0	0.64	1	06/12/24 11:47	06/17/24 12:23	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/12/24 11:47	06/17/24 12:23	7440-41-7	
Boron	**51.0J**	ug/L	100	6.4	1	06/12/24 11:47	06/17/24 12:23	7440-42-8	
Calcium	**111000**	ug/L	200	26.9	1	06/12/24 11:47	06/17/24 12:23	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/12/24 11:47	06/17/24 12:23	7440-48-4	
Iron	**8060**	ug/L	50.0	9.1	1	06/12/24 11:47	06/17/24 12:23	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/12/24 11:47	06/17/24 12:23	7439-92-1	
Lithium	**7.6J**	ug/L	10.0	3.7	1	06/12/24 11:47	06/17/24 12:23	7439-93-2	
Magnesium	**14600**	ug/L	50.0	20.1	1	06/12/24 11:47	06/17/24 12:23	7439-95-4	
Manganese	**297**	ug/L	5.0	0.39	1	06/12/24 11:47	06/17/24 12:23	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/12/24 11:47	06/17/24 12:23	7439-98-7	
Potassium	**1900**	ug/L	500	69.7	1	06/12/24 11:47	06/17/24 12:23	7440-09-7	
Sodium	**4390**	ug/L	500	115	1	06/12/24 11:47	06/17/24 12:23	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:40	7440-36-0	
Arsenic	**1.5**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:40	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:40	7440-43-9	
Chromium	**0.32J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:40	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:40	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:26	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**348**	mg/L	20.0	10.5	1		06/11/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**395**	mg/L	10.0	10.0	1		06/10/24 13:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**8.0**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.082J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-5 **Lab ID: 60454265012** Collected: 06/05/24 14:44 Received: 06/06/24 18:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.037J**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.8**	mg/L	1.0	0.53	1		06/19/24 21:25	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 21:25	16984-48-8	N2
Sulfate	**23.7**	mg/L	10.0	5.5	10		06/20/24 23:45	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-3 **Lab ID: 60454265013** Collected: 06/07/24 09:53 Received: 06/08/24 05:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**47.9**	ug/L	5.0	0.64	1	06/13/24 14:11	06/17/24 10:59	7440-39-3	
Beryllium	**1.0**	ug/L	1.0	0.12	1	06/13/24 14:11	06/17/24 10:59	7440-41-7	
Boron	**12300**	ug/L	100	6.4	1	06/13/24 14:11	06/17/24 10:59	7440-42-8	
Calcium	**15200**	ug/L	200	26.9	1	06/13/24 14:11	06/17/24 10:59	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 14:11	06/17/24 10:59	7440-48-4	
Iron	**141**	ug/L	50.0	9.1	1	06/13/24 14:11	06/17/24 10:59	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 14:11	06/17/24 10:59	7439-92-1	
Lithium	**13.7**	ug/L	10.0	3.7	1	06/13/24 14:11	06/17/24 10:59	7439-93-2	
Magnesium	**1160**	ug/L	50.0	20.1	1	06/13/24 14:11	06/17/24 10:59	7439-95-4	
Manganese	**21.0**	ug/L	5.0	0.39	1	06/13/24 14:11	06/17/24 10:59	7439-96-5	
Molybdenum	**727**	ug/L	20.0	1.0	1	06/13/24 14:11	06/17/24 10:59	7439-98-7	
Potassium	**3800**	ug/L	500	69.7	1	06/13/24 14:11	06/17/24 10:59	7440-09-7	
Sodium	**206000**	ug/L	500	115	1	06/13/24 14:11	06/17/24 10:59	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 15:06	06/24/24 11:49	7440-36-0	
Arsenic	**39.1**	ug/L	1.0	0.13	1	06/13/24 15:06	06/24/24 11:49	7440-38-2	
Cadmium	**0.31J**	ug/L	0.50	0.050	1	06/13/24 15:06	06/24/24 11:49	7440-43-9	
Chromium	**0.66J**	ug/L	1.0	0.30	1	06/13/24 15:06	06/24/24 11:49	7440-47-3	
Selenium	**0.53J**	ug/L	1.0	0.18	1	06/13/24 15:06	06/24/24 11:49	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 15:06	06/24/24 11:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:01	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**301**	mg/L	20.0	10.5	1		06/12/24 17:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**672**	mg/L	13.3	13.3	1		06/12/24 10:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		07/08/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.32**	mg/L	0.20	0.041	1		07/05/24 14:15	15438-31-0	1e,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-3 **Lab ID: 60454265013** Collected: 06/07/24 09:53 Received: 06/08/24 05:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.20**	mg/L	0.050	0.016	1		06/12/24 09:13	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**29.0**	mg/L	1.0	0.53	1		06/21/24 21:36	16887-00-6	
Fluoride	**1.0**	mg/L	0.20	0.12	1		06/21/24 21:36	16984-48-8	N2
Sulfate	**216**	mg/L	50.0	27.5	50		06/20/24 21:45	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898413
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265010, 60454265011, 60454265012

METHOD BLANK: 3556318 Matrix: Water
Associated Lab Samples: 60454265010, 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	06/18/24 15:17	

LABORATORY CONTROL SAMPLE: 3556319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.1	82	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3556320 3556321

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	4.3	4.2	85	84	75-125	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898431
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265013

METHOD BLANK: 3556374 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	06/18/24 14:22	

LABORATORY CONTROL SAMPLE: 3556375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.4	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3556376 3556377

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	3.8	4.0	76	80	75-125	5	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897802
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265010, 60454265011, 60454265012

METHOD BLANK: 3553936 Matrix: Water
Associated Lab Samples: 60454265010, 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 12:11	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 12:11	
Boron	ug/L	<6.4	100	6.4	06/17/24 12:11	
Calcium	ug/L	<26.9	200	26.9	06/17/24 12:11	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 12:11	
Iron	ug/L	16.9J	50.0	9.1	06/17/24 12:11	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 12:11	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 12:11	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 12:11	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 12:11	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 12:11	
Potassium	ug/L	<69.7	500	69.7	06/17/24 12:11	
Sodium	ug/L	126J	500	115	06/17/24 12:11	

LABORATORY CONTROL SAMPLE: 3553937

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	994	99	85-115	
Beryllium	ug/L	1000	981	98	85-115	
Boron	ug/L	1000	932	93	85-115	
Calcium	ug/L	10000	10000	100	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1040	104	85-115	
Lithium	ug/L	1000	994	99	85-115	
Magnesium	ug/L	10000	9750	98	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	982	98	85-115	
Potassium	ug/L	10000	9700	97	85-115	
Sodium	ug/L	10000	9990	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553938 3553939

Parameter	Units	60454199005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	70.4	1000	1000	1070	1030	100	96	70-130	4	20	
Beryllium	ug/L	ND	1000	1000	996	997	100	100	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553938 3553939

Parameter	Units	60454199005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	1030	991	95	91	70-130	3	20	
Calcium	ug/L	90000	10000	10000	99200	95200	92	53	70-130	4	20	M1
Cobalt	ug/L	ND	1000	1000	1010	1020	101	102	70-130	1	20	
Iron	ug/L	100	10000	10000	10300	9960	102	99	70-130	4	20	
Lead	ug/L	ND	1000	1000	1010	1000	101	100	70-130	1	20	
Lithium	ug/L	ND	1000	1000	1020	991	102	99	70-130	3	20	
Magnesium	ug/L	8700	10000	10000	18300	17600	96	89	70-130	4	20	
Manganese	ug/L	27.1	1000	1000	1020	1030	100	100	70-130	1	20	
Molybdenum	ug/L	ND	1000	1000	994	1010	99	100	70-130	1	20	
Potassium	ug/L	4830	10000	10000	14800	14400	100	96	70-130	3	20	
Sodium	ug/L	20000	10000	10000	29900	28900	100	90	70-130	3	20	

MATRIX SPIKE SAMPLE: 3553940

Parameter	Units	60454378002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	82.0	1000	1090	101	70-130	
Beryllium	ug/L	ND	1000	982	98	70-130	
Boron	ug/L	ND	1000	959	93	70-130	
Calcium	ug/L	43900	10000	53200	93	70-130	
Cobalt	ug/L	ND	1000	970	97	70-130	
Iron	ug/L	5550	10000	15800	102	70-130	
Lead	ug/L	ND	1000	960	95	70-130	
Lithium	ug/L	17.8	1000	1130	112	70-130	
Magnesium	ug/L	5900	10000	15100	92	70-130	
Manganese	ug/L	94.0	1000	1060	97	70-130	
Molybdenum	ug/L	49.3	1000	1020	97	70-130	
Potassium	ug/L	271000	10000	279000	78	70-130	
Sodium	ug/L	1340000	10000	1340000	61	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897974
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60454265001

METHOD BLANK: 3554535 Matrix: Water
Associated Lab Samples: 60454265001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 13:01	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 13:01	
Boron	ug/L	<6.4	100	6.4	06/17/24 13:01	
Calcium	ug/L	<26.9	200	26.9	06/17/24 13:01	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 13:01	
Iron	ug/L	<9.1	50.0	9.1	06/17/24 13:01	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 13:01	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 13:01	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 13:01	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 13:01	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 13:01	
Potassium	ug/L	<69.7	500	69.7	06/17/24 13:01	
Sodium	ug/L	<115	500	115	06/17/24 13:01	

LABORATORY CONTROL SAMPLE: 3554536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	974	97	85-115	
Beryllium	ug/L	1000	969	97	85-115	
Boron	ug/L	1000	917	92	85-115	
Calcium	ug/L	10000	9670	97	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	9930	99	85-115	
Lead	ug/L	1000	1020	102	85-115	
Lithium	ug/L	1000	974	97	85-115	
Magnesium	ug/L	10000	9350	94	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	980	98	85-115	
Potassium	ug/L	10000	9550	96	85-115	
Sodium	ug/L	10000	9820	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554537 3554538

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	51.9	1000	1000	1040	1040	99	99	70-130	0	20	
Beryllium	ug/L	<0.12	1000	1000	1030	1000	103	100	70-130	3	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554537 3554538

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4520	1000	1000	5520	5500	99	97	70-130	0	20	
Calcium	ug/L	25200	10000	10000	35000	35200	98	100	70-130	0	20	
Cobalt	ug/L	<1.2	1000	1000	1050	1010	105	101	70-130	3	20	
Iron	ug/L	276	10000	10000	10400	10500	101	102	70-130	1	20	
Lead	ug/L	<3.8	1000	1000	1010	1000	101	100	70-130	1	20	
Lithium	ug/L	19.7	1000	1000	1030	1030	101	101	70-130	1	20	
Magnesium	ug/L	2770	10000	10000	12300	12200	95	95	70-130	0	20	
Manganese	ug/L	52.1	1000	1000	1080	1040	103	99	70-130	3	20	
Molybdenum	ug/L	240	1000	1000	1270	1230	103	99	70-130	3	20	
Potassium	ug/L	5600	10000	10000	15700	15600	101	100	70-130	1	20	
Sodium	ug/L	128000	10000	10000	139000	140000	108	112	70-130	0	20	

MATRIX SPIKE SAMPLE: 3554539

Parameter	Units	60454268018 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	85.3	1000	1050	97	70-130	
Beryllium	ug/L	0.17J	1000	1000	100	70-130	
Boron	ug/L	8820	1000	9410	59	70-130	M1
Calcium	ug/L	19900	10000	28700	87	70-130	
Cobalt	ug/L	<1.2	1000	1010	101	70-130	
Iron	ug/L	1730	10000	11600	99	70-130	
Lead	ug/L	<3.8	1000	996	99	70-130	
Lithium	ug/L	22.0	1000	1020	100	70-130	
Magnesium	ug/L	2610	10000	11800	92	70-130	
Manganese	ug/L	80.5	1000	1060	98	70-130	
Molybdenum	ug/L	309	1000	1280	97	70-130	
Potassium	ug/L	3970	10000	13700	98	70-130	
Sodium	ug/L	181000	10000	183000	20	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898012
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

METHOD BLANK: 3554753 Matrix: Water
Associated Lab Samples: 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 13:56	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 13:56	
Boron	ug/L	<6.4	100	6.4	06/17/24 13:56	
Calcium	ug/L	<26.9	200	26.9	06/17/24 13:56	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 13:56	
Iron	ug/L	<9.1	50.0	9.1	06/17/24 13:56	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 13:56	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 13:56	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 13:56	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 13:56	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 13:56	
Potassium	ug/L	<69.7	500	69.7	06/17/24 13:56	
Sodium	ug/L	229J	500	115	06/17/24 13:56	

LABORATORY CONTROL SAMPLE: 3554754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	989	99	85-115	
Beryllium	ug/L	1000	979	98	85-115	
Boron	ug/L	1000	926	93	85-115	
Calcium	ug/L	10000	9880	99	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Iron	ug/L	10000	9980	100	85-115	
Lead	ug/L	1000	1010	101	85-115	
Lithium	ug/L	1000	984	98	85-115	
Magnesium	ug/L	10000	9610	96	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	975	98	85-115	
Potassium	ug/L	10000	9670	97	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554755 3554756

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	120	1000	1000	1110	1100	99	98	70-130	1	20	
Beryllium	ug/L	<0.12	1000	1000	1000	967	100	97	70-130	4	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554755 3554756

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	466	1000	1000	1410	1390	95	93	70-130	1	20	
Calcium	ug/L	90800	10000	10000	101000	100000	102	92	70-130	1	20	
Cobalt	ug/L	<1.2	1000	1000	1010	980	101	98	70-130	3	20	
Iron	ug/L	95.4	10000	10000	10100	10000	100	99	70-130	1	20	
Lead	ug/L	<3.8	1000	1000	1010	986	101	99	70-130	3	20	
Lithium	ug/L	4.8J	1000	1000	1020	1000	101	100	70-130	2	20	
Magnesium	ug/L	12600	10000	10000	22200	22000	96	94	70-130	1	20	
Manganese	ug/L	57.0	1000	1000	1060	1020	101	96	70-130	4	20	
Molybdenum	ug/L	<1.0	1000	1000	995	960	99	96	70-130	4	20	
Potassium	ug/L	1130	10000	10000	11000	10800	99	97	70-130	2	20	
Sodium	ug/L	12400	10000	10000	22400	22200	101	98	70-130	1	20	

MATRIX SPIKE SAMPLE: 3554757

Parameter	Units	60454268004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	336	1000	1300	96	70-130	
Beryllium	ug/L	<0.12	1000	989	99	70-130	
Boron	ug/L	79.6J	1000	996	92	70-130	
Calcium	ug/L	120000	10000	126000	66	70-130	M1
Cobalt	ug/L	<1.2	1000	992	99	70-130	
Iron	ug/L	15800	10000	25400	96	70-130	
Lead	ug/L	<3.8	1000	999	100	70-130	
Lithium	ug/L	10.0	1000	1010	100	70-130	
Magnesium	ug/L	27400	10000	36300	88	70-130	
Manganese	ug/L	497	1000	1470	97	70-130	
Molybdenum	ug/L	<1.0	1000	973	97	70-130	
Potassium	ug/L	4590	10000	14400	98	70-130	
Sodium	ug/L	12500	10000	22100	96	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898016
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60454265013

METHOD BLANK: 3554767 Matrix: Water
Associated Lab Samples: 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 10:55	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 10:55	
Boron	ug/L	<6.4	100	6.4	06/17/24 10:55	
Calcium	ug/L	<26.9	200	26.9	06/17/24 10:55	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 10:55	
Iron	ug/L	<9.1	50.0	9.1	06/17/24 10:55	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 10:55	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 10:55	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 10:55	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 10:55	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 10:55	
Potassium	ug/L	<69.7	500	69.7	06/17/24 10:55	
Sodium	ug/L	<115	500	115	06/17/24 10:55	

LABORATORY CONTROL SAMPLE: 3554768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1030	103	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Boron	ug/L	1000	974	97	85-115	
Calcium	ug/L	10000	10400	104	85-115	
Cobalt	ug/L	1000	1060	106	85-115	
Iron	ug/L	10000	10500	105	85-115	
Lead	ug/L	1000	1060	106	85-115	
Lithium	ug/L	1000	1030	103	85-115	
Magnesium	ug/L	10000	10100	101	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9940	99	85-115	
Sodium	ug/L	10000	10200	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554769 3554770

Parameter	Units	60454590001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	27.4	1000	1000	1050	1010	102	98	70-130	4	20	
Beryllium	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554769 3554770

Parameter	Units	60454590001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	1020	982	98	94	70-130	4	20	
Calcium	ug/L	44300	10000	10000	53800	51800	95	75	70-130	4	20	
Cobalt	ug/L	ND	1000	1000	1030	1040	103	104	70-130	1	20	
Iron	ug/L	ND	10000	10000	10500	10100	104	100	70-130	4	20	
Lead	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	20	
Lithium	ug/L	36.6	1000	1000	1070	1030	103	100	70-130	3	20	
Magnesium	ug/L	5150	10000	10000	15000	14400	98	92	70-130	4	20	
Manganese	ug/L	ND	1000	1000	1020	1020	101	101	70-130	0	20	
Molybdenum	ug/L	ND	1000	1000	1010	1020	101	102	70-130	1	20	
Potassium	ug/L	17000	10000	10000	26700	26200	97	92	70-130	2	20	
Sodium	ug/L	60500	10000	10000	70000	67800	95	73	70-130	3	20	

MATRIX SPIKE SAMPLE: 3554771

Parameter	Units	60454626001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	ND	1000	1050	95	70-130	
Beryllium	ug/L	ND	1000	1010	101	70-130	
Boron	ug/L	32700	1000	34600	187	70-130	M1
Calcium	ug/L	431000	10000	452000	203	70-130	M1
Cobalt	ug/L	ND	1000	980	98	70-130	
Iron	ug/L	2800	10000	12700	99	70-130	
Lead	ug/L	ND	1000	982	98	70-130	
Lithium	ug/L	ND	1000	1190	106	70-130	
Magnesium	ug/L	857000	10000	890000	322	70-130	M1
Manganese	ug/L	ND	1000	1120	97	70-130	
Molybdenum	ug/L	ND	1000	978J	97	70-130	
Potassium	ug/L	226000	10000	241000	153	70-130	M1
Sodium	ug/L	29000000	10000	29700000	7200	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897965
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265010, 60454265011, 60454265012

METHOD BLANK: 3554509 Matrix: Water
Associated Lab Samples: 60454265001, 60454265010, 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	07/01/24 09:31	
Arsenic	ug/L	<0.13	1.0	0.13	07/01/24 09:31	
Cadmium	ug/L	<0.050	0.50	0.050	07/01/24 09:31	
Chromium	ug/L	<0.30	1.0	0.30	07/01/24 09:31	
Selenium	ug/L	<0.18	1.0	0.18	07/01/24 09:31	
Thallium	ug/L	<0.14	1.0	0.14	07/01/24 09:31	

LABORATORY CONTROL SAMPLE: 3554510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.3	101	85-115	
Arsenic	ug/L	40	39.9	100	85-115	
Cadmium	ug/L	40	41.3	103	85-115	
Chromium	ug/L	40	41.9	105	85-115	
Selenium	ug/L	40	40.2	101	85-115	
Thallium	ug/L	40	35.7	89	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554511 3554512

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	40.7	38.8	102	97	70-130	5	20	
Arsenic	ug/L	5.7	40	40	47.1	44.4	104	97	70-130	6	20	
Cadmium	ug/L	0.095J	40	40	40.1	37.7	100	94	70-130	6	20	
Chromium	ug/L	0.39J	40	40	39.2	37.0	97	91	70-130	6	20	
Selenium	ug/L	0.37J	40	40	38.6	36.6	96	91	70-130	5	20	
Thallium	ug/L	<0.14	40	40	37.1	34.9	93	87	70-130	6	20	

MATRIX SPIKE SAMPLE: 3554513

Parameter	Units	60454268016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	0.14J	40	40.4	101	70-130	
Arsenic	ug/L	11.1	40	50.6	99	70-130	
Cadmium	ug/L	0.14J	40	38.8	97	70-130	
Chromium	ug/L	1.6	40	39.0	93	70-130	
Selenium	ug/L	1.0	40	37.3	91	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

MATRIX SPIKE SAMPLE: 3554513

Parameter	Units	60454268016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	<0.14	40	36.5	91	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897973
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

METHOD BLANK: 3554530 Matrix: Water
Associated Lab Samples: 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	06/25/24 12:59	
Arsenic	ug/L	<0.13	1.0	0.13	06/25/24 12:59	
Cadmium	ug/L	<0.050	0.50	0.050	06/25/24 12:59	
Chromium	ug/L	<0.30	1.0	0.30	06/25/24 12:59	
Selenium	ug/L	<0.18	1.0	0.18	06/25/24 12:59	
Thallium	ug/L	<0.14	1.0	0.14	06/25/24 12:59	

LABORATORY CONTROL SAMPLE: 3554531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.5	99	85-115	
Arsenic	ug/L	40	41.1	103	85-115	
Cadmium	ug/L	40	41.3	103	85-115	
Chromium	ug/L	40	41.6	104	85-115	
Selenium	ug/L	40	41.6	104	85-115	
Thallium	ug/L	40	37.4	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554532 3554533

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.9	39.2	100	98	70-130	2	20	
Arsenic	ug/L	0.54J	40	40	42.6	42.2	105	104	70-130	1	20	
Cadmium	ug/L	<0.050	40	40	40.7	40.1	102	100	70-130	2	20	
Chromium	ug/L	0.47J	40	40	41.7	41.1	103	102	70-130	1	20	
Selenium	ug/L	0.56J	40	40	42.1	41.9	104	103	70-130	0	20	
Thallium	ug/L	<0.14	40	40	39.8	40.0	99	100	70-130	1	20	

MATRIX SPIKE SAMPLE: 3554534

Parameter	Units	60454268005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.12	40	38.8	97	70-130	
Arsenic	ug/L	1.1	40	42.1	103	70-130	
Cadmium	ug/L	<0.050	40	39.5	99	70-130	
Chromium	ug/L	<0.30	40	40.5	101	70-130	
Selenium	ug/L	<0.18	40	40.2	101	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

MATRIX SPIKE SAMPLE: 3554534

Parameter	Units	60454268005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	<0.14	40	39.8	99	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898026
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60454265013

METHOD BLANK: 3554802 Matrix: Water
Associated Lab Samples: 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	06/24/24 11:43	
Arsenic	ug/L	<0.13	1.0	0.13	06/24/24 11:43	
Cadmium	ug/L	<0.050	0.50	0.050	06/24/24 11:43	
Chromium	ug/L	<0.30	1.0	0.30	06/24/24 11:43	
Selenium	ug/L	<0.18	1.0	0.18	06/24/24 11:43	
Thallium	ug/L	<0.14	1.0	0.14	06/24/24 11:43	

LABORATORY CONTROL SAMPLE: 3554803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.8	99	85-115	
Arsenic	ug/L	40	40.8	102	85-115	
Cadmium	ug/L	40	41.4	104	85-115	
Chromium	ug/L	40	41.9	105	85-115	
Selenium	ug/L	40	41.1	103	85-115	
Thallium	ug/L	40	38.5	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554804 3554805

Parameter	Units	60454268023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.2	39.9	98	100	70-130	2	20	
Arsenic	ug/L	5.2	40	40	45.3	46.2	100	102	70-130	2	20	
Cadmium	ug/L	<0.050	40	40	39.6	40.8	99	102	70-130	3	20	
Chromium	ug/L	0.44J	40	40	41.2	41.8	102	103	70-130	1	20	
Selenium	ug/L	<0.18	40	40	38.5	39.9	96	100	70-130	3	20	
Thallium	ug/L	<0.14	40	40	40.1	40.9	100	102	70-130	2	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897433
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265002

METHOD BLANK: 3552762 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/10/24 12:23	

LABORATORY CONTROL SAMPLE: 3552763

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	493	99	90-110	

SAMPLE DUPLICATE: 3552764

Parameter	Units	60454023002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	599	586	2	10	

SAMPLE DUPLICATE: 3552765

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	301	297	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897434
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265006

METHOD BLANK: 3552766 Matrix: Water
Associated Lab Samples: 60454265006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/10/24 14:48	

LABORATORY CONTROL SAMPLE: 3552767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	500	100	90-110	

SAMPLE DUPLICATE: 3552768

Parameter	Units	60454265006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	151	150	0	10	

SAMPLE DUPLICATE: 3552769

Parameter	Units	60454483005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	108	108	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897675
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265003, 60454265004, 60454265005, 60454265007

METHOD BLANK: 3553407 Matrix: Water
Associated Lab Samples: 60454265003, 60454265004, 60454265005, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/11/24 12:39	

LABORATORY CONTROL SAMPLE: 3553408

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	487	97	90-110	

SAMPLE DUPLICATE: 3553409

Parameter	Units	60454108001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	303	287	5	10	

SAMPLE DUPLICATE: 3553410

Parameter	Units	60454402004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	480	480	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897676
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265011, 60454265012

METHOD BLANK: 3553411 Matrix: Water
Associated Lab Samples: 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/11/24 15:25	

LABORATORY CONTROL SAMPLE: 3553412

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	503	101	90-110	

SAMPLE DUPLICATE: 3553413

Parameter	Units	60454210002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	280	288	3	10	

SAMPLE DUPLICATE: 3553414

Parameter	Units	60454268017 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	399	398	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897855
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60454265010

METHOD BLANK: 3554164 Matrix: Water
Associated Lab Samples: 60454265010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/12/24 12:25	

LABORATORY CONTROL SAMPLE: 3554165

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	499	100	90-110	

SAMPLE DUPLICATE: 3554166

Parameter	Units	60454538004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	279	278	0	10	

SAMPLE DUPLICATE: 3554167

Parameter	Units	60454538006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	151	150	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897856
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265013

METHOD BLANK: 3554168 Matrix: Water
Associated Lab Samples: 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/12/24 15:32	

LABORATORY CONTROL SAMPLE: 3554169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	500	100	90-110	

SAMPLE DUPLICATE: 3554170

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	275	278	1	10	

SAMPLE DUPLICATE: 3554171

Parameter	Units	60454537003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	78.2	79.5	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897214
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

METHOD BLANK: 3551270 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	6.0	5.0	5.0	06/07/24 10:57	

LABORATORY CONTROL SAMPLE: 3551271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	921	92	80-120	

SAMPLE DUPLICATE: 3551272

Parameter	Units	60454265001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	505	508	1	10	

SAMPLE DUPLICATE: 3551277

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	387	346	11	10	D6

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897425
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265011, 60454265012

METHOD BLANK: 3552728 Matrix: Water
Associated Lab Samples: 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	06/10/24 13:44	

LABORATORY CONTROL SAMPLE: 3552729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	894	89	80-120	

SAMPLE DUPLICATE: 3552730

Parameter	Units	60454260001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1210	1120	8	10	

SAMPLE DUPLICATE: 3552731

Parameter	Units	60454448001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1030	1000	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897633
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265010

METHOD BLANK: 3553283 Matrix: Water
Associated Lab Samples: 60454265010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	06/11/24 10:25	

LABORATORY CONTROL SAMPLE: 3553284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	876	88	80-120	

SAMPLE DUPLICATE: 3553287

Parameter	Units	60454538004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	835	865	4	10	

SAMPLE DUPLICATE: 3553288

Parameter	Units	60454538006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	940	885	6	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897839
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265013

METHOD BLANK: 3554090 Matrix: Water
Associated Lab Samples: 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	06/12/24 10:42	

LABORATORY CONTROL SAMPLE: 3554091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	880	88	80-120	

SAMPLE DUPLICATE: 3554092

Parameter	Units	60454268012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	445	443	0	10	

SAMPLE DUPLICATE: 3554094

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	449	446	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897692
QC Batch Method: SM 3500-Fe B#4
Analysis Method: SM 3500-Fe B#4
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265012

METHOD BLANK: 3553480 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.041	0.20	0.041	06/13/24 10:57	H6

LABORATORY CONTROL SAMPLE: 3553481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	4	4.1	102	90-110	H6

SAMPLE DUPLICATE: 3553482

Parameter	Units	60454265006 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.041	<0.041		20	H6

SAMPLE DUPLICATE: 3553483

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.041	<0.041		20	H6

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897825
QC Batch Method: SM 3500-Fe B#4
Analysis Method: SM 3500-Fe B#4
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60454265011

METHOD BLANK: 3554015 Matrix: Water
Associated Lab Samples: 60454265011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.041	0.20	0.041	06/13/24 09:14	H6

LABORATORY CONTROL SAMPLE: 3554016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	1.9	96	90-110	H6

SAMPLE DUPLICATE: 3554017

Parameter	Units	60454265011 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.48	0.45	6	20	H3,H6

SAMPLE DUPLICATE: 3554018

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.45	0.45	0	20	H1,H6

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 900728
QC Batch Method: SM 3500-Fe B#4
Analysis Method: SM 3500-Fe B#4
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265010, 60454265013

METHOD BLANK: 3565561 Matrix: Water
Associated Lab Samples: 60454265010, 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.041	0.20	0.041	07/05/24 14:15	H6

LABORATORY CONTROL SAMPLE: 3565562

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	100	90-110	H6

SAMPLE DUPLICATE: 3565563

Parameter	Units	60454265010 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.29	0.29	0	20	H6

SAMPLE DUPLICATE: 3565564

Parameter	Units	60455908003 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	13.5	13.4	1	20	H6

SAMPLE DUPLICATE: 3565565

Parameter	Units	60455906005 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.59	0.61	2	20	H6

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897121
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

METHOD BLANK: 3550966 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/07/24 14:41	

LABORATORY CONTROL SAMPLE: 3550967

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.46	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550968 3550969

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	<0.016	0.5	0.5	0.49	0.48	96	96	75-125	0	20	M1

SAMPLE DUPLICATE: 3550974

Parameter	Units	60454154002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.28	0.30	5	20	

SAMPLE DUPLICATE: 3550975

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.016	<0.016		20	

SAMPLE DUPLICATE: 3550976

Parameter	Units	60454265001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.016	<0.016		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897287
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265010, 60454265011, 60454265012

METHOD BLANK: 3551656 Matrix: Water
Associated Lab Samples: 60454265010, 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/10/24 09:58	

LABORATORY CONTROL SAMPLE: 3551657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.47	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3551658 3551659

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	0.048J	0.5	0.5	0.10	0.11	11	12	75-125	5	20	M1

SAMPLE DUPLICATE: 3551665

Parameter	Units	60454365001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	0.042J		20	

SAMPLE DUPLICATE: 3551666

Parameter	Units	60454210002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	1.2	1.2	1	20	

SAMPLE DUPLICATE: 3551668

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.048J	0.047J		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 897823
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265013

METHOD BLANK: 3554005 Matrix: Water
Associated Lab Samples: 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/12/24 09:13	

LABORATORY CONTROL SAMPLE: 3554006

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.46	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554007 3554008

Parameter	Units	60454537001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.40	0.38	78	75	75-125	3	20	

SAMPLE DUPLICATE: 3554011

Parameter	Units	60454537001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.016		20	

SAMPLE DUPLICATE: 3554014

Parameter	Units	60454537002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.022J	0.016J		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898465
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265010, 60454265011, 60454265012

METHOD BLANK: 3556635 Matrix: Water
Associated Lab Samples: 60454265010, 60454265011, 60454265012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/19/24 12:32	
Fluoride	mg/L	<0.12	0.20	0.12	06/19/24 12:32	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/19/24 12:32	

LABORATORY CONTROL SAMPLE: 3556636

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.5	90	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	N2
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3556637 3556638

Parameter	Units	60454448001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	13.1	5	5	17.5	17.3	87	83	80-120	1	15	
Fluoride	mg/L	0.89	2.5	2.5	4.0	3.8	124	116	80-120	5	15	M1,N2
Sulfate	mg/L	646	250	250	902	899	102	101	80-120	0	15	

MATRIX SPIKE SAMPLE: 3556639

Parameter	Units	60454483008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1.4	5	5.9	90	80-120	
Fluoride	mg/L	0.99	2.5	3.8	113	80-120	N2
Sulfate	mg/L	1010	500	1680	134	80-120	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 898867
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60454265013

METHOD BLANK: 3557948 Matrix: Water
Associated Lab Samples: 60454265013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/20/24 11:29	
Fluoride	mg/L	<0.12	0.20	0.12	06/20/24 11:29	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/20/24 11:29	

LABORATORY CONTROL SAMPLE: 3557949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	N2
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3557950 3557951

Parameter	Units	60454520006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	126	100	100	257	221	131	95	80-120	15	15	M1
Fluoride	mg/L	ND	50	50	59.6	51.2	119	102	80-120	15	15	N2
Sulfate	mg/L	930	1000	1000	1930	1920	100	99	80-120	1	15	

SAMPLE DUPLICATE: 3557952

Parameter	Units	60454520006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	126	120	4	15	
Fluoride	mg/L	ND	<2.5		15	N2
Sulfate	mg/L	930	956	3	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 899327
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265001, 60454265002

METHOD BLANK: 3559802 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/24/24 19:54	
Fluoride	mg/L	<0.12	0.20	0.12	06/24/24 19:54	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/24/24 19:54	

LABORATORY CONTROL SAMPLE: 3559803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	91	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	N2
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3559804 3559805

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.5	5	5	9.5	9.0	101	91	80-120	5	15	
Fluoride	mg/L	<0.12	2.5	2.5	2.3	2.3	92	94	80-120	2	15	N2
Sulfate	mg/L	32.9	10	10	44.0	45.8	110	129	80-120	4	15	M1

SAMPLE DUPLICATE: 3559806

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	4.5	4.2	6	15	
Fluoride	mg/L	<0.12	<0.12		15	N2
Sulfate	mg/L	32.9	32.8	0	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 899449
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

METHOD BLANK: 3560300 Matrix: Water
Associated Lab Samples: 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/25/24 09:36	
Fluoride	mg/L	<0.12	0.20	0.12	06/25/24 09:36	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/25/24 09:36	

METHOD BLANK: 3562193 Matrix: Water
Associated Lab Samples: 60454265003, 60454265004, 60454265005, 60454265006, 60454265007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/26/24 16:29	
Fluoride	mg/L	<0.12	0.20	0.12	06/26/24 16:29	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/26/24 16:29	

LABORATORY CONTROL SAMPLE: 3560301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	N2
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3562194

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	N2
Sulfate	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560302 3560303

Parameter	Units	60454984001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	79.5	100	100	174	169	94	90	80-120	2	15	
Fluoride	mg/L	ND	50	50	38.2	38.1	76	76	80-120	0	15	M1,N2
Sulfate	mg/L	188	100	100	293	290	104	102	80-120	1	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60454265

SAMPLE DUPLICATE: 3560304

Parameter	Units	60454984001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	79.5	79.9	1	15	
Fluoride	mg/L	ND	<2.5		15	N2
Sulfate	mg/L	188	195	4	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-1 **Lab ID: 60454265001** Collected: 06/03/24 11:37 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.899 ± 0.600 (0.744) C:NA T:86%**	pCi/L	07/09/24 12:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.656 ± 0.356 (0.623) C:86% T:78%**	pCi/L	06/25/24 12:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-6 **Lab ID: 60454265002** Collected: 06/03/24 12:23 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.0491 ± 0.500 (0.987) C:NA T:88%**	pCi/L	07/09/24 12:38	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.558 ± 0.311 (0.562) C:96% T:86%**	pCi/L	06/25/24 12:03	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-7(R) **Lab ID: 60454265003** Collected: 06/04/24 14:38 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.529 ± 0.664 (1.11) C:NA T:94%**	pCi/L	07/09/24 12:38	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.383 ± 0.276 (0.526) C:89% T:86%**	pCi/L	06/25/24 12:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-B1 **Lab ID: 60454265004** Collected: 06/04/24 15:47 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.201 ± 0.574 (1.07) C:NA T:86%**	pCi/L	07/09/24 12:38	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.655 ± 0.305 (0.495) C:89% T:89%**	pCi/L	06/25/24 12:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-B2 **Lab ID: 60454265005** Collected: 06/04/24 10:12 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0654 ± 0.462 (0.922) C:NA T:90%**	pCi/L	07/09/24 12:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.406 (0.597) C:88% T:85%**	pCi/L	06/25/24 12:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-DUP-1 **Lab ID: 60454265006** Collected: 06/03/24 00:00 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.254 ± 0.432 (1.01) C:NA T:89%**	pCi/L	07/09/24 12:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.682 ± 0.428 (0.818) C:82% T:86%**	pCi/L	06/25/24 12:05	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-FB-1 **Lab ID: 60454265007** Collected: 06/04/24 14:53 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.137 ± 0.782 (1.54) C:NA T:89%**	pCi/L	07/09/24 12:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.524 ± 0.383 (0.748) C:76% T:91%**	pCi/L	06/25/24 12:05	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MS-1 **Lab ID: 60454265008** Collected: 06/04/24 12:23 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**102.72 %REC ± NA (NA) C:NA T:NA**	pCi/L	07/09/24 12:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**86.90 %REC ± NA (NA) C:NA T:NA**	pCi/L	06/25/24 12:03	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MSD-1 **Lab ID: 60454265009** Collected: 06/04/24 12:23 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**100.52 %REC 2.17RPD ± NA (NA) C:NA T:NA**	pCi/L	07/09/24 12:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**90.88 %REC 4.47RPD ± NA (NA) C:NA T:NA**	pCi/L	06/25/24 12:03	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-2 **Lab ID: 60454265010** Collected: 06/06/24 12:01 Received: 06/06/24 18:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.000 ± 0.524 (1.07) C:NA T:92%**	pCi/L	06/27/24 14:20	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.530 ± 0.428 (0.864) C:82% T:87%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-4 **Lab ID: 60454265011** Collected: 06/05/24 16:05 Received: 06/06/24 18:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0691 ± 0.524 (1.04) C:NA T:90%**	pCi/L	06/27/24 14:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.52 ± 0.556 (0.847) C:75% T:87%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-5 **Lab ID: 60454265012** Collected: 06/05/24 14:44 Received: 06/06/24 18:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.285 ± 0.685 (1.43) C:NA T:93%**	pCi/L	06/27/24 14:20	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.591 ± 0.428 (0.841) C:75% T:88%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

Sample: R-MW-3 **Lab ID: 60454265013** Collected: 06/07/24 09:53 Received: 06/08/24 05:12 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.000 ± 0.776 (1.53) C:NA T:75%**	pCi/L	06/27/24 14:20	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.476 ± 0.424 (0.864) C:81% T:83%**	pCi/L	06/27/24 12:19	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 674850
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265008, 60454265009

METHOD BLANK: 3285467 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265008, 60454265009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.260 ± 0.323 (0.686) C:85% T:89%	pCi/L	06/25/24 12:03	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 674849
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265008, 60454265009

METHOD BLANK: 3285464 Matrix: Water
Associated Lab Samples: 60454265001, 60454265002, 60454265003, 60454265004, 60454265005, 60454265006, 60454265007, 60454265008, 60454265009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.152 ± 0.264 (0.665) C:NA T:88%	pCi/L	07/09/24 12:38	
Radium-226	0.238 ± 0.248 (0.350) C:NA T:95%	pCi/L	06/26/24 15:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 675263
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454265010, 60454265011, 60454265012, 60454265013

METHOD BLANK: 3287824 Matrix: Water
Associated Lab Samples: 60454265010, 60454265011, 60454265012, 60454265013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.329 ± 0.357 (0.746) C:76% T:85%	pCi/L	06/27/24 12:20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60454265

QC Batch: 675262
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454265010, 60454265011, 60454265012, 60454265013

METHOD BLANK: 3287823 Matrix: Water
Associated Lab Samples: 60454265010, 60454265011, 60454265012, 60454265013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.269 (0.433) C:NA T:89%	pCi/L	06/27/24 14:20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: AMEREN RCPA
Pace Project No.: 60454265

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1e	Ferrous Iron result is greater than the total. Data is within laboratory control limits.
B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454265001	**R-MW-1**	EPA 200.7	897974	EPA 200.7	898158
60454265002	**R-MW-6**	EPA 200.7	898012	EPA 200.7	898160
60454265003	**R-MW-7(R)**	EPA 200.7	898012	EPA 200.7	898160
60454265004	**R-MW-B1**	EPA 200.7	898012	EPA 200.7	898160
60454265005	**R-MW-B2**	EPA 200.7	898012	EPA 200.7	898160
60454265006	**R-DUP-1**	EPA 200.7	898012	EPA 200.7	898160
60454265007	**R-FB-1**	EPA 200.7	898012	EPA 200.7	898160
60454265010	**R-MW-2**	EPA 200.7	897802	EPA 200.7	897913
60454265011	**R-MW-4**	EPA 200.7	897802	EPA 200.7	897913
60454265012	**R-MW-5**	EPA 200.7	897802	EPA 200.7	897913
60454265013	**R-MW-3**	EPA 200.7	898016	EPA 200.7	898216
60454265001	**R-MW-1**	EPA 200.8	897965	EPA 200.8	900174
60454265002	**R-MW-6**	EPA 200.8	897973	EPA 200.8	898159
60454265003	**R-MW-7(R)**	EPA 200.8	897973	EPA 200.8	898159
60454265004	**R-MW-B1**	EPA 200.8	897973	EPA 200.8	898159
60454265005	**R-MW-B2**	EPA 200.8	897973	EPA 200.8	898159
60454265006	**R-DUP-1**	EPA 200.8	897973	EPA 200.8	898159
60454265007	**R-FB-1**	EPA 200.8	897973	EPA 200.8	898159
60454265010	**R-MW-2**	EPA 200.8	897965	EPA 200.8	900174
60454265011	**R-MW-4**	EPA 200.8	897965	EPA 200.8	900174
60454265012	**R-MW-5**	EPA 200.8	897965	EPA 200.8	900174
60454265013	**R-MW-3**	EPA 200.8	898026	EPA 200.8	898205
60454265001	**R-MW-1**	EPA 7470	898431	EPA 7470	898444
60454265002	**R-MW-6**	EPA 7470	898431	EPA 7470	898444
60454265003	**R-MW-7(R)**	EPA 7470	898431	EPA 7470	898444
60454265004	**R-MW-B1**	EPA 7470	898431	EPA 7470	898444
60454265005	**R-MW-B2**	EPA 7470	898431	EPA 7470	898444
60454265006	**R-DUP-1**	EPA 7470	898431	EPA 7470	898444
60454265007	**R-FB-1**	EPA 7470	898431	EPA 7470	898444
60454265010	**R-MW-2**	EPA 7470	898413	EPA 7470	898443
60454265011	**R-MW-4**	EPA 7470	898413	EPA 7470	898443
60454265012	**R-MW-5**	EPA 7470	898413	EPA 7470	898443
60454265013	**R-MW-3**	EPA 7470	898431	EPA 7470	898444
60454265001	**R-MW-1**	EPA 903.1	674849		
60454265002	**R-MW-6**	EPA 903.1	674849		
60454265003	**R-MW-7(R)**	EPA 903.1	674849		
60454265004	**R-MW-B1**	EPA 903.1	674849		
60454265005	**R-MW-B2**	EPA 903.1	674849		
60454265006	**R-DUP-1**	EPA 903.1	674849		
60454265007	**R-FB-1**	EPA 903.1	674849		
60454265008	**R-MS-1**	EPA 903.1	674849		
60454265009	**R-MSD-1**	EPA 903.1	674849		
60454265010	**R-MW-2**	EPA 903.1	675262		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454265011	**R-MW-4**	EPA 903.1	675262		
60454265012	**R-MW-5**	EPA 903.1	675262		
60454265013	**R-MW-3**	EPA 903.1	675262		
60454265001	**R-MW-1**	EPA 904.0	674850		
60454265002	**R-MW-6**	EPA 904.0	674850		
60454265003	**R-MW-7(R)**	EPA 904.0	674850		
60454265004	**R-MW-B1**	EPA 904.0	674850		
60454265005	**R-MW-B2**	EPA 904.0	674850		
60454265006	**R-DUP-1**	EPA 904.0	674850		
60454265007	**R-FB-1**	EPA 904.0	674850		
60454265008	**R-MS-1**	EPA 904.0	674850		
60454265009	**R-MSD-1**	EPA 904.0	674850		
60454265010	**R-MW-2**	EPA 904.0	675263		
60454265011	**R-MW-4**	EPA 904.0	675263		
60454265012	**R-MW-5**	EPA 904.0	675263		
60454265013	**R-MW-3**	EPA 904.0	675263		
60454265001	**R-MW-1**	SM 2320B	897433		
60454265002	**R-MW-6**	SM 2320B	897433		
60454265003	**R-MW-7(R)**	SM 2320B	897675		
60454265004	**R-MW-B1**	SM 2320B	897675		
60454265005	**R-MW-B2**	SM 2320B	897675		
60454265006	**R-DUP-1**	SM 2320B	897434		
60454265007	**R-FB-1**	SM 2320B	897675		
60454265010	**R-MW-2**	SM 2320B	897855		
60454265011	**R-MW-4**	SM 2320B	897676		
60454265012	**R-MW-5**	SM 2320B	897676		
60454265013	**R-MW-3**	SM 2320B	897856		
60454265001	**R-MW-1**	SM 2540C	897214		
60454265002	**R-MW-6**	SM 2540C	897214		
60454265003	**R-MW-7(R)**	SM 2540C	897214		
60454265004	**R-MW-B1**	SM 2540C	897214		
60454265005	**R-MW-B2**	SM 2540C	897214		
60454265006	**R-DUP-1**	SM 2540C	897214		
60454265007	**R-FB-1**	SM 2540C	897214		
60454265010	**R-MW-2**	SM 2540C	897633		
60454265011	**R-MW-4**	SM 2540C	897425		
60454265012	**R-MW-5**	SM 2540C	897425		
60454265013	**R-MW-3**	SM 2540C	897839		
60454265001	**R-MW-1**	SM 3500-Fe B#4	899661		
60454265002	**R-MW-6**	SM 3500-Fe B#4	899661		
60454265003	**R-MW-7(R)**	SM 3500-Fe B#4	899661		
60454265004	**R-MW-B1**	SM 3500-Fe B#4	899661		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA
Pace Project No.: 60454265

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454265005	**R-MW-B2**	SM 3500-Fe B#4	899661		
60454265006	**R-DUP-1**	SM 3500-Fe B#4	899661		
60454265007	**R-FB-1**	SM 3500-Fe B#4	899661		
60454265010	**R-MW-2**	SM 3500-Fe B#4	901024		
60454265011	**R-MW-4**	SM 3500-Fe B#4	900344		
60454265012	**R-MW-5**	SM 3500-Fe B#4	900344		
60454265013	**R-MW-3**	SM 3500-Fe B#4	901024		
60454265001	**R-MW-1**	SM 3500-Fe B#4	897692		
60454265002	**R-MW-6**	SM 3500-Fe B#4	897692		
60454265003	**R-MW-7(R)**	SM 3500-Fe B#4	897692		
60454265004	**R-MW-B1**	SM 3500-Fe B#4	897692		
60454265005	**R-MW-B2**	SM 3500-Fe B#4	897692		
60454265006	**R-DUP-1**	SM 3500-Fe B#4	897692		
60454265007	**R-FB-1**	SM 3500-Fe B#4	897692		
60454265010	**R-MW-2**	SM 3500-Fe B#4	900728		
60454265011	**R-MW-4**	SM 3500-Fe B#4	897825		
60454265012	**R-MW-5**	SM 3500-Fe B#4	897692		
60454265013	**R-MW-3**	SM 3500-Fe B#4	900728		
60454265001	**R-MW-1**	SM 4500-S-2 D	897121		
60454265002	**R-MW-6**	SM 4500-S-2 D	897121		
60454265003	**R-MW-7(R)**	SM 4500-S-2 D	897121		
60454265004	**R-MW-B1**	SM 4500-S-2 D	897121		
60454265005	**R-MW-B2**	SM 4500-S-2 D	897121		
60454265006	**R-DUP-1**	SM 4500-S-2 D	897121		
60454265007	**R-FB-1**	SM 4500-S-2 D	897121		
60454265010	**R-MW-2**	SM 4500-S-2 D	897287		
60454265011	**R-MW-4**	SM 4500-S-2 D	897287		
60454265012	**R-MW-5**	SM 4500-S-2 D	897287		
60454265013	**R-MW-3**	SM 4500-S-2 D	897823		
60454265001	**R-MW-1**	EPA 300.0	899327		
60454265002	**R-MW-6**	EPA 300.0	899327		
60454265003	**R-MW-7(R)**	EPA 300.0	899449		
60454265004	**R-MW-B1**	EPA 300.0	899449		
60454265005	**R-MW-B2**	EPA 300.0	899449		
60454265006	**R-DUP-1**	EPA 300.0	899449		
60454265007	**R-FB-1**	EPA 300.0	899449		
60454265010	**R-MW-2**	EPA 300.0	898465		
60454265011	**R-MW-4**	EPA 300.0	898465		
60454265012	**R-MW-5**	EPA 300.0	898465		
60454265013	**R-MW-3**	EPA 300.0	898867		

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WO# : 60454265

60454265

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 1.8/1.9/2.1 Corr. Factor 0.0 Corrected 1.8/1.9/2.1/17.4 19.1

Date and initials of person examining contents: 6/6/24

Temperature should be above freezing to 6°C 17.4/19.1

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 67127/606203	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60454265

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5	Invoice To:	Mark Haddock
Project Name:	AMEREN RCPA	Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 1 1 3 3 3 3 1

Identify Container Preservative Type***: 1 1 1 6 2 2 2

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

Lab Use Only:
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086876

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200 7)*	Appendix IV Metals (200 7/200 8/7470)*	Radium 226 & Radium 228	Sample Comment	Preservation non-conformance identified for sample.
R-MW-1	WT	G			6-3-24	1137	6			✓	✓	✓	✓		✓	✓		
R-MW-2	WT																	
R-MW-3	WT																	
R-MW-4	WT																	
R-MW-5	WT																	
R-MW-6	WT	G			6-3-24	1223	6			✓	✓	✓	✓	✓	✓	✓		
R-MW-7(r)	WT	G			6-4-24	1438	6			✓	✓	✓	✓	✓	✓	✓		
R-MW-B1	WT	G			6-4-24	1547	6			✓	✓	✓	✓	✓	✓	✓		
R-MW-B2	WT	G			6-4-24	1012	6			✓	✓	✓	✓	✓	✓	✓		
R-DUP-1	WT	G			6-3-24	-	6			✓	✓	✓	✓	✓	✓	✓		

Additional Instructions from Pace®:
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By:
(Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice
5	T499	0.0	1.8/1.9/2.1/17.4/19.		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-4-24/1730		6/5/24 0610	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60454465

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units
R-FB-1	WT	G			6-4-24	1453	6		
R-MS-1	WT	G			6-3-24	1223	6		
R-MSD-1	WT	G			6-3-24	1223	6		

Specify Container Size **

Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)*	Radium 226 & Radium 228				Sample Comment
1	1	3	3	3	3	1				
Identify Container Preservative Type***										
1	1	1	6	2	2	2				
Analysis Requested										
✓	✓	✓	✓	✓	✓	✓				
✓	✓	✓	✓	✓	✓	✓				Collected @ R-MW-6
✓	✓	✓	✓	✓	✓	✓				Collected @ R-MW-6

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086876

Preservation non-conformance identified for sample

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By:
(Printed Name): Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T299	0.0	1.8/1.9/2.1	1.8/1.9/2.1	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-4-24/1730		6/5/24 0610	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

Client: Rocksmith Geoeng Profile/EZ # E238 EZ3086876

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	2	1				1					
2																																
3																																
4																																
5																																
6	WT																		3		3	2	3				3					
7	↓																		1		1	2	1				1					
8																			↓		↓	↓	↓				↓					
9																																
10	↓																		↓		↓	↓	↓				↓					
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454265

Client: Rocksmith Profile/EZ # EZ 3086876

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	2	1				1					
2	↓																															
3																						2										
4																						2										
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

(ONLY 109 RAD)

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454265

WO# : 60454265

60454265

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample	
	Revision: 2	Effective Date: 01/12/2022

Client Name: Rocksmith

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: T249 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 1.4 **Corr. Factor** 0.0 **Corrected** 1.4

Date and initials of person examining contents: AF 6/8

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	Cooler 2 – 22.2
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☑Yes ☐No ☐N/A LOT#: 6210106/6210006	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)**	Radium 226 & Radium 228	Sample Comment
~~R-FB-1~~ R-MW-3	WT	G			6-7-24	0953	6			✓	✓	✓	✓	✓	✓	✓	6049426S
~~R-MS-1~~	WT																
~~R-MSD-1~~	WT																

Specify Container Size **: 1 1 3 3 3 3 1

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

Identify Container Preservative Type***: 1 1 1 6 2 2 2

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

Lab Use Only:
Proj. Mgr: **Jamie Church**
AcctNum / Client ID:
Table #:
Profile / Template: **15854**
Prelog / Bottle Ord. ID: **EZ 3086876**

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By:
(Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				1.4	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-7-24/1336		6/8 0912	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa
Client: Rocksmith Profile/EZ # Append to 60454265

Site: Ameren RCPA Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	2	1				1					
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60454265

WO# : 60454265

60454265

DC#_Title: ENV-FRM-LENE-0009_Sample C		
Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T249 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2.9 **Corr. Factor** 0.0 **Corrected** 2.9

Date and initials of person examining contents: AF 6/7

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	Cooler 2 - 23.8 2,-4.2
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	4 - 23.8 5-7.8
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 63098010	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)*	Radium 226 & Radium 228	Container Size **	Preservative Type ***	Sample Comment
R-MW-1	WT																1	1	6049426S
R-MW-2	WT	G			6-6-24	1201	6			✓	✓	✓	✓	✓	✓	✓	3	6	
R-MW-3	WT																3	1	
R-MW-4	WT	G			6-5-24	1603	6			✓	✓	✓	✓	✓	✓	✓	3	6	
R-MW-5	WT	G			6-5-24	1444	6			✓	✓	✓	✓	✓	✓	✓	3	6	
R-MW-6	WT																3	1	
R-MW-7(r)	WT																3	1	
R-MW-B1	WT																3	1	
R-MW-B2	WT																3	1	
R-DUP-1	WT																3	1	

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086876

Preservation non-conformance identified for sample

Additional Instructions from Pace®:
**App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
***App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg

Collected By:
(Printed Name): Grant Marx
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				2.9	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-6-24/1830		6/7 945	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa
Client: Rocksmith Profile/EZ # Append to 60454265

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	2	1				1					1
2																			1		1	2	1				1					
3																			1		1	2	1				1					
4																			1		1	2	1				1					
5																			1		1	2	1				1					
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454265

updated 1lwd/coc received 6/11/24 via email -PS

Internal Transfer Chain of Custody

☐ Rush Multiplier____X

☐ Samples Pre-Logged into eCOC

State Of Origin: MO

Cert. Needed: ☐ Yes ☒ No

Workorder: 60454265 **Workorder Name:** AMEREN RCPA

Owner Received Date: 6/5/2024 **Results Requested By:** 6/21/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228										LAB USE ONLY
1	R-MW-1	PS	6/3/2024 11:37	60454265001	Water	2						X	X										001
2	R-MW-6	RQS	6/3/2024 12:23	60454265002	Water	2						X	X										MS/MSD 002
3	R-MW-7(R)	PS	6/4/2024 14:38	60454265003	Water	2						X	X										003
4	R-MW-B1	PS	6/4/2024 15:47	60454265004	Water	2						X	X										004
5	R-MW-B2	PS	6/4/2024 10:12	60454265005	Water	2						X	X										005
6	R-DUP-1	PS	6/3/2024 00:00	60454265006	Water	2						X	X										006
7	R-FB-1	PS	6/4/2024 14:53	60454265007	Water	2						X	X										007
8	R-MS-1	PS	6/4/2024 12:23	60454265008	Water	2						X	X										008
9	R-MSD-1	PS	6/4/2024 12:23	60454265009	Water	2						X	X										009
10	R-MW-2	PS	6/6/2024 12:01	60454265010	Water	2						X	X										
11	R-MW-4	PS	6/5/2024 16:05	60454265011	Water	2						X	X										
12	R-MW-5	PS	6/5/2024 14:44	60454265012	Water	2						X											
13																							

WO# : 30691013

30691013

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			[signature]	6/7/24 1030	KS sample location: Fedex
2					
3					

Cooler Temperature on Receipt ___ °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 30691013
PM: MAR Due Date: 06/28/24
CLIENT: PACE_60_LEKS

	DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg
Pace ANALYTICAL SERVICES	Effective Date: 01/04/2024

WO#: 30691013
PM: MAR Due Date: 06/28/24
CLIENT: PACE_60_LEKS

Client Name: Pace-KS

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Ot

Initial / Date

Tracking Number: 714623800873

Examined By: PS 6/10/24
Labeled By: PS 6/11/24
Temped By: ____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☑ No

Thermometer Used: ____ **Type of Ice:** Wet Blue (None)

Cooler Temperature: Observed Temp ____ °C Correction Factor: ____ °C Final Temp: ____ °C

Temp should be above freezing to 6°C

pH paper Lot# 10D2931 **D.P.D. Residual Chlorine Lot #** ____

Comments:	Yes	No	NA	
Chain of Custody Present	✓			1. Received COC via PM 6/11/24
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished		✓		3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume: PS 6/11/24	*	✓		9. Missing Samples 010, 011, 012 from COC.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dichlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed: PS Date: 6/7/24 Survey Meter SN: 25014380

Comments: * Received without COC. Sample on COC listed as MS/MSD (RQS) but no other samples match.

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☒ No

Workorder: 60454265 Workorder Name: AMEREN RCPA

Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: Radium 226	Radium 228											LAB USE ONLY
1	R-MW-1	PS	6/3/2024 11:37	60454265001	Water	2						X	X											
2	R-MW-6	RQS	6/3/2024 12:23	60454265002	Water	2						X	X											MS/MSD
3	R-MW-7(R)	PS	6/4/2024 14:38	60454265003	Water	2						X	X											
4	R-MW-B1	PS	6/4/2024 15:47	60454265004	Water	2						X	X											
5	R-MW-B2	PS	6/4/2024 10:12	60454265005	Water	2						X	X											
6	R-DUP-1	PS	6/3/2024 00:00	60454265006	Water	2						X	X											
7	R-FB-1	PS	6/4/2024 14:53	60454265007	Water	2						X	X											
8	R-MS-1	PS	6/4/2024 12:23	60454265008	Water	2						X	X											
9	R-MSD-1	PS	6/4/2024 12:23	60454265009	Water	2						X	X											
10	R-MW-2	PS	6/6/2024 12:01	60454265010	Water	2						X	X											010
11	R-MW-4	PS	6/5/2024 16:05	60454265011	Water	2						X	X											011
12	R-MW-5	PS	6/5/2024 14:44	60454265012	Water	2						X	X											012
13	R-MW-3	PS	6/7/2024 09:53	60454265013	Water	2						X	X											013

WO# : 30691294

30691294

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			[signature]	6/4/24 1045	KS sample location: Fedex
2					
3					

Cooler Temperature on Receipt ___ °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO# : 30691294
PM: MAR Due Date: 07/02/24
CLIENT: PACE_60_LEKS

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO# : 30691294

PM: MAR Due Date: 07/02/24

CLIENT: PACE_60_LEKS

Client Name: Pace-KS

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 7146 2380 2887

Initial / Date

Examined By: LB 6-11-24

Labeled By: LB 6-11-24

Temped By: —

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals Intact:** ☐ Yes ☒ No

Thermometer Used: — **Type of Ice:** Wet Blue (None)

Cooler Temperature: Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 100293 / D.P.D. Residual Chlorine Lot #
Chain of Custody Present	X			1.
Chain of Custody Filled Out:	X			2.
-Were client corrections present on COC		X		
Chain of Custody Relinquished		X		3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC:	X			5.
-Includes date/time/ID				
Matrix: WT				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used	X			
Containers Intact:	X			11.
Orthophosphate field filtered:			X	12.
Hex Cr Aqueous samples field filtered:			X	13.
Organic Samples checked for dichlorination			X	14:
Filtered volume received for dissolved tests:			X	15:
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	X			16. pH<2
All containers meet method preservation requirements:	X			Initial when completed LB / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			X	17.
624.1: Headspace in VOA Vials (0mm)			X	18.
Radon: Headspace in RAD Vials (0mm)			X	19.
Trip Blank Present:			X	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	X			Initial when completed LB / Date: 6-11-24 / Survey Meter SN: 25014380

Comments: 001-009 previously sent. 010-013 logged separately.

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Memorandum

August 7, 2024

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008-24
CC:	Mark Haddock, Jeffrey Ingram		
From:	Jack Rasmussen	**Email:**	Jack.Rasmussen@Rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA – Data Package 60454265**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a compound was analyzed outside of hold time, the sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a compound was detected in a blank (i.e. method, field), and the blank comparison criterion was not met, associated sample results were qualified as estimates (J) or non-detects (U).
- When a compound was detected in a sample result between the Method Detection Limit (MDL) and Practical Quantification Limit (PQL), the results were recorded at the detection value and qualified as estimates (J).
- When a duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA
Project Number: 23008-24
Reviewer: J. Rasmussen
Validation Date: 8/7/2024

Laboratory: Pace Analytical
SDG #: 60454265
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); SM 2320B (Alkalinity); SM 2540C (TDS); EPA 300.0 (Anions);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ EPA 903.1/904.0 (Radium 226+228); SM 3500-Fe B#4
Sample Names R-MW-1, R-MW-6, R-MW-7(R), R-MW-B1, R-MW-B2, R-DUP-1, R-FB-1, R-MS-1, R-MSD-1, R-MW-2, R-MW-4, R-MW-5, R-MW-3

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			06/03/2024-06/07/2024
b) Sampling team indicated?	x			JTA, GTM, JTR
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?		x		See Notes
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?	x			See Notes
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	**YES**	**NO**	**NA**	**COMMENTS**
a) Were analytes detected in the method blank(s)?	x			See Notes
b) Were analytes detected in the field blank(s)?	x			See Notes
c) Were analytes detected in the equipment blank(s)?			x	
d) Were analytes detected in the trip blank(s)?			x	

Laboratory Control Sample (LCS)	**YES**	**NO**	**NA**	**COMMENTS**
a) Was a LCS analyzed once per SDG?	x			
b) Were the proper analytes included in the LCS?	x			
c) Was the LCS accuracy criteria met?	x			

Duplicates	**YES**	**NO**	**NA**	**COMMENTS**
a) Were field duplicates collected (note original and duplicate sample names)?	x			R-DUP-1 collected @ R-MW-1
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			See Notes
d) Were lab dup. precision criteria met (note RPD)?		x		

Blind Standards	**YES**	**NO**	**NA**	**COMMENTS**
a) Was a blind standard used (indicate name, analytes included and concentrations)?			x	
b) Was the %D within control limits?			x	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	**YES**	**NO**	**NA**	**COMMENTS**
a) Was MS accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
b) Was MSD accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
c) Were MS/MSD precision criteria met?	x			

Comments/Notes:

General:

Ferrous iron samples were all analyzed outside of hold time, results qualified as estimates.

Alkalinity, chloride and/or sulfate were diluted in several samples, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blanks:

3553936: iron (16.9J), sodium (126J). Associated with samples -010 through -012. Sample -010 iron result > RL and < 10x blank, result qualified as estimate. All other samples for both iron and sodium results > RL and 10x blank, no qualification necessary.

3554753: sodium (229J), associated with samples -002 through -007. Sample -007 detected as non-detect, no qualification necessary. All other samples results > RL and 10x blank, no qualification necessary.

3551270: TDS (6.0), associated with samples -001 through -007. Sample -007 result > RL and < 10x blank, result qualified as estimate. All other samples results > RL and 10x blank, no qualification necessary.

Field Blanks:

R-FB-1 @ R-MW-7(R): Iron (11.7), TDS (8.5), ferric iron (0.0077J).

Iron > RL and 10x blank, no qualification necessary. TDS > RL and 10x blank, no qualification. Ferric iron > RL and 10x blank, no qualification necessary.

Duplicates:

R-DUP-1 @ R-MW-1: field duplicate RPD exceeds control limit (20%) for arsenic (120%), ferric iron (86%), iron total (65%), results qualified as estimates.

Cadmium detected in original sample, not detected in duplicate: results qualified as estimates. Chromium detected in original sample, not detected in duplicate; results qualified as estimates. Radium-226 detected in original sample, not detected in duplicate; results qualified as estimates.

Lab duplicate max RPD: 10%: alkalinity, TDS; 15%: chloride, fluoride, sulfate; 20%: ferrous iron, sulfide.

3551277: Lab duplicate exceeds max RPD for TDS, associated with sample -002, result qualified as estimate.

MS/MSD:

3553938/3553939: MSD recovery low for calcium, MS and RPD within control limits, associated with unrelated sample, no qualification necessary.

3553940: MS recovery low for sodium, associated with unrelated sample, no qualification necessary.

3554539: MS recovery low for boron and sodium, associated with unrelated sample, no qualification necessary.

3554757: MS recovery low for calcium, associated with unrelated sample, no qualification necessary.

3554771: MS recovery high for boron, calcium, magnesium, potassium, sodium, associated with unrelated sample, no qualification necessary.

3551658/3551659: MS/MSD recovery low for sulfide, associated with unrelated sample, no qualification necessary.

3556637/3556638: MS recovery high for fluoride, MSD and RPD limits within control limits, associated with unrelated sample, no qualification necessary.

3556639: MS recovery high for sulfate, associated with unrelated sample, no qualification necessary.

3557950/3557951: MS recovery high for chloride, MSD and RPD within control limits, associated with unrelated sample, no qualification necessary.

3559804/3559805: MSD recovery high for sulfate, MS and RPD within control limits, associated with sample -002, no qualification necessary.

3560302/3560303: MS/MSD recovery low for fluoride, associated with unrelated sample, no qualification necessary.

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-MW-1	Iron, Ferrous	0.041	UJ	Analyzed outside of hold time
R-MW-6	"	0.041	UJ	"
R-MW-7(R)	"	0.17	J	"
R-MW-B1	"	0.15	J	"
R-MW-B2	"	0.076	J	"
R-DUP-1	"	0.041	UJ	"
R-FB-1	"	0.041	UJ	"
R-MW-2	"	0.29	J	"
R-MW-4	"	0.48	J	"
R-MW-5	"	0.082	J	"
R-MW-3	"	0.32	J	"
R-MW-2	Iron	90.4	J	Detected in method blank, result > RL and < 10x blank
R-FB-1	TDS	8.5	J	"
R-MW-1	Arsenic	4.3	J	Field duplicate RPD exceeds control limits
R-DUP-1	"	17.4	J	"
R-MW-1	Iron, Ferric	0.017	J	"
R-DUP-1	"	0.043	J	"
R-MW-1	Iron, Total	29.1	J	"
R-DUP-1	"	57.4	J	"
R-MW-1	Cadmium	0.053	J	Detected in original sample, not-detected in field duplicate
R-DUP-1	"	0.050	UJ	"
R-MW-1	Chromium	0.34	J	"
R-DUP-1	"	0.30	UJ	"
R-MW-1	Radium-226	0.899	J	"
R-DUP-1	"	1.01	UJ	"
R-MW-6	TDS	387	J	Lab DUP RPD exceeds control limits

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: 08/07/2024

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

July 22, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between June 05, 2024 and June 08, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

REV-1, 7/23/24: Updated Project Name from AMEREN RCRA-CA to AMEREN RCPA-CA.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.

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CERTIFICATIONS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 2000302023-6
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60454268001	**R-P-10S**	Water	06/04/24 13:35	06/05/24 06:10
60454268002	**R-P-16S**	Water	06/03/24 10:28	06/05/24 06:10
60454268003	**R-P-17D**	Water	06/03/24 12:58	06/05/24 06:10
60454268004	**R-P-29S**	Water	06/04/24 11:26	06/05/24 06:10
60454268005	**R-P-29D**	Water	06/04/24 11:23	06/05/24 06:10
60454268006	**R-P-31S**	Water	06/03/24 16:20	06/05/24 06:10
60454268007	**R-CA-DUP-1**	Water	06/03/24 00:00	06/05/24 06:10
60454268008	**R-CA-FB-1**	Water	06/03/24 15:55	06/05/24 06:10
60454268009	**R-P-05S**	Water	06/05/24 13:45	06/07/24 05:45
60454268010	**R-P-17S**	Water	06/06/24 10:48	06/07/24 05:45
60454268011	**R-P-17I**	Water	06/06/24 10:20	06/07/24 05:45
60454268012	**R-P-21S**	Water	06/06/24 16:19	06/07/24 05:45
60454268013	**R-P-21I**	Water	06/06/24 14:24	06/07/24 05:45
60454268014	**R-P-21D**	Water	06/06/24 16:10	06/07/24 05:45
60454268015	**R-P-22S**	Water	06/05/24 18:45	06/07/24 05:45
60454268016	**R-P-22D**	Water	06/05/24 17:29	06/07/24 05:45
60454268017	**R-P-30S**	Water	06/05/24 10:35	06/07/24 05:45
60454268018	**R-CA-DUP-2**	Water	06/05/24 00:00	06/07/24 05:45
60454268019	**R-CA-FB-2**	Water	06/05/24 12:55	06/07/24 05:45
60454268020	**R-CA-MS-1**	Water	06/06/24 14:24	06/07/24 05:45
60454268021	**R-CA-MSD-1**	Water	06/06/24 14:24	06/07/24 05:45
60454268022	**R-P-17D**	Water	06/03/24 12:58	06/08/24 09:12
60454268023	**R-P-19S**	Water	06/07/24 10:23	06/08/24 09:12
60454268024	**R-P-19I**	Water	06/07/24 11:10	06/08/24 09:12
60454268025	**R-P-19D**	Water	06/07/24 10:48	06/08/24 09:12

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60454268001	**R-P-10S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268002	**R-P-16S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268003	**R-P-17D**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268004	**R-P-29S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268005	**R-P-29D**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268006	**R-P-31S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268007	**R-CA-DUP-1**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	PL	3	PASI-K
60454268008	**R-CA-FB-1**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268009	**R-P-05S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268010	**R-P-17S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268011	**R-P-17I**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268012	**R-P-21S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268013	**R-P-21I**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268014	**R-P-21D**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268015	**R-P-22S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268016	**R-P-22D**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268017	**R-P-30S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60454268018	**R-CA-DUP-2**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268019	**R-CA-FB-2**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268020	**R-CA-MS-1**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
60454268021	**R-CA-MSD-1**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
60454268022	**R-P-17D**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
60454268023	**R-P-19S**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268024	**R-P-19I**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60454268025	**R-P-19D**	EPA 200.7	JXD	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	MLD	1	PASI-K
		EPA 903.1	DMC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 3500-Fe B#4	CRN2	1	PASI-K
		SM 3500-Fe B#4	DLJ	1	PASI-K
		SM 4500-S-2 D	DLJ	1	PASI-K
		EPA 300.0	PL	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-10S **Lab ID: 60454268001** Collected: 06/04/24 13:35 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**145**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:19	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:19	7440-41-7	
Boron	**2410**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:19	7440-42-8	
Calcium	**93600**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:19	7440-70-2	
Cobalt	**1.5J**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:19	7440-48-4	
Iron	**735**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:19	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:19	7439-92-1	
Lithium	**20.2**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:19	7439-93-2	
Magnesium	**13900**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:19	7439-95-4	
Manganese	**696**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:19	7439-96-5	
Molybdenum	**46.4**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:19	7439-98-7	
Potassium	**4440**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:19	7440-09-7	
Sodium	**46600**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:19	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:33	7440-36-0	
Arsenic	**8.2**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:33	7440-38-2	
Cadmium	**0.20J**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:33	7440-43-9	
Chromium	**0.51J**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:33	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:33	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:52	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**370**	mg/L	20.0	10.5	1		06/11/24 14:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**465**	mg/L	10.0	10.0	1		06/07/24 11:03		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.69**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.044J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-10S **Lab ID: 60454268001** Collected: 06/04/24 13:35 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**14.4**	mg/L	1.0	0.53	1		06/25/24 14:30	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 14:30	16984-48-8	N2
Sulfate	**52.5**	mg/L	20.0	11.0	20		06/25/24 14:44	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-16S **Lab ID: 60454268002** Collected: 06/03/24 10:28 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**109**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:21	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:21	7440-41-7	
Boron	**162**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:21	7440-42-8	
Calcium	**113000**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:21	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:21	7440-48-4	
Iron	**143**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:21	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:21	7439-92-1	
Lithium	**21.1**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:21	7439-93-2	
Magnesium	**29800**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:21	7439-95-4	
Manganese	**4.1J**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:21	7439-96-5	
Molybdenum	**7.8J**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:21	7439-98-7	
Potassium	**2080**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:21	7440-09-7	
Sodium	**9480**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:21	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:35	7440-36-0	
Arsenic	**1.5**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:35	7440-38-2	
Cadmium	**0.054J**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:35	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:35	7440-47-3	
Selenium	**1.9**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:35	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:54	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**444**	mg/L	20.0	10.5	1		06/10/24 15:07		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**426**	mg/L	10.0	10.0	1		06/07/24 11:00		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.14**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-16S **Lab ID: 60454268002** Collected: 06/03/24 10:28 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1.7**	mg/L	1.0	0.53	1		06/25/24 14:58	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 14:58	16984-48-8	N2
Sulfate	**23.5**	mg/L	5.0	2.8	5		06/25/24 15:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17D **Lab ID: 60454268003** Collected: 06/03/24 12:58 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**95.6**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:22	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:22	7440-41-7	
Boron	**7500**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:22	7440-42-8	
Calcium	**41200**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:22	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:22	7440-48-4	
Iron	**2230**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:22	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:22	7439-92-1	
Lithium	**37.2**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:22	7439-93-2	
Magnesium	**8840**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:22	7439-95-4	
Manganese	**365**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:22	7439-96-5	
Molybdenum	**620**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:22	7439-98-7	
Potassium	**6990**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:22	7440-09-7	
Sodium	**135000**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:22	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:38	7440-36-0	
Arsenic	**1.2**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:38	7440-38-2	
Cadmium	**0.24J**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:38	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:38	7440-47-3	
Selenium	**0.26J**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:38	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:56	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**176**	mg/L	20.0	10.5	1		06/10/24 15:14		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**568**	mg/L	10.0	10.0	1		06/07/24 11:01		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**2.1**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.15J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17D **Lab ID: 60454268003** Collected: 06/03/24 12:58 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.035J**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**28.6**	mg/L	5.0	2.6	5		06/25/24 15:39	16887-00-6	
Fluoride	**0.24**	mg/L	0.20	0.12	1		06/25/24 15:25	16984-48-8	N2
Sulfate	**257**	mg/L	50.0	27.5	50		06/26/24 17:18	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-29S **Lab ID: 60454268004** Collected: 06/04/24 11:26 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**336**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:24	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:24	7440-41-7	
Boron	**79.6J**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:24	7440-42-8	
Calcium	**120000**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:24	7440-70-2	M1,P6
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:24	7440-48-4	
Iron	**15800**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:24	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:24	7439-92-1	
Lithium	**10.0**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:24	7439-93-2	
Magnesium	**27400**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:24	7439-95-4	
Manganese	**497**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:24	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:24	7439-98-7	
Potassium	**4590**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:24	7440-09-7	
Sodium	**12500**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:24	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:41	7440-36-0	
Arsenic	**43.5**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:41	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:41	7440-43-9	
Chromium	**0.55J**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:41	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:41	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/20/24 10:40	06/20/24 14:06	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**484**	mg/L	40.0	21.0	2		06/11/24 14:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**426**	mg/L	10.0	10.0	1		06/07/24 11:04		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**15.7**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.14J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-29S **Lab ID: 60454268004** Collected: 06/04/24 11:26 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**13.0**	mg/L	1.0	0.53	1		06/25/24 16:06	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 16:06	16984-48-8	N2
Sulfate	**<0.55**	mg/L	1.0	0.55	1		06/25/24 16:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-29D **Lab ID: 60454268005** Collected: 06/04/24 11:23 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**136**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:28	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:28	7440-41-7	
Boron	**85.3J**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:28	7440-42-8	
Calcium	**90500**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:28	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:28	7440-48-4	
Iron	**3310**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:28	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:28	7439-92-1	
Lithium	**52.7**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:28	7439-93-2	
Magnesium	**27800**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:28	7439-95-4	
Manganese	**123**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:28	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:28	7439-98-7	
Potassium	**5160**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:28	7440-09-7	
Sodium	**77600**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:28	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:47	7440-36-0	
Arsenic	**1.1**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:47	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:47	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:47	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:47	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/20/24 10:40	06/20/24 14:17	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**323**	mg/L	20.0	10.5	1		06/11/24 14:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**588**	mg/L	13.3	13.3	1		06/07/24 11:04		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**3.3**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-29D **Lab ID: 60454268005** Collected: 06/04/24 11:23 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**138**	mg/L	10.0	5.3	10		06/25/24 17:16	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 16:34	16984-48-8	N2
Sulfate	**28.3**	mg/L	10.0	5.5	10		06/25/24 17:16	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-31S **Lab ID: 60454268006** Collected: 06/03/24 16:20 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**144**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:29	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:29	7440-41-7	
Boron	**300**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:29	7440-42-8	
Calcium	**65500**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:29	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:29	7440-48-4	
Iron	**4110**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:29	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:29	7439-92-1	
Lithium	**10.7**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:29	7439-93-2	
Magnesium	**11400**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:29	7439-95-4	
Manganese	**1130**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:29	7439-96-5	
Molybdenum	**7.2J**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:29	7439-98-7	
Potassium	**3950**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:29	7440-09-7	
Sodium	**11400**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:29	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:52	7440-36-0	
Arsenic	**16.9**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:52	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:52	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:52	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:52	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/20/24 10:40	06/20/24 14:20	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**225**	mg/L	20.0	10.5	1		06/10/24 15:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**272**	mg/L	5.0	5.0	1		06/07/24 11:01		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**4.0**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.082J**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-31S **Lab ID: 60454268006** Collected: 06/03/24 16:20 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.0**	mg/L	1.0	0.53	1		06/25/24 17:30	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 17:30	16984-48-8	N2
Sulfate	**28.9**	mg/L	2.0	1.1	2		06/25/24 17:44	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-DUP-1 **Lab ID: 60454268007** Collected: 06/03/24 00:00 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**107**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:31	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:31	7440-41-7	
Boron	**158**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:31	7440-42-8	
Calcium	**111000**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:31	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:31	7440-48-4	
Iron	**131**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:31	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:31	7439-92-1	
Lithium	**21.6**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:31	7439-93-2	
Magnesium	**29200**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:31	7439-95-4	
Manganese	**4.3J**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:31	7439-96-5	
Molybdenum	**7.6J**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:31	7439-98-7	
Potassium	**2040**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:31	7440-09-7	
Sodium	**9320**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:31	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:55	7440-36-0	
Arsenic	**1.4**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:55	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:55	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:55	7440-47-3	
Selenium	**1.8**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:55	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/20/24 10:40	06/20/24 14:22	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**444**	mg/L	20.0	10.5	1		06/10/24 15:25		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**431**	mg/L	10.0	10.0	1		06/07/24 11:01		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.12**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-DUP-1 **Lab ID: 60454268007** Collected: 06/03/24 00:00 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1.8**	mg/L	1.0	0.53	1		06/25/24 17:57	16887-00-6	
Fluoride	**0.18J**	mg/L	0.20	0.12	1		06/25/24 17:57	16984-48-8	N2
Sulfate	**22.4**	mg/L	10.0	5.5	10		06/25/24 18:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-FB-1 **Lab ID: 60454268008** Collected: 06/03/24 15:55 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**<0.64**	ug/L	5.0	0.64	1	06/13/24 09:39	06/17/24 14:38	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:39	06/17/24 14:38	7440-41-7	
Boron	**<6.4**	ug/L	100	6.4	1	06/13/24 09:39	06/17/24 14:38	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	06/13/24 09:39	06/17/24 14:38	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:39	06/17/24 14:38	7440-48-4	
Iron	**<9.1**	ug/L	50.0	9.1	1	06/13/24 09:39	06/17/24 14:38	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:39	06/17/24 14:38	7439-92-1	
Lithium	**<3.7**	ug/L	10.0	3.7	1	06/13/24 09:39	06/17/24 14:38	7439-93-2	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	06/13/24 09:39	06/17/24 14:38	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	06/13/24 09:39	06/17/24 14:38	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:39	06/17/24 14:38	7439-98-7	
Potassium	**<69.7**	ug/L	500	69.7	1	06/13/24 09:39	06/17/24 14:38	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	06/13/24 09:39	06/17/24 14:38	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/25/24 13:58	7440-36-0	
Arsenic	**<0.13**	ug/L	1.0	0.13	1	06/13/24 09:52	06/25/24 13:58	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 09:52	06/25/24 13:58	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/13/24 09:52	06/25/24 13:58	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 09:52	06/25/24 13:58	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 09:52	06/25/24 13:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 14:59	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		06/10/24 15:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**<5.0**	mg/L	5.0	5.0	1		06/07/24 11:01		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-FB-1 **Lab ID: 60454268008** Collected: 06/03/24 15:55 Received: 06/05/24 06:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/07/24 14:41	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.53**	mg/L	1.0	0.53	1		06/25/24 18:25	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/25/24 18:25	16984-48-8	N2
Sulfate	**<0.55**	mg/L	1.0	0.55	1		06/25/24 18:25	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-05S **Lab ID: 60454268009** Collected: 06/05/24 13:45 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**246**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:04	7440-39-3	
Beryllium	**0.26J**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:04	7440-41-7	
Boron	**2880**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:04	7440-42-8	
Calcium	**70700**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:04	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:04	7440-48-4	
Iron	**12600**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:04	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:04	7439-92-1	
Lithium	**14.3**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:04	7439-93-2	
Magnesium	**24400**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:04	7439-95-4	
Manganese	**298**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:04	7439-96-5	
Molybdenum	**5.2J**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:04	7439-98-7	
Potassium	**5850**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:04	7440-09-7	
Sodium	**21600**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:04	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:43	7440-36-0	
Arsenic	**175**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:43	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:43	7440-43-9	
Chromium	**0.46J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:43	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:43	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:29	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**357**	mg/L	40.0	21.0	2		06/11/24 16:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**347**	mg/L	10.0	10.0	1		06/10/24 13:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**12.3**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.31**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-05S **Lab ID: 60454268009** Collected: 06/05/24 13:45 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.028J**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**16.3**	mg/L	1.0	0.53	1		06/19/24 13:44	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 13:44	16984-48-8	N2
Sulfate	**2.9**	mg/L	1.0	0.55	1		06/19/24 13:44	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17S **Lab ID: 60454268010** Collected: 06/06/24 10:48 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**95.5**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:06	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:06	7440-41-7	
Boron	**2440**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:06	7440-42-8	
Calcium	**79600**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:06	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:06	7440-48-4	
Iron	**5220**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:06	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:06	7439-92-1	
Lithium	**26.9**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:06	7439-93-2	
Magnesium	**18100**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:06	7439-95-4	
Manganese	**904**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:06	7439-96-5	
Molybdenum	**133**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:06	7439-98-7	
Potassium	**4030**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:06	7440-09-7	
Sodium	**119000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:06	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.14J**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:48	7440-36-0	
Arsenic	**26.7**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:48	7440-38-2	
Cadmium	**0.13J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:48	7440-43-9	
Chromium	**0.40J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:48	7440-47-3	
Selenium	**0.63J**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:48	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:31	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**302**	mg/L	40.0	21.0	2		06/12/24 15:41		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**695**	mg/L	10.0	10.0	1		06/11/24 10:29		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**4.9**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.30**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17S **Lab ID: 60454268010** Collected: 06/06/24 10:48 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**30.3**	mg/L	10.0	5.3	10		06/20/24 23:57	16887-00-6	
Fluoride	**0.88**	mg/L	0.20	0.12	1		06/19/24 14:11	16984-48-8	N2
Sulfate	**246**	mg/L	50.0	27.5	50		06/19/24 14:25	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17I **Lab ID: 60454268011** Collected: 06/06/24 10:20 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**13.9**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:08	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:08	7440-41-7	
Boron	**2200**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:08	7440-42-8	
Calcium	**8290**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:08	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:08	7440-48-4	
Iron	**234**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:08	7439-89-6	
Lead	**8.5J**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:08	7439-92-1	
Lithium	**3.8J**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:08	7439-93-2	
Magnesium	**163**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:08	7439-95-4	
Manganese	**4.1J**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:08	7439-96-5	
Molybdenum	**129**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:08	7439-98-7	
Potassium	**1990**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:08	7440-09-7	
Sodium	**241000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:50	7440-36-0	
Arsenic	**39.3**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:50	7440-38-2	
Cadmium	**0.088J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:50	7440-43-9	
Chromium	**0.47J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:50	7440-47-3	
Selenium	**0.70J**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:50	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:50	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:33	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**200**	mg/L	40.0	21.0	2		06/12/24 15:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**777**	mg/L	13.3	13.3	1		06/11/24 10:29		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.48**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17I **Lab ID: 60454268011** Collected: 06/06/24 10:20 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**2.5**	mg/L	0.50	0.16	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**73.0**	mg/L	50.0	26.4	50		06/19/24 14:53	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 14:39	16984-48-8	N2
Sulfate	**277**	mg/L	50.0	27.5	50		06/19/24 14:53	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21S **Lab ID: 60454268012** Collected: 06/06/24 16:19 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**222**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:09	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:09	7440-41-7	
Boron	**105**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:09	7440-42-8	
Calcium	**117000**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:09	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:09	7440-48-4	
Iron	**9900**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:09	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:09	7439-92-1	
Lithium	**13.4**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:09	7439-93-2	
Magnesium	**24100**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:09	7439-95-4	
Manganese	**1380**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:09	7439-96-5	
Molybdenum	**1.0J**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:09	7439-98-7	
Potassium	**3130**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:09	7440-09-7	
Sodium	**11200**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:09	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:53	7440-36-0	
Arsenic	**27.2**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:53	7440-38-2	
Cadmium	**0.050J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:53	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:53	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:53	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:53	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:35	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**468**	mg/L	40.0	21.0	2		06/12/24 16:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**445**	mg/L	10.0	10.0	1		06/12/24 10:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**9.4**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.46**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21S **Lab ID: 60454268012** Collected: 06/06/24 16:19 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1.2**	mg/L	1.0	0.53	1		06/19/24 15:07	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 15:07	16984-48-8	N2
Sulfate	**22.6**	mg/L	5.0	2.8	5		06/19/24 15:21	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21I **Lab ID: 60454268013** Collected: 06/06/24 14:24 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**51.9**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:11	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:11	7440-41-7	
Boron	**4520**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:11	7440-42-8	
Calcium	**25200**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:11	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:11	7440-48-4	
Iron	**276**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:11	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:11	7439-92-1	
Lithium	**19.7**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:11	7439-93-2	
Magnesium	**2770**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:11	7439-95-4	
Manganese	**52.1**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:11	7439-96-5	
Molybdenum	**240**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:11	7439-98-7	
Potassium	**5600**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:11	7440-09-7	
Sodium	**128000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:11	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 09:57	7440-36-0	
Arsenic	**5.7**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 09:57	7440-38-2	
Cadmium	**0.095J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 09:57	7440-43-9	
Chromium	**0.39J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 09:57	7440-47-3	
Selenium	**0.37J**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 09:57	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 09:57	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:38	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**275**	mg/L	40.0	21.0	2		06/12/24 16:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**449**	mg/L	10.0	10.0	1		06/12/24 10:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.45**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21I **Lab ID: 60454268013** Collected: 06/06/24 14:24 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.048J**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	M1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**29.4**	mg/L	10.0	5.3	10		06/21/24 00:10	16887-00-6	
Fluoride	**0.50**	mg/L	0.20	0.12	1		06/19/24 16:02	16984-48-8	N2
Sulfate	**80.6**	mg/L	10.0	5.5	10		06/21/24 00:10	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21D **Lab ID: 60454268014** Collected: 06/06/24 16:10 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**186**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:22	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:22	7440-41-7	
Boron	**3250**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:22	7440-42-8	
Calcium	**135000**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:22	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:22	7440-48-4	
Iron	**3490**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:22	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:22	7439-92-1	
Lithium	**224**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:22	7439-93-2	
Magnesium	**48600**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:22	7439-95-4	
Manganese	**948**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:22	7439-96-5	
Molybdenum	**266**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:22	7439-98-7	
Potassium	**12700**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:22	7440-09-7	
Sodium	**475000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:22	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:07	7440-36-0	
Arsenic	**0.44J**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:07	7440-38-2	
Cadmium	**0.11J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:07	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:07	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:07	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:49	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**251**	mg/L	20.0	10.5	1		06/12/24 16:17		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1310**	mg/L	66.7	66.7	1		06/12/24 10:44		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**3.0**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.52**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21D **Lab ID: 60454268014** Collected: 06/06/24 16:10 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 11:44	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**999**	mg/L	50.0	26.4	50		06/19/24 18:06	16887-00-6	
Fluoride	**0.16J**	mg/L	0.20	0.12	1		06/19/24 17:53	16984-48-8	N2
Sulfate	**156**	mg/L	50.0	27.5	50		06/19/24 18:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-22S **Lab ID: 60454268015** Collected: 06/05/24 18:45 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**140**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:23	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:23	7440-41-7	
Boron	**499**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:23	7440-42-8	
Calcium	**145000**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:23	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:23	7440-48-4	
Iron	**5670**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:23	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:23	7439-92-1	
Lithium	**49.3**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:23	7439-93-2	
Magnesium	**33100**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:23	7439-95-4	
Manganese	**693**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:23	7439-96-5	
Molybdenum	**13.4J**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:23	7439-98-7	
Potassium	**6560**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:23	7440-09-7	
Sodium	**58400**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:23	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:10	7440-36-0	
Arsenic	**5.8**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:10	7440-38-2	
Cadmium	**0.12J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:10	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:10	7440-47-3	
Selenium	**0.21J**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:10	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:51	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**464**	mg/L	20.0	10.5	1		06/11/24 16:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**713**	mg/L	13.3	13.3	1		06/10/24 13:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**5.5**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.17J**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H3,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-22S **Lab ID: 60454268015** Collected: 06/05/24 18:45 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**33.3**	mg/L	10.0	5.3	10		06/21/24 00:59	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 18:48	16984-48-8	N2
Sulfate	**164**	mg/L	10.0	5.5	10		06/21/24 00:59	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-22D **Lab ID: 60454268016** Collected: 06/05/24 17:29 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**85.6**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:25	7440-39-3	
Beryllium	**0.17J**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:25	7440-41-7	
Boron	**8900**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:25	7440-42-8	
Calcium	**20200**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:25	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:25	7440-48-4	
Iron	**1710**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:25	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:25	7439-92-1	
Lithium	**22.7**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:25	7439-93-2	
Magnesium	**2620**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:25	7439-95-4	
Manganese	**83.2**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:25	7439-96-5	
Molybdenum	**313**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:25	7439-98-7	
Potassium	**4020**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:25	7440-09-7	
Sodium	**183000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:25	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.14J**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:12	7440-36-0	
Arsenic	**11.1**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:12	7440-38-2	
Cadmium	**0.14J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:12	7440-43-9	
Chromium	**1.6**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:12	7440-47-3	
Selenium	**1.0**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:12	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:12	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:54	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**329**	mg/L	40.0	21.0	2		06/11/24 16:38		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**628**	mg/L	10.0	10.0	1		06/10/24 13:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**2.4**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H3,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-22D **Lab ID: 60454268016** Collected: 06/05/24 17:29 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.073**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**35.0**	mg/L	10.0	5.3	10		06/19/24 19:30	16887-00-6	
Fluoride	**1.8**	mg/L	0.20	0.12	1		06/19/24 19:16	16984-48-8	N2
Sulfate	**121**	mg/L	10.0	5.5	10		06/19/24 19:30	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-30S **Lab ID: 60454268017** Collected: 06/05/24 10:35 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**94.6**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:27	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:27	7440-41-7	
Boron	**815**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:27	7440-42-8	
Calcium	**144000**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:27	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:27	7440-48-4	
Iron	**525**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:27	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:27	7439-92-1	
Lithium	**38.1**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:27	7439-93-2	
Magnesium	**24100**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:27	7439-95-4	
Manganese	**154**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:27	7439-96-5	
Molybdenum	**2.5J**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:27	7439-98-7	
Potassium	**6430**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:27	7440-09-7	
Sodium	**55000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:27	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:20	7440-36-0	
Arsenic	**0.95J**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:20	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:20	7440-43-9	
Chromium	**0.33J**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:20	7440-47-3	
Selenium	**0.22J**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:20	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:56	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**399**	mg/L	20.0	10.5	1		06/11/24 16:44		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**660**	mg/L	13.3	13.3	1		06/10/24 13:46		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.51**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-30S **Lab ID: 60454268017** Collected: 06/05/24 10:35 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 09:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**47.1**	mg/L	10.0	5.3	10		06/19/24 19:57	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 19:44	16984-48-8	N2
Sulfate	**157**	mg/L	10.0	5.5	10		06/19/24 19:57	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-DUP-2 **Lab ID: 60454268018** Collected: 06/05/24 00:00 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**85.3**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:28	7440-39-3	
Beryllium	**0.17J**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:28	7440-41-7	
Boron	**8820**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:28	7440-42-8	M1,P6
Calcium	**19900**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:28	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:28	7440-48-4	
Iron	**1730**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:28	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:28	7439-92-1	
Lithium	**22.0**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:28	7439-93-2	
Magnesium	**2610**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:28	7439-95-4	
Manganese	**80.5**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:28	7439-96-5	
Molybdenum	**309**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:28	7439-98-7	
Potassium	**3970**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:28	7440-09-7	
Sodium	**181000**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:28	7440-23-5	M1,P6
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:22	7440-36-0	
Arsenic	**11.4**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:22	7440-38-2	
Cadmium	**0.14J**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:22	7440-43-9	
Chromium	**1.7**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:22	7440-47-3	
Selenium	**1.1**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:22	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:58	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**331**	mg/L	40.0	21.0	2		06/11/24 17:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**625**	mg/L	10.0	10.0	1		06/10/24 13:46		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**1.2**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.51**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-DUP-2 **Lab ID: 60454268018** Collected: 06/05/24 00:00 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.072**	mg/L	0.050	0.016	1		06/10/24 11:44	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**34.5**	mg/L	10.0	5.3	10		06/19/24 20:25	16887-00-6	
Fluoride	**1.8**	mg/L	0.20	0.12	1		06/19/24 20:11	16984-48-8	N2
Sulfate	**120**	mg/L	10.0	5.5	10		06/19/24 20:25	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-FB-2 **Lab ID: 60454268019** Collected: 06/05/24 12:55 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**1.1J**	ug/L	5.0	0.64	1	06/13/24 09:52	06/17/24 13:32	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 09:52	06/17/24 13:32	7440-41-7	
Boron	**24.4J**	ug/L	100	6.4	1	06/13/24 09:52	06/17/24 13:32	7440-42-8	
Calcium	**80.2J**	ug/L	200	26.9	1	06/13/24 09:52	06/17/24 13:32	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 09:52	06/17/24 13:32	7440-48-4	
Iron	**12.5J**	ug/L	50.0	9.1	1	06/13/24 09:52	06/17/24 13:32	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 09:52	06/17/24 13:32	7439-92-1	
Lithium	**<3.7**	ug/L	10.0	3.7	1	06/13/24 09:52	06/17/24 13:32	7439-93-2	
Magnesium	**23.4J**	ug/L	50.0	20.1	1	06/13/24 09:52	06/17/24 13:32	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	06/13/24 09:52	06/17/24 13:32	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	06/13/24 09:52	06/17/24 13:32	7439-98-7	
Potassium	**<69.7**	ug/L	500	69.7	1	06/13/24 09:52	06/17/24 13:32	7440-09-7	
Sodium	**438J**	ug/L	500	115	1	06/13/24 09:52	06/17/24 13:32	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/28/24 12:28	07/01/24 10:24	7440-36-0	
Arsenic	**<0.13**	ug/L	1.0	0.13	1	06/28/24 12:28	07/01/24 10:24	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/28/24 12:28	07/01/24 10:24	7440-43-9	
Chromium	**<0.30**	ug/L	1.0	0.30	1	06/28/24 12:28	07/01/24 10:24	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/28/24 12:28	07/01/24 10:24	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/28/24 12:28	07/01/24 10:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 16:01	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		06/11/24 17:12		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**6.5**	mg/L	5.0	5.0	1		06/10/24 13:46		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0085J**	mg/L	0.050		1		07/01/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.041**	mg/L	0.20	0.041	1		06/13/24 10:57	15438-31-0	H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-FB-2 **Lab ID: 60454268019** Collected: 06/05/24 12:55 Received: 06/07/24 05:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**<0.016**	mg/L	0.050	0.016	1		06/10/24 11:44	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.53**	mg/L	1.0	0.53	1		06/19/24 20:39	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/19/24 20:39	16984-48-8	N2
Sulfate	**<0.55**	mg/L	1.0	0.55	1		06/19/24 20:39	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19S **Lab ID: 60454268023** Collected: 06/07/24 10:23 Received: 06/08/24 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**198**	ug/L	5.0	0.64	1	06/13/24 14:11	06/17/24 11:04	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 14:11	06/17/24 11:04	7440-41-7	
Boron	**148**	ug/L	100	6.4	1	06/13/24 14:11	06/17/24 11:04	7440-42-8	
Calcium	**122000**	ug/L	200	26.9	1	06/13/24 14:11	06/17/24 11:04	7440-70-2	
Cobalt	**2.4J**	ug/L	5.0	1.2	1	06/13/24 14:11	06/17/24 11:04	7440-48-4	
Iron	**4250**	ug/L	50.0	9.1	1	06/13/24 14:11	06/17/24 11:04	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 14:11	06/17/24 11:04	7439-92-1	
Lithium	**24.1**	ug/L	10.0	3.7	1	06/13/24 14:11	06/17/24 11:04	7439-93-2	
Magnesium	**20200**	ug/L	50.0	20.1	1	06/13/24 14:11	06/17/24 11:04	7439-95-4	
Manganese	**1260**	ug/L	5.0	0.39	1	06/13/24 14:11	06/17/24 11:04	7439-96-5	
Molybdenum	**2.0J**	ug/L	20.0	1.0	1	06/13/24 14:11	06/17/24 11:04	7439-98-7	
Potassium	**5020**	ug/L	500	69.7	1	06/13/24 14:11	06/17/24 11:04	7440-09-7	
Sodium	**6620**	ug/L	500	115	1	06/13/24 14:11	06/17/24 11:04	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 15:06	06/24/24 11:58	7440-36-0	
Arsenic	**5.2**	ug/L	1.0	0.13	1	06/13/24 15:06	06/24/24 11:58	7440-38-2	
Cadmium	**<0.050**	ug/L	0.50	0.050	1	06/13/24 15:06	06/24/24 11:58	7440-43-9	
Chromium	**0.44J**	ug/L	1.0	0.30	1	06/13/24 15:06	06/24/24 11:58	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	06/13/24 15:06	06/24/24 11:58	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 15:06	06/24/24 11:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:03	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**411**	mg/L	20.0	10.5	1		06/12/24 17:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**457**	mg/L	10.0	10.0	1		06/12/24 10:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**4.0**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.22**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19S **Lab ID: 60454268023** Collected: 06/07/24 10:23 Received: 06/08/24 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.063**	mg/L	0.050	0.016	1		06/12/24 09:13	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**0.80J**	mg/L	1.0	0.53	1		06/20/24 22:03	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		06/20/24 22:03	16984-48-8	N2
Sulfate	**50.3**	mg/L	50.0	27.5	50		06/20/24 22:21	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19I **Lab ID: 60454268024** Collected: 06/07/24 11:10 Received: 06/08/24 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**103**	ug/L	5.0	0.64	1	06/13/24 14:11	06/17/24 11:06	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 14:11	06/17/24 11:06	7440-41-7	
Boron	**9350**	ug/L	100	6.4	1	06/13/24 14:11	06/17/24 11:06	7440-42-8	
Calcium	**32500**	ug/L	200	26.9	1	06/13/24 14:11	06/17/24 11:06	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 14:11	06/17/24 11:06	7440-48-4	
Iron	**1920**	ug/L	50.0	9.1	1	06/13/24 14:11	06/17/24 11:06	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 14:11	06/17/24 11:06	7439-92-1	
Lithium	**19.5**	ug/L	10.0	3.7	1	06/13/24 14:11	06/17/24 11:06	7439-93-2	
Magnesium	**4610**	ug/L	50.0	20.1	1	06/13/24 14:11	06/17/24 11:06	7439-95-4	
Manganese	**251**	ug/L	5.0	0.39	1	06/13/24 14:11	06/17/24 11:06	7439-96-5	
Molybdenum	**697**	ug/L	20.0	1.0	1	06/13/24 14:11	06/17/24 11:06	7439-98-7	
Potassium	**3680**	ug/L	500	69.7	1	06/13/24 14:11	06/17/24 11:06	7440-09-7	
Sodium	**187000**	ug/L	500	115	1	06/13/24 14:11	06/17/24 11:06	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	06/13/24 15:06	06/24/24 12:01	7440-36-0	
Arsenic	**0.56J**	ug/L	1.0	0.13	1	06/13/24 15:06	06/24/24 12:01	7440-38-2	
Cadmium	**0.27J**	ug/L	0.50	0.050	1	06/13/24 15:06	06/24/24 12:01	7440-43-9	
Chromium	**0.46J**	ug/L	1.0	0.30	1	06/13/24 15:06	06/24/24 12:01	7440-47-3	
Selenium	**0.30J**	ug/L	1.0	0.18	1	06/13/24 15:06	06/24/24 12:01	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 15:06	06/24/24 12:01	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:06	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**260**	mg/L	20.0	10.5	1		06/12/24 18:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**646**	mg/L	10.0	10.0	1		06/12/24 10:45		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.49**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**1.4**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19I **Lab ID: 60454268024** Collected: 06/07/24 11:10 Received: 06/08/24 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.021J**	mg/L	0.050	0.016	1		06/12/24 09:13	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**54.1**	mg/L	50.0	26.4	50		06/20/24 22:58	16887-00-6	
Fluoride	**2.0**	mg/L	0.20	0.12	1		06/20/24 22:40	16984-48-8	N2
Sulfate	**201**	mg/L	50.0	27.5	50		06/20/24 22:58	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19D **Lab ID: 60454268025** Collected: 06/07/24 10:48 Received: 06/08/24 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**66.8**	ug/L	5.0	0.64	1	06/13/24 14:11	06/17/24 11:08	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	06/13/24 14:11	06/17/24 11:08	7440-41-7	
Boron	**3800**	ug/L	100	6.4	1	06/13/24 14:11	06/17/24 11:08	7440-42-8	
Calcium	**18000**	ug/L	200	26.9	1	06/13/24 14:11	06/17/24 11:08	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	06/13/24 14:11	06/17/24 11:08	7440-48-4	
Iron	**96.8**	ug/L	50.0	9.1	1	06/13/24 14:11	06/17/24 11:08	7439-89-6	
Lead	**<3.8**	ug/L	10.0	3.8	1	06/13/24 14:11	06/17/24 11:08	7439-92-1	
Lithium	**135**	ug/L	10.0	3.7	1	06/13/24 14:11	06/17/24 11:08	7439-93-2	
Magnesium	**411**	ug/L	50.0	20.1	1	06/13/24 14:11	06/17/24 11:08	7439-95-4	
Manganese	**3.4J**	ug/L	5.0	0.39	1	06/13/24 14:11	06/17/24 11:08	7439-96-5	
Molybdenum	**135**	ug/L	20.0	1.0	1	06/13/24 14:11	06/17/24 11:08	7439-98-7	
Potassium	**40800**	ug/L	500	69.7	1	06/13/24 14:11	06/17/24 11:08	7440-09-7	
Sodium	**170000**	ug/L	500	115	1	06/13/24 14:11	06/17/24 11:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.32J**	ug/L	1.0	0.12	1	06/13/24 15:06	06/24/24 12:08	7440-36-0	
Arsenic	**33.3**	ug/L	1.0	0.13	1	06/13/24 15:06	06/24/24 12:08	7440-38-2	
Cadmium	**0.11J**	ug/L	0.50	0.050	1	06/13/24 15:06	06/24/24 12:08	7440-43-9	
Chromium	**0.59J**	ug/L	1.0	0.30	1	06/13/24 15:06	06/24/24 12:08	7440-47-3	
Selenium	**0.55J**	ug/L	1.0	0.18	1	06/13/24 15:06	06/24/24 12:08	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/13/24 15:06	06/24/24 12:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.096**	ug/L	0.20	0.096	1	06/17/24 11:25	06/18/24 15:08	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**317**	mg/L	20.0	10.5	1		06/12/24 18:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**637**	mg/L	13.3	13.3	1		06/12/24 10:46		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0J**	mg/L	0.050		1		06/25/24 00:00	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.15J**	mg/L	0.20	0.041	1		06/13/24 09:14	15438-31-0	H1,H6

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19D **Lab ID: 60454268025** Collected: 06/07/24 10:48 Received: 06/08/24 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.55**	mg/L	0.050	0.016	1		06/12/24 09:13	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**19.9**	mg/L	1.0	0.53	1		06/20/24 23:17	16887-00-6	
Fluoride	**0.96**	mg/L	0.20	0.12	1		06/20/24 23:17	16984-48-8	N2
Sulfate	**158**	mg/L	50.0	27.5	50		06/20/24 23:35	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898413
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3556318 Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	06/18/24 15:17	

LABORATORY CONTROL SAMPLE: 3556319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.1	82	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3556320 3556321

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	4.3	4.2	85	84	75-125	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898431
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268008, 60454268023, 60454268024, 60454268025

METHOD BLANK: 3556374 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268008, 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	06/18/24 14:22	

LABORATORY CONTROL SAMPLE: 3556375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.4	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3556376 3556377

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	3.8	4.0	76	80	75-125	5	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898759
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268004, 60454268005, 60454268006, 60454268007

METHOD BLANK: 3557493 Matrix: Water
Associated Lab Samples: 60454268004, 60454268005, 60454268006, 60454268007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	06/20/24 14:01	

LABORATORY CONTROL SAMPLE: 3557494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3557495 3557496

Parameter	Units	60455030005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.6	3.9	91	78	75-125	15	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897974
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3554535 Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 13:01	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 13:01	
Boron	ug/L	<6.4	100	6.4	06/17/24 13:01	
Calcium	ug/L	<26.9	200	26.9	06/17/24 13:01	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 13:01	
Iron	ug/L	<9.1	50.0	9.1	06/17/24 13:01	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 13:01	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 13:01	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 13:01	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 13:01	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 13:01	
Potassium	ug/L	<69.7	500	69.7	06/17/24 13:01	
Sodium	ug/L	<115	500	115	06/17/24 13:01	

LABORATORY CONTROL SAMPLE: 3554536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	974	97	85-115	
Beryllium	ug/L	1000	969	97	85-115	
Boron	ug/L	1000	917	92	85-115	
Calcium	ug/L	10000	9670	97	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	9930	99	85-115	
Lead	ug/L	1000	1020	102	85-115	
Lithium	ug/L	1000	974	97	85-115	
Magnesium	ug/L	10000	9350	94	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	980	98	85-115	
Potassium	ug/L	10000	9550	96	85-115	
Sodium	ug/L	10000	9820	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554537 3554538

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	51.9	1000	1000	1040	1040	99	99	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554537 3554538

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Beryllium	ug/L	<0.12	1000	1000	1030	1000	103	100	70-130	3	20	
Boron	ug/L	4520	1000	1000	5520	5500	99	97	70-130	0	20	
Calcium	ug/L	25200	10000	10000	35000	35200	98	100	70-130	0	20	
Cobalt	ug/L	<1.2	1000	1000	1050	1010	105	101	70-130	3	20	
Iron	ug/L	276	10000	10000	10400	10500	101	102	70-130	1	20	
Lead	ug/L	<3.8	1000	1000	1010	1000	101	100	70-130	1	20	
Lithium	ug/L	19.7	1000	1000	1030	1030	101	101	70-130	1	20	
Magnesium	ug/L	2770	10000	10000	12300	12200	95	95	70-130	0	20	
Manganese	ug/L	52.1	1000	1000	1080	1040	103	99	70-130	3	20	
Molybdenum	ug/L	240	1000	1000	1270	1230	103	99	70-130	3	20	
Potassium	ug/L	5600	10000	10000	15700	15600	101	100	70-130	1	20	
Sodium	ug/L	128000	10000	10000	139000	140000	108	112	70-130	0	20	

MATRIX SPIKE SAMPLE: 3554539

Parameter	Units	60454268018 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	85.3	1000	1050	97	70-130	
Beryllium	ug/L	0.17J	1000	1000	100	70-130	
Boron	ug/L	8820	1000	9410	59	70-130	M1
Calcium	ug/L	19900	10000	28700	87	70-130	
Cobalt	ug/L	<1.2	1000	1010	101	70-130	
Iron	ug/L	1730	10000	11600	99	70-130	
Lead	ug/L	<3.8	1000	996	99	70-130	
Lithium	ug/L	22.0	1000	1020	100	70-130	
Magnesium	ug/L	2610	10000	11800	92	70-130	
Manganese	ug/L	80.5	1000	1060	98	70-130	
Molybdenum	ug/L	309	1000	1280	97	70-130	
Potassium	ug/L	3970	10000	13700	98	70-130	
Sodium	ug/L	181000	10000	183000	20	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898012
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3554753 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 13:56	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 13:56	
Boron	ug/L	<6.4	100	6.4	06/17/24 13:56	
Calcium	ug/L	<26.9	200	26.9	06/17/24 13:56	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 13:56	
Iron	ug/L	<9.1	50.0	9.1	06/17/24 13:56	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 13:56	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 13:56	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 13:56	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 13:56	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 13:56	
Potassium	ug/L	<69.7	500	69.7	06/17/24 13:56	
Sodium	ug/L	229J	500	115	06/17/24 13:56	

LABORATORY CONTROL SAMPLE: 3554754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	989	99	85-115	
Beryllium	ug/L	1000	979	98	85-115	
Boron	ug/L	1000	926	93	85-115	
Calcium	ug/L	10000	9880	99	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Iron	ug/L	10000	9980	100	85-115	
Lead	ug/L	1000	1010	101	85-115	
Lithium	ug/L	1000	984	98	85-115	
Magnesium	ug/L	10000	9610	96	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	975	98	85-115	
Potassium	ug/L	10000	9670	97	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554755 3554756

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	120	1000	1000	1110	1100	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554755 3554756

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Beryllium	ug/L	<0.12	1000	1000	1000	967	100	97	70-130	4	20	
Boron	ug/L	466	1000	1000	1410	1390	95	93	70-130	1	20	
Calcium	ug/L	90800	10000	10000	101000	100000	102	92	70-130	1	20	
Cobalt	ug/L	<1.2	1000	1000	1010	980	101	98	70-130	3	20	
Iron	ug/L	95.4	10000	10000	10100	10000	100	99	70-130	1	20	
Lead	ug/L	<3.8	1000	1000	1010	986	101	99	70-130	3	20	
Lithium	ug/L	4.8J	1000	1000	1020	1000	101	100	70-130	2	20	
Magnesium	ug/L	12600	10000	10000	22200	22000	96	94	70-130	1	20	
Manganese	ug/L	57.0	1000	1000	1060	1020	101	96	70-130	4	20	
Molybdenum	ug/L	<1.0	1000	1000	995	960	99	96	70-130	4	20	
Potassium	ug/L	1130	10000	10000	11000	10800	99	97	70-130	2	20	
Sodium	ug/L	12400	10000	10000	22400	22200	101	98	70-130	1	20	

MATRIX SPIKE SAMPLE: 3554757

Parameter	Units	60454268004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	336	1000	1300	96	70-130	
Beryllium	ug/L	<0.12	1000	989	99	70-130	
Boron	ug/L	79.6J	1000	996	92	70-130	
Calcium	ug/L	120000	10000	126000	66	70-130	M1
Cobalt	ug/L	<1.2	1000	992	99	70-130	
Iron	ug/L	15800	10000	25400	96	70-130	
Lead	ug/L	<3.8	1000	999	100	70-130	
Lithium	ug/L	10.0	1000	1010	100	70-130	
Magnesium	ug/L	27400	10000	36300	88	70-130	
Manganese	ug/L	497	1000	1470	97	70-130	
Molybdenum	ug/L	<1.0	1000	973	97	70-130	
Potassium	ug/L	4590	10000	14400	98	70-130	
Sodium	ug/L	12500	10000	22100	96	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898016
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268023, 60454268024, 60454268025

METHOD BLANK: 3554767 Matrix: Water
Associated Lab Samples: 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	06/17/24 10:55	
Beryllium	ug/L	<0.12	1.0	0.12	06/17/24 10:55	
Boron	ug/L	<6.4	100	6.4	06/17/24 10:55	
Calcium	ug/L	<26.9	200	26.9	06/17/24 10:55	
Cobalt	ug/L	<1.2	5.0	1.2	06/17/24 10:55	
Iron	ug/L	<9.1	50.0	9.1	06/17/24 10:55	
Lead	ug/L	<3.8	10.0	3.8	06/17/24 10:55	
Lithium	ug/L	<3.7	10.0	3.7	06/17/24 10:55	
Magnesium	ug/L	<20.1	50.0	20.1	06/17/24 10:55	
Manganese	ug/L	<0.39	5.0	0.39	06/17/24 10:55	
Molybdenum	ug/L	<1.0	20.0	1.0	06/17/24 10:55	
Potassium	ug/L	<69.7	500	69.7	06/17/24 10:55	
Sodium	ug/L	<115	500	115	06/17/24 10:55	

LABORATORY CONTROL SAMPLE: 3554768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1030	103	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Boron	ug/L	1000	974	97	85-115	
Calcium	ug/L	10000	10400	104	85-115	
Cobalt	ug/L	1000	1060	106	85-115	
Iron	ug/L	10000	10500	105	85-115	
Lead	ug/L	1000	1060	106	85-115	
Lithium	ug/L	1000	1030	103	85-115	
Magnesium	ug/L	10000	10100	101	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9940	99	85-115	
Sodium	ug/L	10000	10200	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554769 3554770

Parameter	Units	60454590001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	27.4	1000	1000	1050	1010	102	98	70-130	4	20	
Beryllium	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554769 3554770

Parameter	Units	60454590001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	1020	982	98	94	70-130	4	20	
Calcium	ug/L	44300	10000	10000	53800	51800	95	75	70-130	4	20	
Cobalt	ug/L	ND	1000	1000	1030	1040	103	104	70-130	1	20	
Iron	ug/L	ND	10000	10000	10500	10100	104	100	70-130	4	20	
Lead	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	20	
Lithium	ug/L	36.6	1000	1000	1070	1030	103	100	70-130	3	20	
Magnesium	ug/L	5150	10000	10000	15000	14400	98	92	70-130	4	20	
Manganese	ug/L	ND	1000	1000	1020	1020	101	101	70-130	0	20	
Molybdenum	ug/L	ND	1000	1000	1010	1020	101	102	70-130	1	20	
Potassium	ug/L	17000	10000	10000	26700	26200	97	92	70-130	2	20	
Sodium	ug/L	60500	10000	10000	70000	67800	95	73	70-130	3	20	

MATRIX SPIKE SAMPLE: 3554771

Parameter	Units	60454626001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	ND	1000	1050	95	70-130	
Beryllium	ug/L	ND	1000	1010	101	70-130	
Boron	ug/L	32700	1000	34600	187	70-130	M1
Calcium	ug/L	431000	10000	452000	203	70-130	M1
Cobalt	ug/L	ND	1000	980	98	70-130	
Iron	ug/L	2800	10000	12700	99	70-130	
Lead	ug/L	ND	1000	982	98	70-130	
Lithium	ug/L	ND	1000	1190	106	70-130	
Magnesium	ug/L	857000	10000	890000	322	70-130	M1
Manganese	ug/L	ND	1000	1120	97	70-130	
Molybdenum	ug/L	ND	1000	978J	97	70-130	
Potassium	ug/L	226000	10000	241000	153	70-130	M1
Sodium	ug/L	29000000	10000	29700000	7200	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897965
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3554509 Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	07/01/24 09:31	
Arsenic	ug/L	<0.13	1.0	0.13	07/01/24 09:31	
Cadmium	ug/L	<0.050	0.50	0.050	07/01/24 09:31	
Chromium	ug/L	<0.30	1.0	0.30	07/01/24 09:31	
Selenium	ug/L	<0.18	1.0	0.18	07/01/24 09:31	
Thallium	ug/L	<0.14	1.0	0.14	07/01/24 09:31	

LABORATORY CONTROL SAMPLE: 3554510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.3	101	85-115	
Arsenic	ug/L	40	39.9	100	85-115	
Cadmium	ug/L	40	41.3	103	85-115	
Chromium	ug/L	40	41.9	105	85-115	
Selenium	ug/L	40	40.2	101	85-115	
Thallium	ug/L	40	35.7	89	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554511 3554512

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	40.7	38.8	102	97	70-130	5	20	
Arsenic	ug/L	5.7	40	40	47.1	44.4	104	97	70-130	6	20	
Cadmium	ug/L	0.095J	40	40	40.1	37.7	100	94	70-130	6	20	
Chromium	ug/L	0.39J	40	40	39.2	37.0	97	91	70-130	6	20	
Selenium	ug/L	0.37J	40	40	38.6	36.6	96	91	70-130	5	20	
Thallium	ug/L	<0.14	40	40	37.1	34.9	93	87	70-130	6	20	

MATRIX SPIKE SAMPLE: 3554513

Parameter	Units	60454268016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	0.14J	40	40.4	101	70-130	
Arsenic	ug/L	11.1	40	50.6	99	70-130	
Cadmium	ug/L	0.14J	40	38.8	97	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

MATRIX SPIKE SAMPLE: 3554513

Parameter	Units	60454268016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	1.6	40	39.0	93	70-130	
Selenium	ug/L	1.0	40	37.3	91	70-130	
Thallium	ug/L	<0.14	40	36.5	91	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897973
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3554530 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	06/25/24 12:59	
Arsenic	ug/L	<0.13	1.0	0.13	06/25/24 12:59	
Cadmium	ug/L	<0.050	0.50	0.050	06/25/24 12:59	
Chromium	ug/L	<0.30	1.0	0.30	06/25/24 12:59	
Selenium	ug/L	<0.18	1.0	0.18	06/25/24 12:59	
Thallium	ug/L	<0.14	1.0	0.14	06/25/24 12:59	

LABORATORY CONTROL SAMPLE: 3554531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.5	99	85-115	
Arsenic	ug/L	40	41.1	103	85-115	
Cadmium	ug/L	40	41.3	103	85-115	
Chromium	ug/L	40	41.6	104	85-115	
Selenium	ug/L	40	41.6	104	85-115	
Thallium	ug/L	40	37.4	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554532 3554533

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.9	39.2	100	98	70-130	2	20	
Arsenic	ug/L	0.54J	40	40	42.6	42.2	105	104	70-130	1	20	
Cadmium	ug/L	<0.050	40	40	40.7	40.1	102	100	70-130	2	20	
Chromium	ug/L	0.47J	40	40	41.7	41.1	103	102	70-130	1	20	
Selenium	ug/L	0.56J	40	40	42.1	41.9	104	103	70-130	0	20	
Thallium	ug/L	<0.14	40	40	39.8	40.0	99	100	70-130	1	20	

MATRIX SPIKE SAMPLE: 3554534

Parameter	Units	60454268005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.12	40	38.8	97	70-130	
Arsenic	ug/L	1.1	40	42.1	103	70-130	
Cadmium	ug/L	<0.050	40	39.5	99	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

MATRIX SPIKE SAMPLE: 3554534

Parameter	Units	60454268005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	<0.30	40	40.5	101	70-130	
Selenium	ug/L	<0.18	40	40.2	101	70-130	
Thallium	ug/L	<0.14	40	39.8	99	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898026
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268023, 60454268024, 60454268025

METHOD BLANK: 3554802 Matrix: Water
Associated Lab Samples: 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	06/24/24 11:43	
Arsenic	ug/L	<0.13	1.0	0.13	06/24/24 11:43	
Cadmium	ug/L	<0.050	0.50	0.050	06/24/24 11:43	
Chromium	ug/L	<0.30	1.0	0.30	06/24/24 11:43	
Selenium	ug/L	<0.18	1.0	0.18	06/24/24 11:43	
Thallium	ug/L	<0.14	1.0	0.14	06/24/24 11:43	

LABORATORY CONTROL SAMPLE: 3554803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.8	99	85-115	
Arsenic	ug/L	40	40.8	102	85-115	
Cadmium	ug/L	40	41.4	104	85-115	
Chromium	ug/L	40	41.9	105	85-115	
Selenium	ug/L	40	41.1	103	85-115	
Thallium	ug/L	40	38.5	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554804 3554805

Parameter	Units	60454268023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.2	39.9	98	100	70-130	2	20	
Arsenic	ug/L	5.2	40	40	45.3	46.2	100	102	70-130	2	20	
Cadmium	ug/L	<0.050	40	40	39.6	40.8	99	102	70-130	3	20	
Chromium	ug/L	0.44J	40	40	41.2	41.8	102	103	70-130	1	20	
Selenium	ug/L	<0.18	40	40	38.5	39.9	96	100	70-130	3	20	
Thallium	ug/L	<0.14	40	40	40.1	40.9	100	102	70-130	2	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897434
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268002, 60454268003, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3552766 Matrix: Water
Associated Lab Samples: 60454268002, 60454268003, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/10/24 14:48	

LABORATORY CONTROL SAMPLE: 3552767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	500	100	90-110	

SAMPLE DUPLICATE: 3552768

Parameter	Units	60454265006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	151	150	0	10	

SAMPLE DUPLICATE: 3552769

Parameter	Units	60454483005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	108	108	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897675
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268004, 60454268005

METHOD BLANK: 3553407 Matrix: Water
Associated Lab Samples: 60454268001, 60454268004, 60454268005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/11/24 12:39	

LABORATORY CONTROL SAMPLE: 3553408

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	487	97	90-110	

SAMPLE DUPLICATE: 3553409

Parameter	Units	60454108001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	303	287	5	10	

SAMPLE DUPLICATE: 3553410

Parameter	Units	60454402004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	480	480	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897676
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3553411 Matrix: Water
Associated Lab Samples: 60454268009, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/11/24 15:25	

LABORATORY CONTROL SAMPLE: 3553412

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	503	101	90-110	

SAMPLE DUPLICATE: 3553413

Parameter	Units	60454210002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	280	288	3	10	

SAMPLE DUPLICATE: 3553414

Parameter	Units	60454268017 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	399	398	0	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897856
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268023, 60454268024, 60454268025

METHOD BLANK: 3554168 Matrix: Water
Associated Lab Samples: 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	06/12/24 15:32	

LABORATORY CONTROL SAMPLE: 3554169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	500	100	90-110	

SAMPLE DUPLICATE: 3554170

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	275	278	1	10	

SAMPLE DUPLICATE: 3554171

Parameter	Units	60454537003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	78.2	79.5	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897214
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3551270 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	6.0	5.0	5.0	06/07/24 10:57	

LABORATORY CONTROL SAMPLE: 3551271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	921	92	80-120	

SAMPLE DUPLICATE: 3551272

Parameter	Units	60454265001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	505	508	1	10	

SAMPLE DUPLICATE: 3551277

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	387	346	11	10	D6

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897425
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3552728 Matrix: Water
Associated Lab Samples: 60454268009, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	06/10/24 13:44	

LABORATORY CONTROL SAMPLE: 3552729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	894	89	80-120	

SAMPLE DUPLICATE: 3552730

Parameter	Units	60454260001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1210	1120	8	10	

SAMPLE DUPLICATE: 3552731

Parameter	Units	60454448001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1030	1000	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897633
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268010, 60454268011

METHOD BLANK: 3553283 Matrix: Water
Associated Lab Samples: 60454268010, 60454268011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	06/11/24 10:25	

LABORATORY CONTROL SAMPLE: 3553284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	876	88	80-120	

SAMPLE DUPLICATE: 3553287

Parameter	Units	60454538004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	835	865	4	10	

SAMPLE DUPLICATE: 3553288

Parameter	Units	60454538006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	940	885	6	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897839
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268012, 60454268013, 60454268014, 60454268023, 60454268024, 60454268025

METHOD BLANK: 3554090 Matrix: Water
Associated Lab Samples: 60454268012, 60454268013, 60454268014, 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	06/12/24 10:42	

LABORATORY CONTROL SAMPLE: 3554091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	880	88	80-120	

SAMPLE DUPLICATE: 3554092

Parameter	Units	60454268012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	445	443	0	10	

SAMPLE DUPLICATE: 3554094

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	449	446	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897692
QC Batch Method: SM 3500-Fe B#4
Analysis Method: SM 3500-Fe B#4
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008, 60454268009, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3553480 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008, 60454268009, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.041	0.20	0.041	06/13/24 10:57	H6

LABORATORY CONTROL SAMPLE: 3553481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	4	4.1	102	90-110	H6

SAMPLE DUPLICATE: 3553482

Parameter	Units	60454265006 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.041	<0.041		20	H6

SAMPLE DUPLICATE: 3553483

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.041	<0.041		20	H6

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897825
QC Batch Method: SM 3500-Fe B#4
Analysis Method: SM 3500-Fe B#4
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268023, 60454268024, 60454268025

METHOD BLANK: 3554015 Matrix: Water
Associated Lab Samples: 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.041	0.20	0.041	06/13/24 09:14	H6

LABORATORY CONTROL SAMPLE: 3554016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	1.9	96	90-110	H6

SAMPLE DUPLICATE: 3554017

Parameter	Units	60454265011 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.48	0.45	6	20	H3,H6

SAMPLE DUPLICATE: 3554018

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.45	0.45	0	20	H1,H6

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897121
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3550966 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/07/24 14:41	

LABORATORY CONTROL SAMPLE: 3550967

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.46	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550968 3550969

Parameter	Units	60454265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	<0.016	0.5	0.5	0.49	0.48	96	96	75-125	0	20	M1

SAMPLE DUPLICATE: 3550974

Parameter	Units	60454154002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.28	0.30	5	20	

SAMPLE DUPLICATE: 3550975

Parameter	Units	60454265002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.016	<0.016		20	

SAMPLE DUPLICATE: 3550976

Parameter	Units	60454265001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.016	<0.016		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897287
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268015, 60454268016, 60454268017

METHOD BLANK: 3551656 Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268015, 60454268016, 60454268017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/10/24 09:58	

LABORATORY CONTROL SAMPLE: 3551657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.47	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3551658 3551659

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	0.048J	0.5	0.5	0.10	0.11	11	12	75-125	5	20	M1

SAMPLE DUPLICATE: 3551665

Parameter	Units	60454365001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	0.042J		20	

SAMPLE DUPLICATE: 3551666

Parameter	Units	60454210002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	1.2	1.2	1	20	

SAMPLE DUPLICATE: 3551668

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.048J	0.047J		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897418
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268014, 60454268018, 60454268019

METHOD BLANK: 3552702 Matrix: Water
Associated Lab Samples: 60454268014, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/10/24 11:44	

LABORATORY CONTROL SAMPLE: 3552703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.47	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552704 3552705

Parameter	Units	60454538006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.41	0.42	82	83	75-125	1	20	

SAMPLE DUPLICATE: 3552708

Parameter	Units	60454483001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.016		20	

SAMPLE DUPLICATE: 3552709

Parameter	Units	60454483002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.016		20	

SAMPLE DUPLICATE: 3552710

Parameter	Units	60454538004 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.016		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

SAMPLE DUPLICATE: 3552711

Parameter	Units	60454538006 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.016		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 897823
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268023, 60454268024, 60454268025

METHOD BLANK: 3554005 Matrix: Water
Associated Lab Samples: 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.016	0.050	0.016	06/12/24 09:13	

LABORATORY CONTROL SAMPLE: 3554006

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.46	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554007 3554008

Parameter	Units	60454537001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.40	0.38	78	75	75-125	3	20	

SAMPLE DUPLICATE: 3554011

Parameter	Units	60454537001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.016		20	

SAMPLE DUPLICATE: 3554014

Parameter	Units	60454537002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.022J	0.016J		20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898466
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

METHOD BLANK: 3556640 Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/19/24 13:16	
Fluoride	mg/L	<0.12	0.20	0.12	06/19/24 13:16	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/19/24 13:16	

LABORATORY CONTROL SAMPLE: 3556641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.5	90	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	N2
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3556642 3556643

Parameter	Units	60454268013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	29.4	50	50	72.4	75.4	86	92	80-120	4	15	
Fluoride	mg/L	0.50	2.5	2.5	2.8	2.7	93	88	80-120	4	15	N2
Sulfate	mg/L	80.6	50	50	123	131	85	101	80-120	7	15	

SAMPLE DUPLICATE: 3556644

Parameter	Units	60454268013 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	29.4	29.7	1	15	
Fluoride	mg/L	0.50	0.52	4	15	N2
Sulfate	mg/L	80.6	80.9	0	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 898867
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268023, 60454268024, 60454268025

METHOD BLANK: 3557948 Matrix: Water
Associated Lab Samples: 60454268023, 60454268024, 60454268025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/20/24 11:29	
Fluoride	mg/L	<0.12	0.20	0.12	06/20/24 11:29	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/20/24 11:29	

LABORATORY CONTROL SAMPLE: 3557949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	N2
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3557950 3557951

Parameter	Units	60454520006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	126	100	100	257	221	131	95	80-120	15	15	M1
Fluoride	mg/L	ND	50	50	59.6	51.2	119	102	80-120	15	15	N2
Sulfate	mg/L	930	1000	1000	1930	1920	100	99	80-120	1	15	

SAMPLE DUPLICATE: 3557952

Parameter	Units	60454520006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	126	120	4	15	
Fluoride	mg/L	ND	<2.5		15	N2
Sulfate	mg/L	930	956	3	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 899449
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3560300 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/25/24 09:36	
Fluoride	mg/L	<0.12	0.20	0.12	06/25/24 09:36	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/25/24 09:36	

METHOD BLANK: 3562193 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268003, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	06/26/24 16:29	
Fluoride	mg/L	<0.12	0.20	0.12	06/26/24 16:29	N2
Sulfate	mg/L	<0.55	1.0	0.55	06/26/24 16:29	

LABORATORY CONTROL SAMPLE: 3560301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	N2
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3562194

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	N2
Sulfate	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560302 3560303

Parameter	Units	60454984001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	79.5	100	100	174	169	94	90	80-120	2	15	
Fluoride	mg/L	ND	50	50	38.2	38.1	76	76	80-120	0	15	M1,N2

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560302 3560303

Parameter	Units	60454984001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	188	100	100	293	290	104	102	80-120	1	15	

SAMPLE DUPLICATE: 3560304

Parameter	Units	60454984001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	79.5	79.9	1	15	
Fluoride	mg/L	ND	<2.5		15	N2
Sulfate	mg/L	188	195	4	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-10S **Lab ID: 60454268001** Collected: 06/04/24 13:35 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.284 ± 0.623 (1.34) C:NA T:87%**	pCi/L	07/09/24 12:50	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.299 ± 0.412 (0.884) C:79% T:88%**	pCi/L	06/25/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-16S **Lab ID: 60454268002** Collected: 06/03/24 10:28 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.144 ± 0.914 (1.69) C:NA T:85%**	pCi/L	07/09/24 12:50	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.492 ± 0.358 (0.695) C:81% T:84%**	pCi/L	06/25/24 12:05	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-29S **Lab ID: 60454268004** Collected: 06/04/24 11:26 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.600 ± 0.859 (1.46) C:NA T:89%**	pCi/L	07/09/24 12:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.658 ± 0.334 (0.571) C:82% T:91%**	pCi/L	06/25/24 12:05	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-29D **Lab ID: 60454268005** Collected: 06/04/24 11:23 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.646 ± 1.08 (1.86) C:NA T:93%**	pCi/L	07/09/24 12:50	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.0525 ± 0.274 (0.629) C:81% T:84%**	pCi/L	06/25/24 12:05	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-31S **Lab ID: 60454268006** Collected: 06/03/24 16:20 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.455 (0.945) C:NA T:88%**	pCi/L	07/09/24 12:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.411 ± 0.376 (0.762) C:87% T:70%**	pCi/L	06/25/24 12:05	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-DUP-1 **Lab ID: 60454268007** Collected: 06/03/24 00:00 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.122 ± 0.480 (0.918) C:NA T:91%**	pCi/L	07/09/24 12:50	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.843 ± 0.469 (0.875) C:82% T:85%**	pCi/L	06/25/24 12:06	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-FB-1 **Lab ID: 60454268008** Collected: 06/03/24 15:55 Received: 06/05/24 06:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.442 ± 0.414 (0.587) C:NA T:94%**	pCi/L	07/09/24 13:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.799 ± 0.421 (0.762) C:82% T:87%**	pCi/L	06/25/24 12:06	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-05S **Lab ID: 60454268009** Collected: 06/05/24 13:45 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.000 ± 0.600 (1.21) C:NA T:94%**	pCi/L	07/02/24 13:19	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.280 ± 0.301 (0.625) C:84% T:91%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17S **Lab ID: 60454268010** Collected: 06/06/24 10:48 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.900 ± 0.864 (1.36) C:NA T:95%**	pCi/L	06/27/24 14:20	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.563 ± 0.375 (0.710) C:77% T:85%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17I **Lab ID: 60454268011** Collected: 06/06/24 10:20 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.000 ± 1.06 (2.01) C:NA T:72%**	pCi/L	06/27/24 14:20	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.218 ± 0.317 (0.682) C:82% T:91%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21S **Lab ID: 60454268012** Collected: 06/06/24 16:19 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.136 ± 0.682 (1.28) C:NA T:94%**	pCi/L	06/27/24 14:37	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.11 ± 0.496 (0.843) C:74% T:88%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21I **Lab ID: 60454268013** Collected: 06/06/24 14:24 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.117 ± 0.560 (1.06) C:NA T:91%**	pCi/L	06/27/24 14:37	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.16 ± 0.453 (0.694) C:77% T:88%**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-21D **Lab ID: 60454268014** Collected: 06/06/24 16:10 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.282 ± 0.706 (1.28) C:NA T:95%**	pCi/L	06/27/24 14:37	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.13 ± 0.498 (0.827) C:80% T:80%**	pCi/L	06/27/24 12:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-22S **Lab ID: 60454268015** Collected: 06/05/24 18:45 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.0666 ± 0.598 (1.21) C:NA T:94%**	pCi/L	06/27/24 14:37	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.842 ± 0.449 (0.811) C:73% T:88%**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-22D **Lab ID: 60454268016** Collected: 06/05/24 17:29 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.136 ± 0.679 (1.28) C:NA T:93%**	pCi/L	06/27/24 14:37	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.519 ± 0.377 (0.737) C:82% T:85%**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-30S **Lab ID: 60454268017** Collected: 06/05/24 10:35 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.450 ± 0.751 (1.60) C:NA T:92%**	pCi/L	06/27/24 14:37	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.841 ± 0.408 (0.702) C:79% T:89%**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-DUP-2 **Lab ID: 60454268018** Collected: 06/05/24 00:00 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.290 ± 0.668 (1.21) C:NA T:93%**	pCi/L	06/27/24 14:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.376 ± 0.412 (0.863) C:75% T:82%**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-FB-2 **Lab ID: 60454268019** Collected: 06/05/24 12:55 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.700 ± 0.669 (1.02) C:NA T:92%**	pCi/L	06/27/24 14:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.00750 ± 0.310 (0.722) C:81% T:90%**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-MS-1 **Lab ID: 60454268020** Collected: 06/06/24 14:24 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**90.75 %REC ± NA (NA) C:NA T:NA**	pCi/L	06/27/24 14:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**70.75 %REC ± NA (NA) C:NA T:NA**	pCi/L	06/27/24 12:20	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-CA-MSD-1 **Lab ID: 60454268021** Collected: 06/06/24 14:24 Received: 06/07/24 05:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**74.79 %REC 19.29RPD ± NA (NA) C:NA T:NA**	pCi/L	06/27/24 14:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**78.02 %REC 9.78RPD ± NA (NA) C:NA T:NA**	pCi/L	06/27/24 12:21	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-17D **Lab ID: 60454268022** Collected: 06/03/24 12:58 Received: 06/08/24 09:12 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.313 ± 0.727 (1.30) C:NA T:99%**	pCi/L	06/27/24 14:49	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.326 ± 0.359 (0.748) C:72% T:85%**	pCi/L	06/27/24 12:21	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19S **Lab ID: 60454268023** Collected: 06/07/24 10:23 Received: 06/08/24 09:12 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.704 ± 0.961 (1.62) C:NA T:87%**	pCi/L	06/27/24 14:49	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.555 ± 0.395 (0.763) C:69% T:91%**	pCi/L	06/27/24 12:21	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19I **Lab ID: 60454268024** Collected: 06/07/24 11:10 Received: 06/08/24 09:12 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.961 ± 0.673 (0.888) C:NA T:90%**	pCi/L	06/27/24 14:49	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.431 ± 0.373 (0.746) C:72% T:79%**	pCi/L	06/27/24 12:21	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Sample: R-P-19D **Lab ID: 60454268025** Collected: 06/07/24 10:48 Received: 06/08/24 09:12 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0676 ± 0.607 (1.18) C:NA T:92%**	pCi/L	06/28/24 13:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.852 ± 0.399 (0.654) C:81% T:82%**	pCi/L	06/27/24 15:24	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 674849
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454268001, 60454268002, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3285464 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.152 ± 0.264 (0.665) C:NA T:88%	pCi/L	07/09/24 12:38	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 674850 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454268001, 60454268002, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

METHOD BLANK: 3285467 Matrix: Water
Associated Lab Samples: 60454268001, 60454268002, 60454268004, 60454268005, 60454268006, 60454268007, 60454268008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.260 ± 0.323 (0.686) C:85% T:89%	pCi/L	06/25/24 12:03	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 675262
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019, 60454268020, 60454268021, 60454268022, 60454268023, 60454268024

METHOD BLANK: 3287823
Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019, 60454268020, 60454268021, 60454268022, 60454268023, 60454268024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.269 (0.433) C:NA T:89%	pCi/L	06/27/24 14:20	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 675263
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019, 60454268020, 60454268021, 60454268022, 60454268023, 60454268024

METHOD BLANK: 3287824
Matrix: Water
Associated Lab Samples: 60454268009, 60454268010, 60454268011, 60454268012, 60454268013, 60454268014, 60454268015, 60454268016, 60454268017, 60454268018, 60454268019, 60454268020, 60454268021, 60454268022, 60454268023, 60454268024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.329 ± 0.357 (0.746) C:76% T:85%	pCi/L	06/27/24 12:20	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 675495
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454268025

METHOD BLANK: 3288961 Matrix: Water
Associated Lab Samples: 60454268025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.103 ± 0.235 (0.379) C:NA T:92%	pCi/L	06/28/24 13:05	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

QC Batch: 675496
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60454268025

METHOD BLANK: 3288962 Matrix: Water
Associated Lab Samples: 60454268025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.432 ± 0.312 (0.597) C:85% T:83%	pCi/L	06/27/24 12:17	

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QUALIFIERS

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454268001	**R-P-10S**	EPA 200.7	898012	EPA 200.7	898160
60454268002	**R-P-16S**	EPA 200.7	898012	EPA 200.7	898160
60454268003	**R-P-17D**	EPA 200.7	898012	EPA 200.7	898160
60454268004	**R-P-29S**	EPA 200.7	898012	EPA 200.7	898160
60454268005	**R-P-29D**	EPA 200.7	898012	EPA 200.7	898160
60454268006	**R-P-31S**	EPA 200.7	898012	EPA 200.7	898160
60454268007	**R-CA-DUP-1**	EPA 200.7	898012	EPA 200.7	898160
60454268008	**R-CA-FB-1**	EPA 200.7	898012	EPA 200.7	898160
60454268009	**R-P-05S**	EPA 200.7	897974	EPA 200.7	898158
60454268010	**R-P-17S**	EPA 200.7	897974	EPA 200.7	898158
60454268011	**R-P-17I**	EPA 200.7	897974	EPA 200.7	898158
60454268012	**R-P-21S**	EPA 200.7	897974	EPA 200.7	898158
60454268013	**R-P-21I**	EPA 200.7	897974	EPA 200.7	898158
60454268014	**R-P-21D**	EPA 200.7	897974	EPA 200.7	898158
60454268015	**R-P-22S**	EPA 200.7	897974	EPA 200.7	898158
60454268016	**R-P-22D**	EPA 200.7	897974	EPA 200.7	898158
60454268017	**R-P-30S**	EPA 200.7	897974	EPA 200.7	898158
60454268018	**R-CA-DUP-2**	EPA 200.7	897974	EPA 200.7	898158
60454268019	**R-CA-FB-2**	EPA 200.7	897974	EPA 200.7	898158
60454268023	**R-P-19S**	EPA 200.7	898016	EPA 200.7	898216
60454268024	**R-P-19I**	EPA 200.7	898016	EPA 200.7	898216
60454268025	**R-P-19D**	EPA 200.7	898016	EPA 200.7	898216
60454268001	**R-P-10S**	EPA 200.8	897973	EPA 200.8	898159
60454268002	**R-P-16S**	EPA 200.8	897973	EPA 200.8	898159
60454268003	**R-P-17D**	EPA 200.8	897973	EPA 200.8	898159
60454268004	**R-P-29S**	EPA 200.8	897973	EPA 200.8	898159
60454268005	**R-P-29D**	EPA 200.8	897973	EPA 200.8	898159
60454268006	**R-P-31S**	EPA 200.8	897973	EPA 200.8	898159
60454268007	**R-CA-DUP-1**	EPA 200.8	897973	EPA 200.8	898159
60454268008	**R-CA-FB-1**	EPA 200.8	897973	EPA 200.8	898159
60454268009	**R-P-05S**	EPA 200.8	897965	EPA 200.8	900174
60454268010	**R-P-17S**	EPA 200.8	897965	EPA 200.8	900174
60454268011	**R-P-17I**	EPA 200.8	897965	EPA 200.8	900174
60454268012	**R-P-21S**	EPA 200.8	897965	EPA 200.8	900174
60454268013	**R-P-21I**	EPA 200.8	897965	EPA 200.8	900174
60454268014	**R-P-21D**	EPA 200.8	897965	EPA 200.8	900174
60454268015	**R-P-22S**	EPA 200.8	897965	EPA 200.8	900174
60454268016	**R-P-22D**	EPA 200.8	897965	EPA 200.8	900174
60454268017	**R-P-30S**	EPA 200.8	897965	EPA 200.8	900174
60454268018	**R-CA-DUP-2**	EPA 200.8	897965	EPA 200.8	900174
60454268019	**R-CA-FB-2**	EPA 200.8	897965	EPA 200.8	900174
60454268023	**R-P-19S**	EPA 200.8	898026	EPA 200.8	898205
60454268024	**R-P-19I**	EPA 200.8	898026	EPA 200.8	898205
60454268025	**R-P-19D**	EPA 200.8	898026	EPA 200.8	898205
60454268001	**R-P-10S**	EPA 7470	898431	EPA 7470	898444
60454268002	**R-P-16S**	EPA 7470	898431	EPA 7470	898444

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454268003	**R-P-17D**	EPA 7470	898431	EPA 7470	898444
60454268004	**R-P-29S**	EPA 7470	898759	EPA 7470	898998
60454268005	**R-P-29D**	EPA 7470	898759	EPA 7470	898998
60454268006	**R-P-31S**	EPA 7470	898759	EPA 7470	898998
60454268007	**R-CA-DUP-1**	EPA 7470	898759	EPA 7470	898998
60454268008	**R-CA-FB-1**	EPA 7470	898431	EPA 7470	898444
60454268009	**R-P-05S**	EPA 7470	898413	EPA 7470	898443
60454268010	**R-P-17S**	EPA 7470	898413	EPA 7470	898443
60454268011	**R-P-17I**	EPA 7470	898413	EPA 7470	898443
60454268012	**R-P-21S**	EPA 7470	898413	EPA 7470	898443
60454268013	**R-P-21I**	EPA 7470	898413	EPA 7470	898443
60454268014	**R-P-21D**	EPA 7470	898413	EPA 7470	898443
60454268015	**R-P-22S**	EPA 7470	898413	EPA 7470	898443
60454268016	**R-P-22D**	EPA 7470	898413	EPA 7470	898443
60454268017	**R-P-30S**	EPA 7470	898413	EPA 7470	898443
60454268018	**R-CA-DUP-2**	EPA 7470	898413	EPA 7470	898443
60454268019	**R-CA-FB-2**	EPA 7470	898413	EPA 7470	898443
60454268023	**R-P-19S**	EPA 7470	898431	EPA 7470	898444
60454268024	**R-P-19I**	EPA 7470	898431	EPA 7470	898444
60454268025	**R-P-19D**	EPA 7470	898431	EPA 7470	898444
60454268001	**R-P-10S**	EPA 903.1	674849		
60454268002	**R-P-16S**	EPA 903.1	674849		
60454268004	**R-P-29S**	EPA 903.1	674849		
60454268005	**R-P-29D**	EPA 903.1	674849		
60454268006	**R-P-31S**	EPA 903.1	674849		
60454268007	**R-CA-DUP-1**	EPA 903.1	674849		
60454268008	**R-CA-FB-1**	EPA 903.1	674849		
60454268009	**R-P-05S**	EPA 903.1	675262		
60454268010	**R-P-17S**	EPA 903.1	675262		
60454268011	**R-P-17I**	EPA 903.1	675262		
60454268012	**R-P-21S**	EPA 903.1	675262		
60454268013	**R-P-21I**	EPA 903.1	675262		
60454268014	**R-P-21D**	EPA 903.1	675262		
60454268015	**R-P-22S**	EPA 903.1	675262		
60454268016	**R-P-22D**	EPA 903.1	675262		
60454268017	**R-P-30S**	EPA 903.1	675262		
60454268018	**R-CA-DUP-2**	EPA 903.1	675262		
60454268019	**R-CA-FB-2**	EPA 903.1	675262		
60454268020	**R-CA-MS-1**	EPA 903.1	675262		
60454268021	**R-CA-MSD-1**	EPA 903.1	675262		
60454268022	**R-P-17D**	EPA 903.1	675262		
60454268023	**R-P-19S**	EPA 903.1	675262		
60454268024	**R-P-19I**	EPA 903.1	675262		
60454268025	**R-P-19D**	EPA 903.1	675495		
60454268001	**R-P-10S**	EPA 904.0	674850		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454268002	**R-P-16S**	EPA 904.0	674850		
60454268004	**R-P-29S**	EPA 904.0	674850		
60454268005	**R-P-29D**	EPA 904.0	674850		
60454268006	**R-P-31S**	EPA 904.0	674850		
60454268007	**R-CA-DUP-1**	EPA 904.0	674850		
60454268008	**R-CA-FB-1**	EPA 904.0	674850		
60454268009	**R-P-05S**	EPA 904.0	675263		
60454268010	**R-P-17S**	EPA 904.0	675263		
60454268011	**R-P-17I**	EPA 904.0	675263		
60454268012	**R-P-21S**	EPA 904.0	675263		
60454268013	**R-P-21I**	EPA 904.0	675263		
60454268014	**R-P-21D**	EPA 904.0	675263		
60454268015	**R-P-22S**	EPA 904.0	675263		
60454268016	**R-P-22D**	EPA 904.0	675263		
60454268017	**R-P-30S**	EPA 904.0	675263		
60454268018	**R-CA-DUP-2**	EPA 904.0	675263		
60454268019	**R-CA-FB-2**	EPA 904.0	675263		
60454268020	**R-CA-MS-1**	EPA 904.0	675263		
60454268021	**R-CA-MSD-1**	EPA 904.0	675263		
60454268022	**R-P-17D**	EPA 904.0	675263		
60454268023	**R-P-19S**	EPA 904.0	675263		
60454268024	**R-P-19I**	EPA 904.0	675263		
60454268025	**R-P-19D**	EPA 904.0	675496		
60454268001	**R-P-10S**	SM 2320B	897675		
60454268002	**R-P-16S**	SM 2320B	897434		
60454268003	**R-P-17D**	SM 2320B	897434		
60454268004	**R-P-29S**	SM 2320B	897675		
60454268005	**R-P-29D**	SM 2320B	897675		
60454268006	**R-P-31S**	SM 2320B	897434		
60454268007	**R-CA-DUP-1**	SM 2320B	897434		
60454268008	**R-CA-FB-1**	SM 2320B	897434		
60454268009	**R-P-05S**	SM 2320B	897676		
60454268010	**R-P-17S**	SM 2320B	897856		
60454268011	**R-P-17I**	SM 2320B	897856		
60454268012	**R-P-21S**	SM 2320B	897856		
60454268013	**R-P-21I**	SM 2320B	897856		
60454268014	**R-P-21D**	SM 2320B	897856		
60454268015	**R-P-22S**	SM 2320B	897676		
60454268016	**R-P-22D**	SM 2320B	897676		
60454268017	**R-P-30S**	SM 2320B	897676		
60454268018	**R-CA-DUP-2**	SM 2320B	897676		
60454268019	**R-CA-FB-2**	SM 2320B	897676		
60454268023	**R-P-19S**	SM 2320B	897856		
60454268024	**R-P-19I**	SM 2320B	897856		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454268025	**R-P-19D**	SM 2320B	897856		
60454268001	**R-P-10S**	SM 2540C	897214		
60454268002	**R-P-16S**	SM 2540C	897214		
60454268003	**R-P-17D**	SM 2540C	897214		
60454268004	**R-P-29S**	SM 2540C	897214		
60454268005	**R-P-29D**	SM 2540C	897214		
60454268006	**R-P-31S**	SM 2540C	897214		
60454268007	**R-CA-DUP-1**	SM 2540C	897214		
60454268008	**R-CA-FB-1**	SM 2540C	897214		
60454268009	**R-P-05S**	SM 2540C	897425		
60454268010	**R-P-17S**	SM 2540C	897633		
60454268011	**R-P-17I**	SM 2540C	897633		
60454268012	**R-P-21S**	SM 2540C	897839		
60454268013	**R-P-21I**	SM 2540C	897839		
60454268014	**R-P-21D**	SM 2540C	897839		
60454268015	**R-P-22S**	SM 2540C	897425		
60454268016	**R-P-22D**	SM 2540C	897425		
60454268017	**R-P-30S**	SM 2540C	897425		
60454268018	**R-CA-DUP-2**	SM 2540C	897425		
60454268019	**R-CA-FB-2**	SM 2540C	897425		
60454268023	**R-P-19S**	SM 2540C	897839		
60454268024	**R-P-19I**	SM 2540C	897839		
60454268025	**R-P-19D**	SM 2540C	897839		
60454268001	**R-P-10S**	SM 3500-Fe B#4	900344		
60454268002	**R-P-16S**	SM 3500-Fe B#4	900344		
60454268003	**R-P-17D**	SM 3500-Fe B#4	900344		
60454268004	**R-P-29S**	SM 3500-Fe B#4	900344		
60454268005	**R-P-29D**	SM 3500-Fe B#4	900344		
60454268006	**R-P-31S**	SM 3500-Fe B#4	900344		
60454268007	**R-CA-DUP-1**	SM 3500-Fe B#4	900344		
60454268008	**R-CA-FB-1**	SM 3500-Fe B#4	900344		
60454268009	**R-P-05S**	SM 3500-Fe B#4	900344		
60454268010	**R-P-17S**	SM 3500-Fe B#4	900344		
60454268011	**R-P-17I**	SM 3500-Fe B#4	900344		
60454268012	**R-P-21S**	SM 3500-Fe B#4	900344		
60454268013	**R-P-21I**	SM 3500-Fe B#4	900344		
60454268014	**R-P-21D**	SM 3500-Fe B#4	900344		
60454268015	**R-P-22S**	SM 3500-Fe B#4	900344		
60454268016	**R-P-22D**	SM 3500-Fe B#4	900344		
60454268017	**R-P-30S**	SM 3500-Fe B#4	900344		
60454268018	**R-CA-DUP-2**	SM 3500-Fe B#4	900346		
60454268019	**R-CA-FB-2**	SM 3500-Fe B#4	900346		
60454268023	**R-P-19S**	SM 3500-Fe B#4	899661		
60454268024	**R-P-19I**	SM 3500-Fe B#4	899661		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454268025	**R-P-19D**	SM 3500-Fe B#4	899661		
60454268001	**R-P-10S**	SM 3500-Fe B#4	897692		
60454268002	**R-P-16S**	SM 3500-Fe B#4	897692		
60454268003	**R-P-17D**	SM 3500-Fe B#4	897692		
60454268004	**R-P-29S**	SM 3500-Fe B#4	897692		
60454268005	**R-P-29D**	SM 3500-Fe B#4	897692		
60454268006	**R-P-31S**	SM 3500-Fe B#4	897692		
60454268007	**R-CA-DUP-1**	SM 3500-Fe B#4	897692		
60454268008	**R-CA-FB-1**	SM 3500-Fe B#4	897692		
60454268009	**R-P-05S**	SM 3500-Fe B#4	897692		
60454268010	**R-P-17S**	SM 3500-Fe B#4	897825		
60454268011	**R-P-17I**	SM 3500-Fe B#4	897825		
60454268012	**R-P-21S**	SM 3500-Fe B#4	897825		
60454268013	**R-P-21I**	SM 3500-Fe B#4	897825		
60454268014	**R-P-21D**	SM 3500-Fe B#4	897825		
60454268015	**R-P-22S**	SM 3500-Fe B#4	897825		
60454268016	**R-P-22D**	SM 3500-Fe B#4	897825		
60454268017	**R-P-30S**	SM 3500-Fe B#4	897692		
60454268018	**R-CA-DUP-2**	SM 3500-Fe B#4	897692		
60454268019	**R-CA-FB-2**	SM 3500-Fe B#4	897692		
60454268023	**R-P-19S**	SM 3500-Fe B#4	897825		
60454268024	**R-P-19I**	SM 3500-Fe B#4	897825		
60454268025	**R-P-19D**	SM 3500-Fe B#4	897825		
60454268001	**R-P-10S**	SM 4500-S-2 D	897121		
60454268002	**R-P-16S**	SM 4500-S-2 D	897121		
60454268003	**R-P-17D**	SM 4500-S-2 D	897121		
60454268004	**R-P-29S**	SM 4500-S-2 D	897121		
60454268005	**R-P-29D**	SM 4500-S-2 D	897121		
60454268006	**R-P-31S**	SM 4500-S-2 D	897121		
60454268007	**R-CA-DUP-1**	SM 4500-S-2 D	897121		
60454268008	**R-CA-FB-1**	SM 4500-S-2 D	897121		
60454268009	**R-P-05S**	SM 4500-S-2 D	897287		
60454268010	**R-P-17S**	SM 4500-S-2 D	897287		
60454268011	**R-P-17I**	SM 4500-S-2 D	897287		
60454268012	**R-P-21S**	SM 4500-S-2 D	897287		
60454268013	**R-P-21I**	SM 4500-S-2 D	897287		
60454268014	**R-P-21D**	SM 4500-S-2 D	897418		
60454268015	**R-P-22S**	SM 4500-S-2 D	897287		
60454268016	**R-P-22D**	SM 4500-S-2 D	897287		
60454268017	**R-P-30S**	SM 4500-S-2 D	897287		
60454268018	**R-CA-DUP-2**	SM 4500-S-2 D	897418		
60454268019	**R-CA-FB-2**	SM 4500-S-2 D	897418		
60454268023	**R-P-19S**	SM 4500-S-2 D	897823		
60454268024	**R-P-19I**	SM 4500-S-2 D	897823		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA-Revised Report
Pace Project No.: 60454268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60454268025	**R-P-19D**	SM 4500-S-2 D	897823		
60454268001	**R-P-10S**	EPA 300.0	899449		
60454268002	**R-P-16S**	EPA 300.0	899449		
60454268003	**R-P-17D**	EPA 300.0	899449		
60454268004	**R-P-29S**	EPA 300.0	899449		
60454268005	**R-P-29D**	EPA 300.0	899449		
60454268006	**R-P-31S**	EPA 300.0	899449		
60454268007	**R-CA-DUP-1**	EPA 300.0	899449		
60454268008	**R-CA-FB-1**	EPA 300.0	899449		
60454268009	**R-P-05S**	EPA 300.0	898466		
60454268010	**R-P-17S**	EPA 300.0	898466		
60454268011	**R-P-17I**	EPA 300.0	898466		
60454268012	**R-P-21S**	EPA 300.0	898466		
60454268013	**R-P-21I**	EPA 300.0	898466		
60454268014	**R-P-21D**	EPA 300.0	898466		
60454268015	**R-P-22S**	EPA 300.0	898466		
60454268016	**R-P-22D**	EPA 300.0	898466		
60454268017	**R-P-30S**	EPA 300.0	898466		
60454268018	**R-CA-DUP-2**	EPA 300.0	898466		
60454268019	**R-CA-FB-2**	EPA 300.0	898466		
60454268023	**R-P-19S**	EPA 300.0	898867		
60454268024	**R-P-19I**	EPA 300.0	898867		
60454268025	**R-P-19D**	EPA 300.0	898867		

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WO# : 60454268

60454268

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 18.9/2.1 Corr. Factor 0.0 Corrected 18.9/2.1/17.4 19.1

Date and initials of person examining contents: 6/6/24

Temperature should be above freezing to 6°C 17.4/19.1

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	Did not receive RAD Volume for R-P-17D.
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 67121/606203	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Per Grant, RAD volume will arrive with next shipment.

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60454260

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6	Invoice To:	Mark Haddock
Project Name:	AMEREN RCPA-CA	Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)*	Radium 226 & Radium 228	Sample Comment	Preservation non-conformance identified for sample
Specify Container Size **										1	1	3	3	3	3	1		
Identify Container Preservative Type***										1	1	1	6	2	2	2		
R-P-05S	WT																	
R-P-10S	WT	G			6-4-24	1335	6			✓	✓	✓	✓	✓	✓	✓		
R-P-16S	WT	G			6-3-24	1028	6			✓	✓	✓	✓	✓	✓	✓		
R-P-17S	WT																	
R-P-17I	WT																	
R-P-17D	WT	G			6-3-24	1258	6			✓	✓	✓	✓	✓	✓	✓		
R-P-19S	WT																	
R-P-19I	WT																	
R-P-19D	WT																	
R-P-21S	WT																	

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086896

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By:
(Printed Name): Grant Moore
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	TZ99	0.0	1.8/1.9/2.1/1.7	1.4/1.9	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-4-24/1730		6/5/24 0610	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60454268

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6	Invoice To:	Mark Haddock
Project Name:	AMEREN RCPA-CA	Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)*	Radium 226 & Radium 228	Sample Comment	Preservation non-conformance identified for sample.
Specify Container Size **										1	1	1	3	3	3	1		
Identify Container Preservative Type***										1	1	1	6	2	2	2		
R-P-21I	WT																	
R-P-21D	WT																	
R-P-22S	WT																	
R-P-22D	WT																	
R-P-29S	WT	G			6-4-24	1126	6			✓	✓	✓	✓	✓	✓	✓		
R-P-29D	WT	G			6-4-24	1123	6			✓	✓	✓	✓	✓	✓	✓		
R-P-30S	WT																	
R-P-31S	WT	G			6-3-24	1620	6			✓	✓	✓	✓	✓	✓	✓		
R-CA-DUP-1	WT	G			6-3-24	—	6			✓	✓	✓	✓	✓	✓	✓		
R-CA-DUP-2	WT																	

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Jamie Church**

AcctNum / Client ID:

Table #:

Profile / Template: **15854**

Prelog / Bottle Ord. ID: **EZ 3086896**

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By:
(Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T299	0.0	1.8/1.9/2.1/17.4/19.4		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Grant Morey / Rocksmith	6-4-24/1730		6/5/24 0620	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

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Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60454268

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 1 1 3 3 3 3 1

Identify Container Preservative Type***: 1 1 1 6 2 2 2

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cal/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)**	Radium 226 & Radium 228	Sample Comment
R-CA-FB-1	WT	G			6-3-24	1555	6			✓	✓	✓	✓	✓	✓	✓	
R-CA-FB-2	WT																
R-CA-MS-1	WT																
R-CA-MSD-1	WT																

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086896

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
**App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
***App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg

Collected By:
(Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T299	0.0	1.8/1.9/2.1/17.4/19.1		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-4-24/1736		6/5/24 0640	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

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DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

Client: Rocksmith Geoeng

Profile/EZ # EZ 3086892

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1																			1		1	2	1				1					
2	WT																		1		1	2	1				1					
3	↓																															
4																																
5																																
6	WT																		1		1	0	1				1	(Do not log RAD)				
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 6045468

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

Client: Rocksmith Geo eng Profile/EZ #:

Site: Notes:

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1																																
2																																
3																																
4																																
5	WT																		1		1	2	1				1					
6	WT																		1		1	2	1				1					
7																																
8	WT																		1		1	2	1				1					
9	WT																		1		1	2	1				1					
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	**Matrix**	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 6045468

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa
Client: Rocksmith Brewing Profile/EZ #

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	2	1				1					
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60454268

WO# : 60454268

60454268

ame: Rocksmith

: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

king #: Pace Shipping Label Used? Yes ☑ No ☐

stody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: T299 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 1.4 Corr. Factor 0.0 Corrected 1.4

Date and initials of person examining contents: AF 6/8

Temperature should be above freezing to 6°C

Cooler 2 - 22.2

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 6208016210006	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6	Invoice To:	Mark Haddock
Project Name:	AMEREN RCPA-CA	Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 1 1 3 3 3 3 1

Identify Container Preservative Type***: 1 1 1 6 2 2 2

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Jamie Church**

AcctNum / Client ID:

Table #:

Profile / Template: **15854**

Prelog / Bottle Ord. ID: **EZ 3086896**

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)**	Radium 226 & Radium 228	Sample Comment
R-P-05S	WT																60494268
R-P-10S	WT																
R-P-16S	WT																
R-P-17S	WT																
R-P-17I	WT																
R-P-17D	WT	G			6-3-24	1258	2									✓	Not included with previously shipped coolers
R-P-19S	WT	G			6-7-24	1023	6			✓	✓	✓	✓	✓	✓	✓	
R-P-19I	WT	G			"	1110	6			✓	✓	✓	✓	✓	✓	✓	
R-P-19D	WT	G			"	1048	6			✓	✓	✓	✓	✓	✓	✓	
R-P-21S	WT																

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By: (Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				1.4	

Preservation non-conformance identified for sample.

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Grant Morey / Rocksmith	6-7-24 / 1330		6/8 0912
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other

Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

Client: Rocksmith

Profile/EZ # Append to 60454268

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																					2										
2																																
3																																
4																																
5																																
6																						2										
7																			1		1	2	1				1					
8																			1		1	2	1				1					
9																			1		1	2	1				1					
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454268

WO# : 60454268

60454268

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T209 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2.9 **Corr. Factor** 0.0 **Corrected** 2.9

Date and initials of person examining contents: AF 6/7

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	Cooler 2-~~23.7~~ 23.8 3-4.2 4-23.6 5-7.8
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 6209010	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

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Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 1 1 3 3 3 3 1

Identify Container Preservative Type***: 1 1 1 6 2 2 2

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfale	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)*	Radium 226 & Radium 228	Sample Comment
R-P-05S	WT	G			6-5-24	1345	6			✓	✓	✓	✓	✓	✓	✓	60454268
R-P-10S	WT																
R-P-16S	WT																
R-P-17S	WT	G			6-6-24	1048	6			✓	✓	✓	✓	✓	✓	✓	
R-P-17I	WT	G			1	1020	6			✓	✓	✓	✓	✓	✓	✓	
R-P-17D	WT																
R-P-19S	WT																
R-P-19I	WT																
R-P-19D	WT																
R-P-21S	WT	G			6-6-24	1619	6			✓	✓	✓	✓	✓	✓	✓	

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086896

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By: (Printed Name) Grant Moore
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				2.9	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-6-24/1830		6/7 945	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

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Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

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		Cc E-Mail:	
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Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
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Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

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Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)**	Radium 226 & Radium 228	Sample Comment
R-P-21I	WT	G			6-6-24	1424	6			✓	✓	✓	✓	✓	✓	✓	60451268
R-P-21D	WT	G			I	1610	6			✓	✓	✓	✓	✓	✓	✓	
R-P-22S	WT	G			6-5-24	1845	6			✓	✓	✓	.	-	-	-	
R-P-22D	WT	G			6-5-24	1729	6			✓	✓	✓	✓	✓	✓	✓	
R-P-29S	WT																
R-P-29D	WT																
R-P-30S	WT	G			6-5-24	1035	6			✓	✓	✓	✓	✓	✓	✓	
R-P-31S	WT																
R-CA-DUP-1	WT																
R-CA-DUP-2	WT	G			6-5-24	-	6			✓	✓	✓	✓	✓	✓	✓	

Specify Container Size **: 1 1 3 3 2 3 1
Identify Container Preservative Type***: 1 1 1 6 2 2 2
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

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Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3086896

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Collected By:
(Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C) Corrected Temp. (°C) 2.9 On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	6-6-24/1830		6/7 545	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
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		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
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Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units
R-CA-FB-1	WT								
R-CA-FB-2	WT	G			6-5-24	1255	6		
R-CA-MS-1	WT	G			6-6-24	1424	6		
R-CA-MSD-1	WT	G			"	1424	6		

Specify Container Size **: 1 1 3 3 3 3 1

Identify Container Preservative Type***: 1 1 1 6 2 2 2

Analysis Requested

Chloride/Fluoride/Sulfate	TDS / Alkalinity	Ferrous Iron / Ferric Iron	Sulfide	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)**	Radium 226 & Radium 228				
✓	✓	✓	✓	✓	✓	✓				
✓	✓	✓	✓	✓	✓	✓				
✓	✓	✓	✓	✓	✓	✓				

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Jamie Church**
AcctNum / Client ID:
Table #:
Profile / Template: **15854**
Prelog / Bottle Ord. ID: **EZ 3086896**

Sample Comment

6045426 8

Collected @ R-P-21

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
***App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B**
****App IV Metals - EPA 200.7 -Ba,Be,Co,Pb,Li,Mo & 200.8 Metals - Sb,As,Cd,Cr,Se,Tl +7470 Hg**

Collected By:
(Printed Name): Grayt Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				2.9	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Rocksmith	6-6-24/1830		6/7 545
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier
[ ] FedEX [ ] UPS [ ] Other

Page: 3 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa
Client: Rocksmith

Profile/EZ # Append to 60454268

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	2	1				1					
2																																
3																																
4																			1		1	2	1				1					
5																			1		1	2	1				1					
6																																
7																																
8																																
9																																
10																			1		1	2	1				1					
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454268

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

Client: Rocksmith

Profile/EZ # Append to 60454268

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	WT																		3		3	3	3				3			
2																			1		1	2	1				1			
3																			1		1	2	1				1			
4																			1		1	2	1				1			
5																														
6																														
7																			1		1	2	1				1			
8																														
9																														
10																			1		1	2	1				1			
11																														
12																														

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Ccliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454268

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count
Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa
Client: Rocksmith

Profile/EZ # Append to 60454268

Site:

Notes Only Radium for Last 2 Lines

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																															
2																			1		1	2	1				1					
3																						2										
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1C	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2C	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3C	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Ccliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60454268

Updated IR with COC received via email 6/11/24 - PS

Internal Transfer Chain of Custody

Pace

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Workorder: 60454268 **Workorder Name:** AMEREN RCRA-CA

Report To

Jamie Church
Pace Analytical Kansas
9608 Loiret Blvd.
Lenexa, KS 66219
Phone 314-838-7223

Subcontract To

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
1	R-P-10S	PS	6/4/2024 13:35	60454268001	Water	2						X	X											001
2	R-P-16S	PS	6/3/2024 10:28	60454268002	Water	2						X	X											002
3	R-P-29S	PS	6/4/2024 11:26	60454268004	Water	2						X	X											004
4	R-P-29D	PS	6/4/2024 11:23	60454268005	Water	2						X	X											005
5	R-P-31S	PS	6/3/2024 16:20	60454268006	Water	2						X	X											006
6	R-CA-DUP-1	PS	6/3/2024 00:00	60454268007	Water	2						X	X											007
7	R-CA-FB-1	PS	6/3/2024 15:55	60454268008	Water	2						X	X											008
8	R-P-05S	PS	6/5/2024 13:45	60454268009	Water	1								X										
9	R-P-17S	PS	6/6/2024 10:48	60454268010	Water	1								X										
10	R-P-17I	PS	6/6/2024 10:20	60454268011	Water	1								X										
11	R-P-21S	PS	6/6/2024 16:19	60454268012	Water	1								X										
12	R-P-21I	RQS	6/6/2024 14:24	60454268013	Water	1								X										
13	R-P-21D	PS	6/6/2024 16:10	60454268014	Water	1								X										
14	R-P-22S	PS	6/5/2024 18:45	60454268015	Water	1								X										
15	R-P-22D	PS	6/5/2024 17:29	60454268016	Water	1								X										
16	R-P-30S	PS	6/5/2024 10:35	60454268017	Water	1								X										
~~17~~	~~R-CA-DUP-2~~	~~PS~~	~~6/5/2024 00:00~~	~~60454268018~~	~~Water~~	~~1~~								~~X~~										
18	R-CA-FB-2	PS	6/5/2024 12:55	60454268019	Water	1								X										
19																								

WO# : 30691055

30691055

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Workorder: 60454268 **Workorder Name:** AMEREN RCRA-CA

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis												LAB USE ONLY
20	R-CA-MSD-1	PS	6/6/2024 14:24	60454268021	Water	1								X										
21	R-P-17D	PS	6/3/2024 12:58	60454268022	Water	2								X										
22	R-P-19S	PS	6/7/2024 10:23	60454268023	Water	2								X										
23	R-P-19I	PS	6/7/2024 11:10	60454268024	Water	2								X										
24																								

Transfers	Released By	Date/Time	Received By	Date/Time
1			Ryp2 Ln	6/7/24 1030
2				
3				

Comments: KS sample location: FEDEX

Cooler Temperature on Receipt ____°C | Custody Seal Y or (N) | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 30691055
PM: MAR Due Date: 06/28/24
CLIENT: PACE_60_LEKS

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO#: 30691055

PM: MAR Due Date: 06/28/24

CLIENT: PACE_60_LEKS

Client Name: Pace - KS Pr

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 714623800884

Initial / Date

Examined By: PS 6/10/24

Labeled By: PS 6/11/24

Temped By: ____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☑ No

Thermometer Used: ____ **Type of Ice:** Wet Blue (None)

Cooler Temperature: Observed Temp ____ °C Correction Factor: ____ °C Final Temp: ____ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA
Chain of Custody Present	✓		
Chain of Custody Filled Out:	✓		
-Were client corrections present on COC		✓	
Chain of Custody Relinquished		✓	
Sampler Name & Signature on COC:		✓	
Sample Labels match COC:	✓		
-Includes date/time/ID			
Matrix:	WT		
Samples Arrived within Hold Time:	✓		
Short Hold Time Analysis (<72hr remaining):		✓	
Rush Turn Around Time Requested:		✓	
Sufficient Volume: PS 6/11/24	X	✓	
Correct Containers Used:	✓		
-Pace Containers Used	✓		
Containers Intact:	✓		
Orthophosphate field filtered:			✓
Hex Cr Aqueous samples field filtered:			✓
Organic Samples checked for dichlorination			✓
Filtered volume received for dissolved tests:			✓
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	✓		
All containers meet method preservation requirements:	✓		
8260C/D: Headspace in VOA Vials (> 6mm)			✓
624.1: Headspace in VOA Vials (0mm)			✓
Radon: Headspace in RAD Vials (0mm)			✓
Trip Blank Present:			✓
Rad Samples Screened <.05 mrem/hr.	✓		

pH paper Lot# 1002431

D.P.D. Residual Chlorine Lot #

1. Received COC via PM 6/11/24
2.
3.
4.
5.
6.
7.
8.
9. Missing samples from COC.
10.
11.
12.
13.
14:
15:
16. PH<2

Initial when completed PS Date/Time of Preservation

Lot# of added Preservative

17.
18.
19.

Trip blank custody seal present? YES or NO

Initial when completed PS Date: 6/7/24 Survey Meter SN: 25014380

Comments: * Received 6/7/24 1030 No COC.

* Received samples 001, 002, 004-008. No others on COC.

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Internal Transfer Chain of Custody

WO# : 30691302

30691302

☐ Rush Multiplier____X

☐ Samples Pre-Logged into eCOC

State Of Origin: MO

Cert. Needed: ☐ Yes ☒ No

Workorder: 60454268 Workorder Name: AMEREN RCRA-CA

Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
1	R-P-10S	PS	6/4/2024 13:35	60454268001	Water	2						X	X											
2	R-P-16S	PS	6/3/2024 10:28	60454268002	Water	2						X	X											
3	R-P-29S	PS	6/4/2024 11:26	60454268004	Water	2						X	X											
4	R-P-29D	PS	6/4/2024 11:23	60454268005	Water	2						X	X											
5	R-P-31S	PS	6/3/2024 16:20	60454268006	Water	2						X	X											
6	R-CA-DUP-1	PS	6/3/2024 00:00	60454268007	Water	2						X	X											
7	R-CA-FB-1	PS	6/3/2024 15:55	60454268008	Water	2						X	X											
8	R-P-05S	PS	6/5/2024 13:45	60454268009	Water	1						X	X											009
9	R-P-17S	PS	6/6/2024 10:48	60454268010	Water	1						X	X											010
10	R-P-17I	PS	6/6/2024 10:20	60454268011	Water	1						X	X											011
11																								
1	R-P-21I	RQS	6/6/2024 14:24	60454268013	Water	1						X	X											MS/MSD 013
2	R-P-21D	PS	6/6/2024 16:10	60454268014	Water	1						X	X											014
3	R-P-22S	PS	6/5/2024 18:45	60454268015	Water	1						X	X											015
4	R-P-22D	PS	6/5/2024 17:29	60454268016	Water	1						X	X											016
5	R-P-30S	PS	6/5/2024 10:35	60454268017	Water	1						X	X											017
6	R-CA-DUP-2	PS	6/5/2024 00:00	60454268018	Water	1						X	X											018
7	R-CA-FB-2	PS	6/5/2024 12:55	60454268019	Water	1						X	X											019
8	R-CA-MS-1	PS	6/6/2024 14:24	60454268020	Water	1						X	X											020

Internal Transfer Chain of Custody

WO# : 30691302

PM: MAR Due Date: 07/02/24

CLIENT: PACE_60_LEKS

☐ Rush Multiplier____X

☐ Samples Pre-Logged into eCOC

State Of Origin: MO

Cert. Needed: ☐ Yes ☐ No

Workorder: 60454268 Workorder Name: AMEREN RCRA-CA

Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
9	R-CA-MSD-1	PS	6/6/2024 14:24	60454268021	Water	2						X	X											021
10	R-P-17D	PS	6/3/2024 12:58	60454268022	Water	2						X	X											022
11	R-P-19S	PS	6/7/2024 10:23	60454268023	Water	2						X	X											023
12	R-P-19I	PS	6/7/2024 11:10	60454268024	Water	2						X	X											024
13	R-P-19D	PS	6/7/2024 10:48	60454268025	Water	2						X	X											025

Transfers	Released By	Date/Time	Received By	Date/Time
1				6/11/24 1015
2				
3				

Comments

KS sample location: 6090-R17-S3A

Note: 013 is parent sample for 020 and 021 MS/MSD.

Cooler Temperature on Receipt _____ °C | **Custody Seal Y or N** | **Received on Ice Y or N** | **Samples Intact Y or N**

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Internal Transfer Chain of Custody

WO# : 30691302
PM: MAR Due Date: 07/02/24
CLIENT: PACE_60_LEKS

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Workorder: 60454268 Workorder Name: AMEREN RCRA-CA

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
1	R-P-10S	PS	6/4/2024 13:35	60454268001	Water	2						X	X											
2	R-P-16S	PS	6/3/2024 10:28	60454268002	Water	2						X	X											
3	R-P-29S	PS	6/4/2024 11:26	60454268004	Water	2						X	X											
4	R-P-29D	PS	6/4/2024 11:23	60454268005	Water	2						X	X											
5	R-P-31S	PS	6/3/2024 16:20	60454268006	Water	2						X	X											
6	R-CA-DUP-1	PS	6/3/2024 00:00	60454268007	Water	2						X	X											
7	R-CA-FB-1	PS	6/3/2024 15:55	60454268008	Water	2						X	X											
8	R-P-05S	PS	6/5/2024 13:45	60454268009	Water	1								X										009
9	R-P-17S	PS	6/6/2024 10:48	60454268010	Water	1								X										010
10	R-P-17I	PS	6/6/2024 10:20	60454268011	Water	1								X										011
11	R-P-21S	PS	6/6/2024 16:19	60454268012	Water	1								X										012
12	R-P-21I	RQS	6/6/2024 14:24	60454268013	Water	1								X										013
13	R-P-21D	PS	6/6/2024 16:10	60454268014	Water	1								X										014
14	R-P-22S	PS	6/5/2024 18:45	60454268015	Water	1								X										015
15	R-P-22D	PS	6/5/2024 17:29	60454268016	Water	1								X										016
16	R-P-30S	PS	6/5/2024 10:35	60454268017	Water	1								X										017
~~17~~	~~R-CA-DUP-2~~	~~PS~~	~~6/5/2024 00:00~~	~~60454268018~~	~~Water~~	~~1~~								X										018
18	R-CA-FB-2	PS	6/5/2024 12:55	60454268019	Water	1								X										019
19																								

Internal Transfer Chain of Custody

WO# : 30691302

PM: MAR **Due Date: 07/02/24**

CLIENT: PACE_60_LEKS

☐ Rush Multiplier_____X

☐ Samples Pre-Logged into eCOC

State Of Origin: MO

Cert. Needed: ☐ Yes ☐ N

Workorder: 60454268 Workorder Name: AMEREN RCRA-CA

Owner Received Date: 6/5/2024 Results Requested By: 6/21/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis	LAB USE ONLY
20	R-CA-MSD-1	PS	6/6/2024 14:24	60454268021	Water	1	X	021
21	R-P-17D	PS	6/3/2024 12:58	60454268022	Water	2	X	022
22	R-P-19S	PS	6/7/2024 10:23	60454268023	Water	2	X	023
23	R-P-19I	PS	6/7/2024 11:10	60454268024	Water	2	X	024
24								025

Transfers	Released By	Date/Time	Received By	Date/Time
1				6/5/2024
2				
3				

Comments: KS sample location: FEDEX

Cooler Temperature on Receipt _____ °C | **Custody Seal Y or N** | **Received on Ice Y or N** | **Samples Intact Y or N**

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-GBUR-0088 v07_Sam Greensburg

Effective Date: 01/04/2024

WO# : 30691302

PM: MAR Due Date: 07/02/24

CLIENT: PACE_60_LEKS

Client Name: PaceKS

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 7146 2380 2887

Initial / Date

Examined By: VB 6-11-24

Labeled By: VB 6-11-24

Temped By: —

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals Intact:** ☐ Yes ☒ No

Thermometer Used: — **Type of Ice:** Wet Blue (None)

Cooler Temperature: Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	
Chain of Custody Present	X			1.
Chain of Custody Filled Out:	X			2.
-Were client corrections present on COC		X		
Chain of Custody Relinquished		X		3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used	X			
Containers Intact:	X			11.
Orthophosphate field filtered:			X	12.
Hex Cr Aqueous samples field filtered:			X	13.
Organic Samples checked for dichlorination			X	14:
Filtered volume received for dissolved tests:			X	15:
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	X			16. pH<2
All containers meet method preservation requirements:	X			Initial when completed: VB Date/Time of Preservation: Lot# of added Preservative:
8260C/D: Headspace in VOA Vials (> 6mm)			X	17.
624.1: Headspace in VOA Vials (0mm)			X	18.
Radon: Headspace in RAD Vials (0mm)			X	19.
Trip Blank Present:			X	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	/			Initial when completed: DB Date: 6/11/24 Survey Meter SN: 2501380

pH paper Lot# 10022431

D.P.D. Residual Chlorine Lot #

Comments: Two copies of CoC received. Each with one sample not listed and one with no MS/MSD listed. Received seperately from 001-008 and logged seperately.

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Memorandum

August 8, 2024

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008-24
CC:	Mark Haddock, Jeffrey Ingram		
From:	Jack Rasmussen	**Email:**	Jack.Rasmussen@Rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA-CA – Data Package 60454268**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a compound was analyzed outside of hold time, the sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a compound was detected in a blank (i.e. method, field), and the blank comparison criterion was not met, associated sample results were qualified as estimates (J) or non-detects (U).
- When a compound was detected in a sample result between the Method Detection Limit (MDL) and Practical Quantification Limit (PQL), the results were recorded at the detection value and qualified as estimates (J).
- When a duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a matrix spike/matrix spike duplicate (MS/MSD) criterion was not met, the associated sample result was qualified as an estimate (J, J+ for estimates based high, and J- for estimates based low).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA-CA
Project Number: 23008-24
Reviewer: J. Rasmussen
Validation Date: 8/8/2024

Laboratory: Pace Analytical
SDG #: 60454268
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); SM 2320B (Alkalinity); SM 2540C (TDS); EPA 300.0 (Anions);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ EPA 903.1/904.0 (Radium 226+228); SM 3500-Fe B#4 (Ferrous+Ferric Iron)
Sample Names R-P-10S, R-P-16S, R-P-17D, R-P-29S, R-P-31S, R-CA-DUP-1, R-CA-FB-1, R-P-05S, R-P-17S, R-P-17I, R-P-21S, R-P-21I, R-P-21D, R-P-22S, R-P-22D, R-P-30S, R-CA-DUP-2, R-CA-FB-2, R-CA-MS-1, R-MSD-1, R-P-17D, R-P-19S, R-P-19S, R-P-19I, R-P-19D

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			6/03/24-6/07/24
b) Sampling team indicated?	x			JTA, GTM
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?		x		

Note Deficiencies: Based on careful review of the data, it appears that all laboratory results for R-P-19I are incorrectly reported for R-P-19D, and vice versa. All laboratory anaylsis for these sample locations will be recorded and referred to as the correct sample location in this document and data tables associated with this sampling event.

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?		x		See Notes
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?	x			See Notes
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	x			See Notes
b) Were analytes detected in the field blank(s)?	x			See Notes
c) Were analytes detected in the equipment blank(s)?			x	
d) Were analytes detected in the trip blank(s)?			x	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	x			
b) Were the proper analytes included in the LCS?	x			
c) Was the LCS accuracy criteria met?	x			

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	x			R-CA-DUP-1 @ R-P-16S; R-CA-DUP-2 @ R-P-22D
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			See Notes
d) Were lab dup. precision criteria met (note RPD)?		x		See Notes

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?			x	
b) Was the %D within control limits?			x	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
b) Was MSD accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
c) Were MS/MSD precision criteria met?	x			

Comments/Notes:

General:

Ferrous iron samples were all analyzed outside of hold time controls. Results qualified as estimates.

Chloride, alkalinity and/or sulfate were diluted in several samples, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blanks:

3554753: sodium (229J), associated with sample -001 through -008. Sample -008 detected as non-detect, no qualification necessary.

All other samples results > RL and 10x blank, no qualification necessary.

3551270: TDS (6.0), associated with sample -001 through -008. Sample -008 detected as non-detect, no qualification necessary.

All other samples results > RL and 10x blank, no qualification necessary.

Field Blanks:

R-CA-FB-1 @ R-P-31S, no detections.

R-CA-FB-2 @ R-P-05S: barium (1.1J), boron (24.4J), calcium (80.2J), magnesium (23.4J), sodium (438J), TDS (6.5), ferric iron (0.0085J), iron (12.5J). All results > RL and 10x blank, no qualification necessary.

Duplicates:

R-CA-DUP-1 @ R-P-16S: Cadmium detected in original sample and non-detectin field duplicate, results qualified as estimates.

Fluoride detected in field duplicate and not in original sample, results qualified as estimates.

R-CA-DUP-2 @ R-P-22D: field duplicate RPD exceeds control limit (20%) for ferrous iron (129%), results qualified as estimates.

Ferric iron detected in duplicate and non-detect in original sample, results qualified as estimates. Antimony detected in duplicate and non-detect duplicate, results qualified as estimates.

Lab duplicate max RPD: 10%: alkalinity, TDS; 15%: chloride, fluoride, sulfate; 20%: ferrous iron, sulfide.

3551277: Lab duplicate exceeds max RPD for TDS, associated with unrelated sample, no qualification necessary.

MS/MSD:

3554539: MS recovery low for boron and sodium, associated with sample -018. Results qualified as estimates.

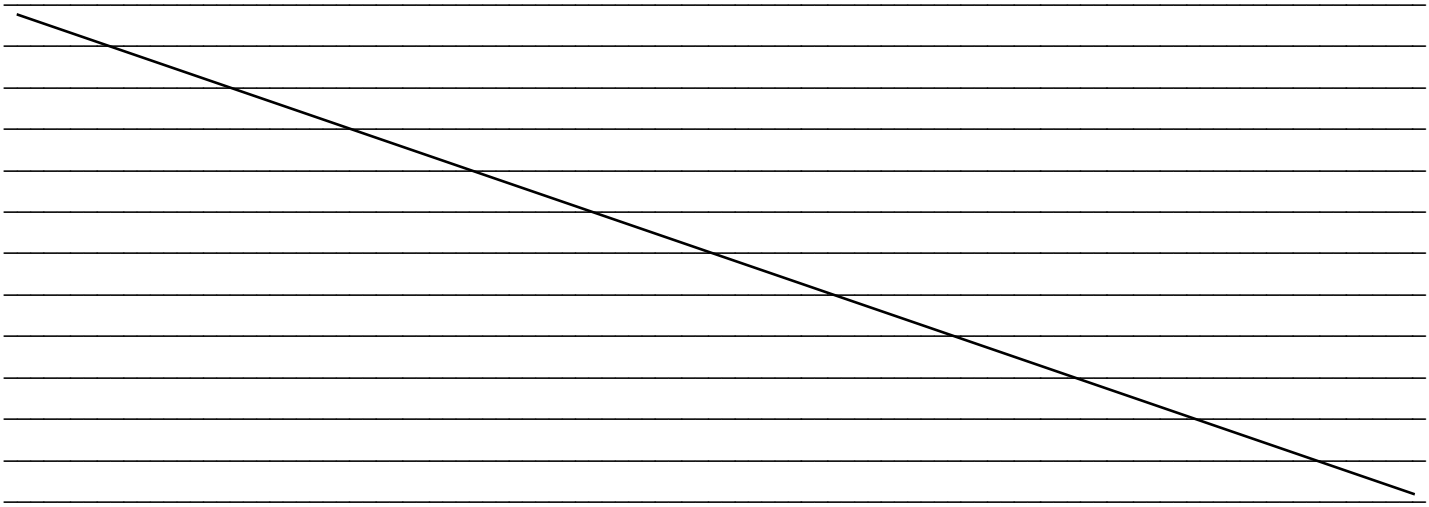
3554757: MS recovery low for calcium, associated with sample -004. Results qualified as estimates.

3554771: MS recovery high for boron, calcium, magnesium, potassium, and sodium. Associated with unrelated sample, no qualification necessary.

3551658/3551659: MS/MSD recovery low for sulfide, associated with sample -013. Results qualified as estimates.

3557950/3557951: MS recovery high for chloride. MSD and RPD within control limits. Associated with unrelated sample, no qualification necessary.

3560302/3560303: MS/MSD recovery low for fluoride, associated with unrelated sample, no qualification necessary.



QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-P-10S	Iron, Ferrous	0.044	J	Analyzed outside of hold time
R-P-16S	"	0.041	UJ	"
R-P-17D	"	0.15	J	"
R-P-29S	"	0.14	J	"
R-P-29D	"	0.041	UJ	"
R-P-31S	"	0.082	J	"
R-CA-DUP-1	"	0.041	UJ	"
R-CA-FB-1	"	0.041	UJ	"
R-P-05S	"	0.31	J	"
R-P-17S	"	0.30	J	"
R-P-17I	"	0.48	J	"
R-P-21S	"	0.46	J	"
R-P-21I	"	0.45	J	"
R-P-21D	"	0.52	J	"
R-P-22S	"	0.17	J	"
R-P-22D	"	2.4	J	"
R-P-30S	"	0.041	UJ	"
R-CA-DUP-2	"	0.51	J	"
R-CA-FB-2	"	0.041	UJ	"
R-P-19S	"	0.22	J	"
R-P-19I	"	0.15	J	"
R-P-19D	"	1.4	J	"
R-P-16S	Cadmium	0.054	J	Detected in original sample, non-detect in field duplicate
R-CA-DUP-1	"	0.05	UJ	"
R-P-22D	Antimony	0.14	J	"
R-CA-DUP-2	"	0.12	UJ	"
R-P-22D	Iron, Ferric	0.050	UJ	Non-detect in original sample, detected in duplicate
R-CA-DUP-2	"	1.2	J	"
R-P-22D	Iron, Ferrous	2.4	J	Field DUP RPD exceeds control limits
R-CA-DUP-2	"	0.51	J	"
R-CA-DUP-2	Boron	8820	J-	MS recovery low
"	Sodium	181000	J-	"
R-P-29S	Calcium	120000	J-	"
R-P-21I	Sulfide	0.048	J-	MS/MSD recovery low

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-P-16S	Fluoride	0.12	UJ	Detected in field duplicate, non-detect in original sample
R-CA-DUP-1	"	0.18	J	"

Signature: _____ Date: 08/08/2024

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

August 18, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
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CERTIFICATIONS

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60457837001	**R-MW-2**	Water	07/31/24 13:57	08/02/24 06:45
60457837002	**R-MW-7(r)**	Water	07/31/24 12:47	08/02/24 06:45
60457837003	**R-DUP-1**	Water	07/31/24 00:00	08/02/24 06:45
60457837004	**R-FB-1**	Water	07/31/24 13:35	08/02/24 06:45

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60457837001	**R-MW-2**	SM 2540C	KVI	1	PASI-K
		EPA 300.0	PL	2	PASI-K
60457837002	**R-MW-7(r)**	SM 2540C	KVI	1	PASI-K
		EPA 300.0	PL	2	PASI-K
60457837003	**R-DUP-1**	SM 2540C	KVI	1	PASI-K
		EPA 300.0	PL	2	PASI-K
60457837004	**R-FB-1**	SM 2540C	KVI	1	PASI-K
		EPA 300.0	PL	2	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Sample: R-MW-2 **Lab ID: 60457837001** Collected: 07/31/24 13:57 Received: 08/02/24 06:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**733**	mg/L	13.3	13.3	1		08/05/24 09:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**61.0**	mg/L	50.0	26.4	50		08/13/24 09:11	16887-00-6	B
Sulfate	**238**	mg/L	50.0	27.5	50		08/13/24 09:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Sample: R-MW-7(r) **Lab ID: 60457837002** Collected: 07/31/24 12:47 Received: 08/02/24 06:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**397**	mg/L	10.0	10.0	1		08/05/24 09:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**18.7**	mg/L	1.0	0.53	1		08/13/24 09:25	16887-00-6	M1
Sulfate	**79.5**	mg/L	50.0	27.5	50		08/13/24 10:48	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Sample: R-DUP-1 **Lab ID: 60457837003** Collected: 07/31/24 00:00 Received: 08/02/24 06:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**755**	mg/L	13.3	13.3	1		08/05/24 09:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**65.9**	mg/L	50.0	26.4	50		08/13/24 11:57	16887-00-6	B
Sulfate	**229**	mg/L	50.0	27.5	50		08/13/24 11:57	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Sample: R-FB-1 **Lab ID: 60457837004** Collected: 07/31/24 13:35 Received: 08/02/24 06:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**<5.0**	mg/L	5.0	5.0	1		08/05/24 09:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**0.55J**	mg/L	1.0	0.53	1		08/13/24 12:11	16887-00-6	B
Sulfate	**<0.55**	mg/L	1.0	0.55	1		08/13/24 12:11	14808-79-8	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

QC Batch: 904105
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60457837001, 60457837002, 60457837003, 60457837004

METHOD BLANK: 3578163 Matrix: Water
Associated Lab Samples: 60457837001, 60457837002, 60457837003, 60457837004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	08/05/24 09:30	

LABORATORY CONTROL SAMPLE: 3578164

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	950	95	80-120	

SAMPLE DUPLICATE: 3578166

Parameter	Units	60457837002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	397	367	8	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

QC Batch: 904328
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60457837001, 60457837002, 60457837003, 60457837004

METHOD BLANK: 3578850 Matrix: Water
Associated Lab Samples: 60457837001, 60457837002, 60457837003, 60457837004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.55J	1.0	0.53	08/12/24 13:54	
Sulfate	mg/L	<0.55	1.0	0.55	08/12/24 13:54	

METHOD BLANK: 3582985 Matrix: Water
Associated Lab Samples: 60457837001, 60457837002, 60457837003, 60457837004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.54J	1.0	0.53	08/14/24 09:31	
Sulfate	mg/L	<0.55	1.0	0.55	08/14/24 09:31	

LABORATORY CONTROL SAMPLE: 3578851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 3582986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	5.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3578855 3578856

Parameter	Units	60457837002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	18.7	5	5	22.7	22.7	79	80	80-120	0	15	M1
Sulfate	mg/L	79.5	250	250	309	312	92	93	80-120	1	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3578858 3578859

Parameter	Units	60457841001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	30.8	100	100	118	117	87	87	80-120	1	15	
Sulfate	mg/L	201	100	100	291	289	90	89	80-120	1	15	

SAMPLE DUPLICATE: 3578857

Parameter	Units	60457837002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	18.7	18.7	0	15	
Sulfate	mg/L	79.5	76.2	4	15	

SAMPLE DUPLICATE: 3578860

Parameter	Units	60457841001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	30.8	31.0	1	15	
Sulfate	mg/L	201	187	7	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-VERIFICATION
Pace Project No.: 60457837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60457837001	**R-MW-2**	SM 2540C	904105		
60457837002	**R-MW-7(r)**	SM 2540C	904105		
60457837003	**R-DUP-1**	SM 2540C	904105		
60457837004	**R-FB-1**	SM 2540C	904105		
60457837001	**R-MW-2**	EPA 300.0	904328		
60457837002	**R-MW-7(r)**	EPA 300.0	904328		
60457837003	**R-DUP-1**	EPA 300.0	904328		
60457837004	**R-FB-1**	EPA 300.0	904328		

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WO# : 60457837

60457837

Pace	DC#_Title: ENV-FRM-LENE-0009_Sample Con		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T299 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 1.1 **Corr. Factor** 0.0 **Corrected** 1.1

Temperature should be above freezing to 6°C

Date and initials of person examining contents: pv 8/2/24

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:**	☐Yes ☐No ☑N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	Rocksmith Geoengineering, LLC
Address:	5233 Roanoke Drive
	St. Charles, MO 63304
Email To:	mark.haddock@rocksmithgeo.com
Phone: 314-974-5678	Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Mark Haddock
Copy To:	Jeffery Ingram, Grant Morey
Purchase Order No.:	COC #7
Project Name:	Ameren RCPA - Verification Sampling
Project Number:	COC#7

Section C Invoice Information:

Attention:	
Company Name:	Rocksmith
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	15856, line 1

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

Requested Analysis Filtered (Y/N)

ITEM #	Section D: SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride	Sulfate	Total Dissolved Solids	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	R-MW-2	WT	G			7-31-24	1357		1	1									✓	✓	✓		60457837
2	R-MW-7(r)	WT	G				1247		1	1									✓	✓	✓		
3	R-DUP-1	WT	G				—		1	1									✓	✓	✓		
4	R-FB-1	WT	G				1335		1	1									✓	✓	✓		
5	R-MS-1	WT	G				1247		1	1									✓	✓	✓		Collected @ R-MW-7(r)
6	R-MSD-1	WT	G				1247		1	1									✓	✓	✓		
7		WT	G																				
8		WT	G																				
9		WT	G																				
10		WT	G																				
11		WT	G																				
12		WT	G																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / Rocksmith	8-1-24	1230	[signature]	8/2	0645	1.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 07/31/24

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Client: Rocksmith Geoeng Profile/EZ # 15856-1

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																			1												
2	↓																			3												
3																				1												
4																				1												
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60457837

Memorandum

August 29, 2024

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008-24
CC:	Mark Haddock, Jeffrey Ingram		
From:	Valerie Hurt	**Email:**	valerie.hurt@rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA Verification – Data Package 60457837**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a compound was detected in a blank (i.e. method, field), and the blank comparison criterion was not met, associated sample results were qualified as estimates (J) or non-detects (U).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA - Verification
Project Number: 23008-24
Reviewer: J. Rasmussen
Validation Date: 08/29/2024

Laboratory: Pace Analytical
SDG #: 60457837
Analytical Method (type and no.): EPA 300.0 (Chloride & Sulfate), SM 2540C (Total Dissolved Solids)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names R-MW-2, R-MW-7(r), R-DUP-1, R-FB-1

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			07/31/2024
b) Sampling team indicated?	x			GTM/JTR
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes.
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?	x			
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?	x			See Notes
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	**YES**	**NO**	**NA**	**COMMENTS**
a) Were analytes detected in the method blank(s)?	x			See Notes
b) Were analytes detected in the field blank(s)?	x			See Notes
c) Were analytes detected in the equipment blank(s)?			x	
d) Were analytes detected in the trip blank(s)?			x	

Laboratory Control Sample (LCS)	**YES**	**NO**	**NA**	**COMMENTS**
a) Was a LCS analyzed once per SDG?	x			
b) Were the proper analytes included in the LCS?	x			
c) Was the LCS accuracy criteria met?	x			

Duplicates	**YES**	**NO**	**NA**	**COMMENTS**
a) Were field duplicates collected (note original and duplicate sample names)?	x			R-DUP-1 collected @ R-MW-2
b) Were field dup. precision criteria met (note RPD)?	x			
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			
d) Were lab dup. precision criteria met (note RPD)?	x			

Blind Standards	**YES**	**NO**	**NA**	**COMMENTS**
a) Was a blind standard used (indicate name, analytes included and concentrations)?			x	
b) Was the %D within control limits?			x	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	**YES**	**NO**	**NA**	**COMMENTS**
a) Was MS accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
b) Was MSD accuracy criteria met?	x			
Recovery could not be calculated since sample contained high concentration of analyte?			x	
c) Were MS/MSD precision criteria met?	x			

Comments/Notes:

General:

Chloride and sulfate diluted in several samples, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blanks:

3582985: chloride (0.55J), related with samples -001, -002, -003 and -004. Samples -001 through -003 results > RL and 10x blank, no qualification necessary. Sample -004 result detected below reporting limit, reported at reporting limit and qualified as non-detect (U).

Field Blanks:

R-FB-1 @ R-MW-2: chloride(0.55J), result > RL and10x blank no qualification necessary.

MS/MSD:

3578855/3578859: MS recovery low for chloride, MSD and RPD within control limits, associated with sample -002, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-FB-1	Chloride	1.0	U	Detected in method blank, result < RL

Signature: _____ Date: 08/29/2024

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

December 13, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA
Pace Project No.: 60464293

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between November 09, 2024 and November 15, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.
Austin Nieman, Ameren

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(913)599-5665

CERTIFICATIONS

Project: AMEREN RCPA
Pace Project No.: 60464293

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 2000302023-6
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: AMEREN RCPA
Pace Project No.: 60464293

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60464293001	**R-MW-5**	Water	11/08/24 14:17	11/09/24 06:15
60464293002	**R-FB-1**	Water	11/08/24 12:36	11/09/24 06:15
60464293003	**R-MW-1**	Water	11/12/24 13:04	11/13/24 05:26
60464293004	**R-MW-2**	Water	11/11/24 12:31	11/13/24 05:26
60464293005	**R-MW-6**	Water	11/11/24 13:10	11/13/24 05:26
60464293006	**R-MW-7(r)**	Water	11/11/24 11:12	11/13/24 05:26
60464293007	**R-MW-B1**	Water	11/11/24 16:20	11/13/24 05:26
60464293008	**R-DUP-1**	Water	11/11/24 08:00	11/13/24 05:26
60464293009	**R-MS-1**	Water	11/11/24 11:12	11/13/24 05:26
60464293010	**R-MSD-1**	Water	11/11/24 11:12	11/13/24 05:26
60464293011	**R-MW-3**	Water	11/13/24 15:00	11/15/24 05:55
60464293012	**R-MW-4**	Water	11/13/24 13:27	11/15/24 05:55
60464293013	**R-MW-B2**	Water	11/13/24 17:08	11/15/24 05:55

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60464293

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60464293001	**R-MW-5**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293002	**R-FB-1**	EPA 200.7	ARMN	12	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293003	**R-MW-1**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293004	**R-MW-2**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293005	**R-MW-6**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293006	**R-MW-7(r)**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60464293

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293007	**R-MW-B1**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293008	**R-DUP-1**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293009	**R-MS-1**	EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60464293010	**R-MSD-1**	EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60464293011	**R-MW-3**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293012	**R-MW-4**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	SR1	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA
Pace Project No.: 60464293

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464293013	**R-MW-B2**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-5 **Lab ID: 60464293001** Collected: 11/08/24 14:17 Received: 11/09/24 06:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**341**	ug/L	5.0	0.64	1	11/11/24 10:32	11/22/24 11:44	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/11/24 10:32	11/22/24 11:44	7440-41-7	
Boron	**47.9J**	ug/L	100	6.4	1	11/11/24 10:32	11/22/24 11:44	7440-42-8	
Calcium	**115000**	ug/L	200	26.9	1	11/11/24 10:32	11/22/24 11:44	7440-70-2	
Iron	**8330**	ug/L	50.0	9.1	1	11/11/24 10:32	11/22/24 11:44	7439-89-6	
Lithium	**4.6J**	ug/L	10.0	3.7	1	11/11/24 10:32	11/22/24 11:44	7439-93-2	
Magnesium	**15000**	ug/L	50.0	20.1	1	11/11/24 10:32	11/22/24 11:44	7439-95-4	
Manganese	**320**	ug/L	5.0	0.39	1	11/11/24 10:32	11/22/24 11:44	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/11/24 10:32	11/22/24 11:44	7439-98-7	
Potassium	**1970**	ug/L	500	69.7	1	11/11/24 10:32	11/22/24 11:44	7440-09-7	
Sodium	**4510**	ug/L	500	115	1	11/11/24 10:32	11/22/24 11:44	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/12/24 15:15	11/27/24 16:26	7440-36-0	
Arsenic	**1.5**	ug/L	1.0	0.13	1	11/12/24 15:15	11/27/24 16:26	7440-38-2	
Chromium	**0.44J**	ug/L	1.0	0.30	1	11/12/24 15:15	11/27/24 16:26	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/12/24 15:15	11/27/24 16:26	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**349**	mg/L	40.0	21.0	2		11/18/24 13:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**417**	mg/L	10.0	10.0	1		11/14/24 13:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.7**	mg/L	1.0	0.53	1		11/27/24 20:33	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/27/24 20:33	16984-48-8	
Sulfate	**19.9**	mg/L	5.0	2.8	5		11/27/24 20:47	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-FB-1 **Lab ID: 60464293002** Collected: 11/08/24 12:36 Received: 11/09/24 06:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**<0.64**	ug/L	5.0	0.64	1	11/11/24 11:40	11/27/24 15:11	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/11/24 11:40	11/27/24 15:11	7440-41-7	
Boron	**<6.4**	ug/L	100	6.4	1	11/11/24 11:40	11/27/24 15:11	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	11/11/24 11:40	11/27/24 15:11	7440-70-2	
Cobalt	**<1.2**	ug/L	5.0	1.2	1	11/11/24 11:40	11/27/24 15:11	7440-48-4	
Iron	**16.5J**	ug/L	50.0	9.1	1	11/11/24 11:40	11/27/24 15:11	7439-89-6	
Lithium	**<3.7**	ug/L	10.0	3.7	1	11/11/24 11:40	11/27/24 15:11	7439-93-2	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	11/11/24 11:40	11/27/24 15:11	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	11/11/24 11:40	11/27/24 15:11	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/11/24 11:40	11/27/24 15:11	7439-98-7	
Potassium	**<69.7**	ug/L	500	69.7	1	11/11/24 11:40	11/27/24 15:11	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	11/11/24 11:40	11/27/24 15:11	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/12/24 15:15	12/02/24 09:42	7440-36-0	
Arsenic	**<0.13**	ug/L	1.0	0.13	1	11/12/24 15:15	12/02/24 09:42	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/12/24 15:15	12/02/24 09:42	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/12/24 15:15	12/02/24 09:42	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		11/18/24 13:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**<5.0**	mg/L	5.0	5.0	1		11/14/24 13:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.53**	mg/L	1.0	0.53	1		11/27/24 21:01	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/27/24 21:01	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		11/27/24 21:01	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-1 **Lab ID: 60464293003** Collected: 11/12/24 13:04 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**36.8**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:03	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:03	7440-41-7	
Boron	**2790**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:03	7440-42-8	
Calcium	**45800**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:03	7440-70-2	
Iron	**35.8J**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:03	7439-89-6	B
Lithium	**<3.7**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:03	7439-93-2	
Magnesium	**6990**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:03	7439-95-4	
Manganese	**45.1**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:03	7439-96-5	
Molybdenum	**121**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:03	7439-98-7	
Potassium	**6790**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:03	7440-09-7	
Sodium	**137000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:03	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.13J**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 16:55	7440-36-0	
Arsenic	**3.4**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 16:55	7440-38-2	
Chromium	**0.35J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 16:55	7440-47-3	
Selenium	**0.20J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 16:55	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**234**	mg/L	20.0	10.5	1		11/26/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**596**	mg/L	13.3	13.3	1		11/18/24 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**31.0**	mg/L	20.0	10.5	20		12/10/24 15:13	16887-00-6	
Fluoride	**0.34**	mg/L	0.20	0.12	1		12/04/24 17:17	16984-48-8	
Sulfate	**198**	mg/L	20.0	11.0	20		12/10/24 15:13	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-2 **Lab ID: 60464293004** Collected: 11/11/24 12:31 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**15.4**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:04	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:04	7440-41-7	
Boron	**3350**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:04	7440-42-8	
Calcium	**15300**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:04	7440-70-2	
Iron	**51.6**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:04	7439-89-6	B
Lithium	**4.8J**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:04	7439-93-2	
Magnesium	**20.3J**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:04	7439-95-4	
Manganese	**1.4J**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:04	7439-96-5	
Molybdenum	**65.1**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:04	7439-98-7	
Potassium	**4160**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:04	7440-09-7	
Sodium	**281000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:04	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**1.7**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 16:58	7440-36-0	
Arsenic	**179**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 16:58	7440-38-2	
Chromium	**0.31J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 16:58	7440-47-3	
Selenium	**0.44J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 16:58	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**235**	mg/L	20.0	10.5	1		11/25/24 14:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**950**	mg/L	20.0	20.0	1		11/14/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**189**	mg/L	20.0	10.5	20		12/04/24 17:55	16887-00-6	
Fluoride	**0.72**	mg/L	0.20	0.12	1		12/04/24 17:43	16984-48-8	
Sulfate	**249**	mg/L	20.0	11.0	20		12/04/24 17:55	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-6 **Lab ID: 60464293005** Collected: 11/11/24 13:10 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**189**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:06	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:06	7440-41-7	
Boron	**1720**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:06	7440-42-8	
Calcium	**88900**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:06	7440-70-2	
Iron	**592**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:06	7439-89-6	
Lithium	**6.0J**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:06	7439-93-2	
Magnesium	**12700**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:06	7439-95-4	
Manganese	**226**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:06	7439-96-5	
Molybdenum	**1.7J**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:06	7439-98-7	
Potassium	**2100**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:06	7440-09-7	
Sodium	**29700**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:06	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:00	7440-36-0	
Arsenic	**0.81J**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:00	7440-38-2	
Chromium	**0.33J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:00	7440-47-3	
Selenium	**0.21J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:00	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**321**	mg/L	20.0	10.5	1		11/25/24 14:12		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**363**	mg/L	10.0	10.0	1		11/14/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.7**	mg/L	1.0	0.53	1		12/04/24 21:45	16887-00-6	
Fluoride	**0.30**	mg/L	0.20	0.12	1		12/04/24 21:45	16984-48-8	
Sulfate	**13.9**	mg/L	1.0	0.55	1		12/04/24 21:45	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-7(r) **Lab ID: 60464293006** Collected: 11/11/24 11:12 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**297**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:08	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:08	7440-41-7	
Boron	**1880**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:08	7440-42-8	
Calcium	**83700**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:08	7440-70-2	
Iron	**18000**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:08	7439-89-6	
Lithium	**28.8**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:08	7439-93-2	
Magnesium	**23200**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:08	7439-95-4	
Manganese	**366**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:08	7439-96-5	
Molybdenum	**35.7**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:08	7439-98-7	
Potassium	**5390**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:08	7440-09-7	
Sodium	**18200**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 16:44	7440-36-0	
Arsenic	**109**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 16:44	7440-38-2	M1
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 16:44	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 16:44	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**257**	mg/L	40.0	21.0	2		11/25/24 14:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**418**	mg/L	10.0	10.0	1		11/14/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**20.2**	mg/L	5.0	2.6	5		12/04/24 09:17	16887-00-6	
Fluoride	**0.22**	mg/L	0.20	0.12	1		12/04/24 09:04	16984-48-8	M1
Sulfate	**97.2**	mg/L	5.0	2.8	5		12/04/24 09:17	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-B1 **Lab ID: 60464293007** Collected: 11/11/24 16:20 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**445**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:13	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:13	7440-41-7	
Boron	**105**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:13	7440-42-8	
Calcium	**142000**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:13	7440-70-2	
Iron	**21500**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:13	7439-89-6	
Lithium	**57.1**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:13	7439-93-2	
Magnesium	**44200**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:13	7439-95-4	
Manganese	**1060**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:13	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:13	7439-98-7	
Potassium	**8550**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:13	7440-09-7	
Sodium	**25400**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:13	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:03	7440-36-0	
Arsenic	**16.5**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:03	7440-38-2	
Chromium	**0.36J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:03	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:03	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**502**	mg/L	40.0	21.0	2		11/25/24 14:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**660**	mg/L	13.3	13.3	1		11/14/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**65.5**	mg/L	10.0	5.3	10		12/04/24 11:36	16887-00-6	
Fluoride	**0.15J**	mg/L	0.20	0.12	1		12/04/24 11:22	16984-48-8	
Sulfate	**36.1**	mg/L	10.0	5.5	10		12/04/24 11:36	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-DUP-1 **Lab ID: 60464293008** Collected: 11/11/24 08:00 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**180**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:20	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:20	7440-41-7	
Boron	**1400**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:20	7440-42-8	
Calcium	**87500**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:20	7440-70-2	
Iron	**508**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:20	7439-89-6	
Lithium	**5.1J**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:20	7439-93-2	
Magnesium	**12500**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:20	7439-95-4	
Manganese	**196**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:20	7439-96-5	
Molybdenum	**1.7J**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:20	7439-98-7	
Potassium	**1750**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:20	7440-09-7	
Sodium	**25100**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:20	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:09	7440-36-0	
Arsenic	**0.74J**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:09	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:09	7440-47-3	
Selenium	**0.22J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:09	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**324**	mg/L	20.0	10.5	1		11/25/24 14:42		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**353**	mg/L	10.0	10.0	1		11/14/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**8.7**	mg/L	1.0	0.53	1		12/04/24 11:49	16887-00-6	
Fluoride	**0.30**	mg/L	0.20	0.12	1		12/04/24 11:49	16984-48-8	
Sulfate	**16.0**	mg/L	1.0	0.55	1		12/04/24 11:49	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-3 **Lab ID: 60464293011** Collected: 11/13/24 15:00 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**56.8**	ug/L	5.0	0.64	1	11/15/24 15:15	11/20/24 12:32	7440-39-3	
Beryllium	**0.15J**	ug/L	1.0	0.12	1	11/15/24 15:15	11/20/24 12:32	7440-41-7	
Boron	**11200**	ug/L	100	6.4	1	11/15/24 15:15	11/20/24 12:32	7440-42-8	
Calcium	**18400**	ug/L	200	26.9	1	11/15/24 15:15	11/20/24 12:32	7440-70-2	
Iron	**148**	ug/L	50.0	9.1	1	11/15/24 15:15	11/20/24 12:32	7439-89-6	B
Lithium	**17.5**	ug/L	10.0	3.7	1	11/15/24 15:15	11/20/24 12:32	7439-93-2	
Magnesium	**1270**	ug/L	50.0	20.1	1	11/15/24 15:15	11/20/24 12:32	7439-95-4	
Manganese	**21.1**	ug/L	5.0	0.39	1	11/15/24 15:15	11/20/24 12:32	7439-96-5	B
Molybdenum	**519**	ug/L	20.0	1.0	1	11/15/24 15:15	11/20/24 12:32	7439-98-7	
Potassium	**4880**	ug/L	500	69.7	1	11/15/24 15:15	11/20/24 12:32	7440-09-7	
Sodium	**209000**	ug/L	500	115	1	11/15/24 15:15	11/20/24 12:32	7440-23-5	M1
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:04	7440-36-0	
Arsenic	**36.5**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:04	7440-38-2	
Chromium	**0.58J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:04	7440-47-3	
Selenium	**0.37J**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:04	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**350**	mg/L	40.0	21.0	2		11/26/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**681**	mg/L	13.3	13.3	1		11/19/24 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**26.4**	mg/L	20.0	10.5	20		12/04/24 20:36	16887-00-6	
Fluoride	**1.0**	mg/L	0.20	0.12	1		12/04/24 20:22	16984-48-8	
Sulfate	**160**	mg/L	20.0	11.0	20		12/04/24 20:36	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-4 **Lab ID: 60464293012** Collected: 11/13/24 13:27 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**390**	ug/L	5.0	0.64	1	11/15/24 15:15	11/20/24 12:35	7440-39-3	
Beryllium	**0.17J**	ug/L	1.0	0.12	1	11/15/24 15:15	11/20/24 12:35	7440-41-7	
Boron	**1720**	ug/L	100	6.4	1	11/15/24 15:15	11/20/24 12:35	7440-42-8	
Calcium	**114000**	ug/L	200	26.9	1	11/15/24 15:15	11/20/24 12:35	7440-70-2	
Iron	**9130**	ug/L	50.0	9.1	1	11/15/24 15:15	11/20/24 12:35	7439-89-6	
Lithium	**36.3**	ug/L	10.0	3.7	1	11/15/24 15:15	11/20/24 12:35	7439-93-2	
Magnesium	**22400**	ug/L	50.0	20.1	1	11/15/24 15:15	11/20/24 12:35	7439-95-4	
Manganese	**524**	ug/L	5.0	0.39	1	11/15/24 15:15	11/20/24 12:35	7439-96-5	
Molybdenum	**34.0**	ug/L	20.0	1.0	1	11/15/24 15:15	11/20/24 12:35	7439-98-7	
Potassium	**5780**	ug/L	500	69.7	1	11/15/24 15:15	11/20/24 12:35	7440-09-7	
Sodium	**30100**	ug/L	500	115	1	11/15/24 15:15	11/20/24 12:35	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:07	7440-36-0	
Arsenic	**7.2**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:07	7440-38-2	
Chromium	**0.35J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:07	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:07	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**444**	mg/L	40.0	21.0	2		11/26/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**461**	mg/L	10.0	10.0	1		11/19/24 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.5**	mg/L	1.0	0.53	1		12/04/24 21:03	16887-00-6	
Fluoride	**0.45**	mg/L	0.20	0.12	1		12/04/24 21:03	16984-48-8	
Sulfate	**0.90J**	mg/L	1.0	0.55	1		12/04/24 21:03	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-B2 **Lab ID: 60464293013** Collected: 11/13/24 17:08 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**392**	ug/L	5.0	0.64	1	11/15/24 15:15	11/20/24 12:37	7440-39-3	
Beryllium	**0.12J**	ug/L	1.0	0.12	1	11/15/24 15:15	11/20/24 12:37	7440-41-7	
Boron	**40.8J**	ug/L	100	6.4	1	11/15/24 15:15	11/20/24 12:37	7440-42-8	
Calcium	**108000**	ug/L	200	26.9	1	11/15/24 15:15	11/20/24 12:37	7440-70-2	
Iron	**9550**	ug/L	50.0	9.1	1	11/15/24 15:15	11/20/24 12:37	7439-89-6	
Lithium	**10.7**	ug/L	10.0	3.7	1	11/15/24 15:15	11/20/24 12:37	7439-93-2	
Magnesium	**18900**	ug/L	50.0	20.1	1	11/15/24 15:15	11/20/24 12:37	7439-95-4	
Manganese	**251**	ug/L	5.0	0.39	1	11/15/24 15:15	11/20/24 12:37	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/15/24 15:15	11/20/24 12:37	7439-98-7	
Potassium	**1920**	ug/L	500	69.7	1	11/15/24 15:15	11/20/24 12:37	7440-09-7	
Sodium	**24300**	ug/L	500	115	1	11/15/24 15:15	11/20/24 12:37	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:17	7440-36-0	
Arsenic	**3.1**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:17	7440-38-2	
Chromium	**0.36J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:17	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:17	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**343**	mg/L	40.0	21.0	2		11/27/24 15:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**428**	mg/L	10.0	10.0	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**43.9**	mg/L	10.0	5.3	10		12/04/24 21:31	16887-00-6	
Fluoride	**0.19J**	mg/L	0.20	0.12	1		12/04/24 21:17	16984-48-8	
Sulfate	**16.3**	mg/L	1.0	0.55	1		12/04/24 21:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 915872
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464293001

METHOD BLANK: 3626370 Matrix: Water
Associated Lab Samples: 60464293001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/22/24 10:23	
Beryllium	ug/L	<0.12	1.0	0.12	11/22/24 10:23	
Boron	ug/L	<6.4	100	6.4	11/22/24 10:23	
Calcium	ug/L	225	200	26.9	11/22/24 11:32	P8
Iron	ug/L	84.8	50.0	9.1	11/22/24 11:32	P8
Lithium	ug/L	<3.7	10.0	3.7	11/22/24 10:23	
Magnesium	ug/L	<20.1	50.0	20.1	11/22/24 10:23	
Manganese	ug/L	0.75J	5.0	0.39	11/22/24 10:23	
Molybdenum	ug/L	<1.0	20.0	1.0	11/22/24 10:23	
Potassium	ug/L	<69.7	500	69.7	11/22/24 10:23	
Sodium	ug/L	<115	500	115	11/22/24 10:23	

LABORATORY CONTROL SAMPLE: 3626371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1020	102	85-115	
Beryllium	ug/L	1000	1020	102	85-115	
Boron	ug/L	1000	948	95	85-115	
Calcium	ug/L	10000	10300	103	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lithium	ug/L	1000	1010	101	85-115	
Magnesium	ug/L	10000	9770	98	85-115	
Manganese	ug/L	1000	1040	104	85-115	
Molybdenum	ug/L	1000	1030	103	85-115	
Potassium	ug/L	10000	9800	98	85-115	
Sodium	ug/L	10000	9990	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626372 3626373

Parameter	Units	60464178002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	22.6	1000	1000	1060	1050	104	103	70-130	1	20	
Beryllium	ug/L	0.14J	1000	1000	1040	1030	104	103	70-130	1	20	
Boron	ug/L	13.6J	1000	1000	979	973	96	96	70-130	1	20	
Calcium	ug/L	13600	10000	10000	24100	23800	105	102	70-130	1	20	
Iron	ug/L	1020	10000	10000	12000	11500	110	105	70-130	4	20	
Lithium	ug/L	<3.7	1000	1000	1020	1010	102	101	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626372 3626373

Parameter	Units	60464178002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	7300	10000	10000	17300	17200	100	99	70-130	0	20	
Manganese	ug/L	42.4	1000	1000	1120	1080	108	104	70-130	3	20	
Molybdenum	ug/L	<1.0	1000	1000	1070	1020	107	102	70-130	4	20	
Potassium	ug/L	1070	10000	10000	11100	11100	100	100	70-130	0	20	
Sodium	ug/L	687	10000	10000	10700	10600	100	99	70-130	1	20	

MATRIX SPIKE SAMPLE: 3626374

Parameter	Units	60464236001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	31.5	1000	1060	102	70-130	
Beryllium	ug/L	ND	1000	1070	107	70-130	
Boron	ug/L	ND	1000	1050	96	70-130	
Calcium	ug/L	32600	10000	42900	93	70-130	
Iron	ug/L	342	10000	10500	99	70-130	
Lithium	ug/L	18.0	1000	1040	102	70-130	
Magnesium	ug/L	9710	10000	19300	93	70-130	
Manganese	ug/L	74.1	1000	1100	102	70-130	
Molybdenum	ug/L	ND	1000	1050	103	70-130	
Potassium	ug/L	116000	10000	130000	92	70-130	
Sodium	ug/L	486000	10000	500000	7	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 915896
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464293002

METHOD BLANK: 3626529 Matrix: Water
Associated Lab Samples: 60464293002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/27/24 15:08	
Beryllium	ug/L	<0.12	1.0	0.12	11/27/24 15:08	
Boron	ug/L	<6.4	100	6.4	11/27/24 15:08	
Calcium	ug/L	<26.9	200	26.9	11/27/24 15:08	
Cobalt	ug/L	<1.2	5.0	1.2	11/27/24 15:08	
Iron	ug/L	<9.1	50.0	9.1	11/27/24 15:08	
Lithium	ug/L	<3.7	10.0	3.7	11/27/24 15:08	
Magnesium	ug/L	<20.1	50.0	20.1	11/27/24 15:08	
Manganese	ug/L	<0.39	5.0	0.39	11/27/24 15:08	
Molybdenum	ug/L	<1.0	20.0	1.0	11/27/24 15:08	
Potassium	ug/L	<69.7	500	69.7	11/27/24 15:08	
Sodium	ug/L	<115	500	115	11/27/24 15:08	

LABORATORY CONTROL SAMPLE: 3626530

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	985	98	85-115	
Beryllium	ug/L	1000	983	98	85-115	
Boron	ug/L	1000	913	91	85-115	
Calcium	ug/L	10000	9810	98	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lithium	ug/L	1000	988	99	85-115	
Magnesium	ug/L	10000	9380	94	85-115	
Manganese	ug/L	1000	1020	102	85-115	
Molybdenum	ug/L	1000	997	100	85-115	
Potassium	ug/L	10000	9500	95	85-115	
Sodium	ug/L	10000	9750	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626531 3626532

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	119	1000	1000	1150	1140	103	102	70-130	1	20	
Beryllium	ug/L	<0.12	1000	1000	1060	1050	106	105	70-130	0	20	
Boron	ug/L	368	1000	1000	1340	1340	97	97	70-130	0	20	
Calcium	ug/L	116000	10000	10000	130000	132000	136	157	70-130	2	20	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626531 3626532

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	ug/L	<1.2	1000	1000	1050	1040	105	104	70-130	0	20	
Iron	ug/L	48.8J	10000	10000	10600	10400	106	104	70-130	2	20	
Lithium	ug/L	25.2	1000	1000	1060	1060	104	103	70-130	0	20	
Magnesium	ug/L	29500	10000	10000	40100	40500	106	110	70-130	1	20	
Manganese	ug/L	8.9	1000	1000	1050	1050	105	104	70-130	0	20	
Molybdenum	ug/L	12.4J	1000	1000	1050	1060	104	105	70-130	0	20	
Potassium	ug/L	2700	10000	10000	12800	13000	102	103	70-130	1	20	
Sodium	ug/L	18400	10000	10000	29000	29000	106	107	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916309
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

METHOD BLANK: 3627818 Matrix: Water
Associated Lab Samples: 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/22/24 20:59	
Beryllium	ug/L	<0.12	1.0	0.12	11/22/24 20:59	
Boron	ug/L	<6.4	100	6.4	11/22/24 20:59	
Calcium	ug/L	<26.9	200	26.9	11/22/24 20:59	
Iron	ug/L	11.0J	50.0	9.1	11/22/24 20:59	
Lithium	ug/L	<3.7	10.0	3.7	11/22/24 20:59	
Magnesium	ug/L	<20.1	50.0	20.1	11/22/24 20:59	
Manganese	ug/L	<0.39	5.0	0.39	11/22/24 20:59	
Molybdenum	ug/L	<1.0	20.0	1.0	11/22/24 20:59	
Potassium	ug/L	<69.7	500	69.7	11/22/24 20:59	
Sodium	ug/L	<115	500	115	11/22/24 20:59	

LABORATORY CONTROL SAMPLE: 3627819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	982	98	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	921	92	85-115	
Calcium	ug/L	10000	9870	99	85-115	
Iron	ug/L	10000	9980	100	85-115	
Lithium	ug/L	1000	988	99	85-115	
Magnesium	ug/L	10000	9510	95	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9390	94	85-115	
Sodium	ug/L	10000	9560	96	85-115	

MATRIX SPIKE SAMPLE: 3627820

Parameter	Units	60464293006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	297	1000	1300	100	70-130	
Beryllium	ug/L	<0.12	1000	1030	103	70-130	
Boron	ug/L	1880	1000	2860	99	70-130	
Calcium	ug/L	83700	10000	94600	109	70-130	
Iron	ug/L	18000	10000	28500	105	70-130	
Lithium	ug/L	28.8	1000	1040	101	70-130	
Magnesium	ug/L	23200	10000	33000	98	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

MATRIX SPIKE SAMPLE: 3627820

Parameter	Units	60464293006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Manganese	ug/L	366	1000	1400	104	70-130	
Molybdenum	ug/L	35.7	1000	1070	104	70-130	
Potassium	ug/L	5390	10000	15400	100	70-130	
Sodium	ug/L	18200	10000	27900	98	70-130	

MATRIX SPIKE SAMPLE: 3627822

Parameter	Units	60464294009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	242	1000	1230	99	70-130	
Beryllium	ug/L	<0.12	1000	1040	104	70-130	
Boron	ug/L	168	1000	1100	93	70-130	
Calcium	ug/L	110000	10000	120000	97	70-130	
Iron	ug/L	4130	10000	14200	101	70-130	
Lithium	ug/L	22.3	1000	1040	101	70-130	
Magnesium	ug/L	18000	10000	27500	95	70-130	
Manganese	ug/L	1100	1000	2120	103	70-130	
Molybdenum	ug/L	2.6J	1000	1030	103	70-130	
Potassium	ug/L	4600	10000	14600	100	70-130	
Sodium	ug/L	6530	10000	16300	98	70-130	

SAMPLE DUPLICATE: 3635086

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Barium	ug/L	297	312	5	20	
Beryllium	ug/L	<0.12	<0.12		20	
Boron	ug/L	1880	1890	1	20	
Calcium	ug/L	83700	84500	1	20	
Iron	ug/L	18000	18400	2	19	
Lithium	ug/L	28.8	28.5	1	20	
Magnesium	ug/L	23200	23400	1	20	
Manganese	ug/L	366	370	1	12	
Molybdenum	ug/L	35.7	35.6	0	20	
Potassium	ug/L	5390	5380	0	20	
Sodium	ug/L	18200	18400	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916636
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293011, 60464293012, 60464293013

METHOD BLANK: 3629486 Matrix: Water
Associated Lab Samples: 60464293011, 60464293012, 60464293013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/20/24 12:05	
Beryllium	ug/L	<0.12	1.0	0.12	11/20/24 12:05	
Boron	ug/L	<6.4	100	6.4	11/20/24 12:05	
Calcium	ug/L	<26.9	200	26.9	11/20/24 12:05	
Iron	ug/L	43.4J	50.0	9.1	11/20/24 12:05	
Lithium	ug/L	<3.7	10.0	3.7	11/20/24 12:05	
Magnesium	ug/L	<20.1	50.0	20.1	11/20/24 12:05	
Manganese	ug/L	2.4J	5.0	0.39	11/20/24 12:05	
Molybdenum	ug/L	<1.0	20.0	1.0	11/20/24 12:05	
Potassium	ug/L	<69.7	500	69.7	11/20/24 12:05	
Sodium	ug/L	<115	500	115	11/20/24 12:05	

LABORATORY CONTROL SAMPLE: 3629487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	988	99	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	934	93	85-115	
Calcium	ug/L	10000	9970	100	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lithium	ug/L	1000	992	99	85-115	
Magnesium	ug/L	10000	9570	96	85-115	
Manganese	ug/L	1000	1060	106	85-115	
Molybdenum	ug/L	1000	1040	104	85-115	
Potassium	ug/L	10000	9760	98	85-115	
Sodium	ug/L	10000	9790	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3629488 3629489

Parameter	Units	60464695001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	150	1000	1000	1150	1170	100	102	70-130	1	20	
Beryllium	ug/L	ND	1000	1000	1030	1040	103	104	70-130	1	20	
Boron	ug/L	113	1000	1000	1070	1080	96	96	70-130	1	20	
Calcium	ug/L	265	10000	10000	10300	10300	100	101	70-130	1	20	
Iron	ug/L	4810	10000	10000	15600	15800	107	110	70-130	2	20	
Lithium	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3629488 3629489

Parameter	Units	60464695001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	ND	10000	10000	9500	9570	95	95	70-130	1	20	
Manganese	ug/L	591	1000	1000	1670	1690	107	110	70-130	1	20	
Molybdenum	ug/L	ND	1000	1000	1060	1070	105	106	70-130	1	20	
Potassium	ug/L	9450	10000	10000	20200	20200	107	108	70-130	0	20	
Sodium	ug/L	153000	10000	10000	171000	173000	179	197	70-130	1	20	M1

MATRIX SPIKE SAMPLE: 3629490

Parameter	Units	60464293011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	56.8	1000	1050	100	70-130	
Beryllium	ug/L	0.15J	1000	1050	105	70-130	
Boron	ug/L	11200	1000	11900	76	70-130	
Calcium	ug/L	18400	10000	27900	95	70-130	
Iron	ug/L	148	10000	10700	105	70-130	
Lithium	ug/L	17.5	1000	1000	99	70-130	
Magnesium	ug/L	1270	10000	10800	95	70-130	
Manganese	ug/L	21.1	1000	1070	104	70-130	
Molybdenum	ug/L	519	1000	1550	103	70-130	
Potassium	ug/L	4880	10000	14500	96	70-130	
Sodium	ug/L	209000	10000	215000	62	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916118
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293001, 60464293002

METHOD BLANK: 3627082 Matrix: Water
Associated Lab Samples: 60464293001, 60464293002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	11/27/24 16:10	
Arsenic	ug/L	<0.13	1.0	0.13	11/27/24 16:10	
Chromium	ug/L	<0.30	1.0	0.30	11/27/24 16:10	
Selenium	ug/L	<0.18	1.0	0.18	11/27/24 16:10	

LABORATORY CONTROL SAMPLE: 3627083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.5	99	85-115	
Arsenic	ug/L	40	38.8	97	85-115	
Chromium	ug/L	40	41.4	104	85-115	
Selenium	ug/L	40	40.4	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3627084 3627085

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.4	39.1	98	98	70-130	1	20	
Arsenic	ug/L	1.4	40	40	39.9	39.4	96	95	70-130	1	20	
Chromium	ug/L	0.32J	40	40	40.3	40.1	100	100	70-130	0	20	
Selenium	ug/L	0.43J	40	40	38.2	38.2	94	94	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916373
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

METHOD BLANK: 3628117 Matrix: Water
Associated Lab Samples: 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	11/27/24 16:39	
Arsenic	ug/L	<0.13	1.0	0.13	11/27/24 16:39	
Chromium	ug/L	<0.30	1.0	0.30	11/27/24 16:39	
Selenium	ug/L	<0.18	1.0	0.18	11/27/24 16:39	

LABORATORY CONTROL SAMPLE: 3628118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.4	101	85-115	
Arsenic	ug/L	40	39.6	99	85-115	
Chromium	ug/L	40	42.7	107	85-115	
Selenium	ug/L	40	41.0	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628119 3628120

Parameter	Units	60464293006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.3	44.3	98	111	70-130	12	20	
Arsenic	ug/L	109	40	40	146	165	93	141	70-130	12	20	M1
Chromium	ug/L	<0.30	40	40	40.3	45.7	100	114	70-130	13	20	
Selenium	ug/L	<0.18	40	40	38.1	43.0	95	107	70-130	12	20	

MATRIX SPIKE SAMPLE: 3628121

Parameter	Units	60464294010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	0.28J	40	40.2	100	70-130	
Arsenic	ug/L	42.9	40	82.4	99	70-130	
Chromium	ug/L	0.54J	40	45.6	113	70-130	
Selenium	ug/L	0.72J	40	38.2	94	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 918235
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293011, 60464293012, 60464293013

METHOD BLANK: 3636110 Matrix: Water
Associated Lab Samples: 60464293011, 60464293012, 60464293013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	12/09/24 13:36	
Arsenic	ug/L	<0.13	1.0	0.13	12/09/24 13:36	
Chromium	ug/L	<0.30	1.0	0.30	12/09/24 13:36	
Selenium	ug/L	<0.18	1.0	0.18	12/09/24 13:36	

LABORATORY CONTROL SAMPLE: 3636111

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.1	103	85-115	
Arsenic	ug/L	40	40.8	102	85-115	
Chromium	ug/L	40	41.9	105	85-115	
Selenium	ug/L	40	40.9	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3636112 3636113

Parameter	Units	60464293012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.7	39.5	99	99	70-130	1	20	
Arsenic	ug/L	7.2	40	40	48.4	49.1	103	105	70-130	2	20	
Chromium	ug/L	0.35J	40	40	44.0	44.0	109	109	70-130	0	20	
Selenium	ug/L	<0.18	40	40	39.9	39.4	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916772
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293001, 60464293002

METHOD BLANK: 3630090 Matrix: Water
Associated Lab Samples: 60464293001, 60464293002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/18/24 11:46	

LABORATORY CONTROL SAMPLE: 3630091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	482	96	90-110	

SAMPLE DUPLICATE: 3630092

Parameter	Units	60464022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	142	143	0	10	

SAMPLE DUPLICATE: 3630093

Parameter	Units	60464294002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	423	437	3	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 917605 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

METHOD BLANK: 3633961 Matrix: Water
Associated Lab Samples: 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/25/24 12:33	

LABORATORY CONTROL SAMPLE: 3633962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	499	100	90-110	

SAMPLE DUPLICATE: 3633963

Parameter	Units	60465213003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	126	125	1	10	H3

SAMPLE DUPLICATE: 3633964

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	257	255	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 917790
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293003, 60464293011, 60464293012

METHOD BLANK: 3634573 Matrix: Water
Associated Lab Samples: 60464293003, 60464293011, 60464293012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/26/24 16:21	

LABORATORY CONTROL SAMPLE: 3634574

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	486	97	90-110	

SAMPLE DUPLICATE: 3634575

Parameter	Units	60464465003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	1360	1360	0	10	

SAMPLE DUPLICATE: 3634576

Parameter	Units	60464559003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	96.1	98.5	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 917909
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293013

METHOD BLANK: 3634992 Matrix: Water
Associated Lab Samples: 60464293013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/27/24 15:47	

LABORATORY CONTROL SAMPLE: 3634993

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	480	96	90-110	

SAMPLE DUPLICATE: 3634994

Parameter	Units	60464293013 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	343	347	1	10	

SAMPLE DUPLICATE: 3634995

Parameter	Units	60464699001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	337	339	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916345
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293001, 60464293002, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

METHOD BLANK: 3627980 Matrix: Water
Associated Lab Samples: 60464293001, 60464293002, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/14/24 13:46	

LABORATORY CONTROL SAMPLE: 3627981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	970	97	80-120	

SAMPLE DUPLICATE: 3627982

Parameter	Units	60464294002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	481	467	3	10	

SAMPLE DUPLICATE: 3627983

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	418	427	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916764
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464293003

METHOD BLANK: 3630062 Matrix: Water
Associated Lab Samples: 60464293003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/18/24 11:37	

LABORATORY CONTROL SAMPLE: 3630063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 3630064

Parameter	Units	60464294017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	<5.0	<5.0		10	

SAMPLE DUPLICATE: 3630065

Parameter	Units	60464421013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	856	832	3	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 916954
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293011, 60464293012, 60464293013

METHOD BLANK: 3630622 Matrix: Water
Associated Lab Samples: 60464293011, 60464293012, 60464293013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/19/24 12:16	

LABORATORY CONTROL SAMPLE: 3630623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 3630624

Parameter	Units	60464559003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	140	140	0	10	

SAMPLE DUPLICATE: 3630625

Parameter	Units	60464294022 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	647	664	3	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 917889
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293001, 60464293002

METHOD BLANK: 3634911 Matrix: Water
Associated Lab Samples: 60464293001, 60464293002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/27/24 06:10	
Fluoride	mg/L	<0.12	0.20	0.12	11/27/24 06:10	
Sulfate	mg/L	<0.55	1.0	0.55	11/27/24 06:10	

LABORATORY CONTROL SAMPLE: 3634912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3634913 3634914

Parameter	Units	60464795002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	205	100	100	289	292	84	86	80-120	1	15	
Fluoride	mg/L	0.48	2.5	2.5	1.9	4.0	58	141	80-120	70	15	M1,R1
Sulfate	mg/L	745	250	250	983	993	95	99	80-120	1	15	

MATRIX SPIKE SAMPLE: 3634916

Parameter	Units	60464938002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	107	250	338	92	80-120	
Fluoride	mg/L	ND	125	129	103	80-120	
Sulfate	mg/L	52.3	250	297	98	80-120	

SAMPLE DUPLICATE: 3634915

Parameter	Units	60464795002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	205	208	1	15	
Fluoride	mg/L	0.48	0.48	0	15	
Sulfate	mg/L	745	740	1	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 918345
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293003, 60464293004

METHOD BLANK: 3636649 Matrix: Water
Associated Lab Samples: 60464293003, 60464293004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	12/04/24 01:11	
Fluoride	mg/L	<0.12	0.20	0.12	12/04/24 01:11	
Sulfate	mg/L	<0.55	1.0	0.55	12/04/24 01:11	

LABORATORY CONTROL SAMPLE: 3636650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3636651 3636652

Parameter	Units	60465166003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.1	5	5	10.5	10.2	107	100	80-120	3	15	
Fluoride	mg/L	0.30	2.5	2.5	3.6	3.4	132	125	80-120	5	15	M1
Sulfate	mg/L	44.5	25	25	71.6	73.5	108	116	80-120	3	15	

MATRIX SPIKE SAMPLE: 3636654

Parameter	Units	60465266001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	ND	2000	2030	84	80-120	
Fluoride	mg/L	159	1000	1170	101	80-120	
Sulfate	mg/L	4490	2000	6480	100	80-120	

SAMPLE DUPLICATE: 3636653

Parameter	Units	60465166003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	5.1	5.3	3	15	
Fluoride	mg/L	0.30	0.31	3	15	
Sulfate	mg/L	44.5	44.3	0	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 918350
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464293005, 60464293006, 60464293007, 60464293008, 60464293011, 60464293012, 60464293013

METHOD BLANK: 3636670 Matrix: Water
Associated Lab Samples: 60464293005, 60464293006, 60464293007, 60464293008, 60464293011, 60464293012, 60464293013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	12/04/24 02:38	
Fluoride	mg/L	<0.12	0.20	0.12	12/04/24 02:38	
Sulfate	mg/L	<0.55	1.0	0.55	12/04/24 02:38	

LABORATORY CONTROL SAMPLE: 3636671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3636672 3636673

Parameter	Units	60464293006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	20.2	25	25	41.9	42.1	87	88	80-120	0	15	
Fluoride	mg/L	0.22	2.5	2.5	3.1	3.3	116	123	80-120	5	15	M1
Sulfate	mg/L	97.2	25	25	123	123	103	102	80-120	0	15	E

MATRIX SPIKE SAMPLE: 3636675

Parameter	Units	60464294012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1230	250	1390	66	80-120	E,M1
Fluoride	mg/L	0.25	2.5	3.1	114	80-120	
Sulfate	mg/L	141	250	386	98	80-120	

SAMPLE DUPLICATE: 3636674

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	20.2	20.1	1	15	
Fluoride	mg/L	0.22	0.23	5	15	
Sulfate	mg/L	97.2	96.6	1	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-5 **Lab ID: 60464293001** Collected: 11/08/24 14:17 Received: 11/09/24 06:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.000 ± 0.571 (1.11) C:NA T:93%**	pCi/L	12/10/24 14:16	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.529 ± 0.342 (0.628) C:79% T:90%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-FB-1 **Lab ID: 60464293002** Collected: 11/08/24 12:36 Received: 11/09/24 06:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.404 ± 0.495 (0.814) C:NA T:91%**	pCi/L	12/10/24 14:16	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.286 ± 0.306 (0.633) C:81% T:88%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-1 **Lab ID: 60464293003** Collected: 11/12/24 13:04 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.293 ± 0.973 (1.90) C:NA T:87%**	pCi/L	12/10/24 14:16	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.388 ± 0.429 (0.899) C:79% T:84%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-2 **Lab ID: 60464293004** Collected: 11/11/24 12:31 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.703 ± 1.63 (2.91) C:NA T:93%**	pCi/L	12/10/24 14:16	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.365 ± 0.815 (1.81) C:70% T:94%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-6 **Lab ID: 60464293005** Collected: 11/11/24 13:10 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.347 ± 0.562 (1.26) C:NA T:93%**	pCi/L	12/10/24 14:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.283 ± 0.322 (0.672) C:76% T:96%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-7(r) **Lab ID: 60464293006** Collected: 11/11/24 11:12 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.272 (0.589) C:NA T:88%**	pCi/L	12/10/24 14:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.408 ± 0.378 (0.768) C:74% T:84%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-B1 **Lab ID: 60464293007** Collected: 11/11/24 16:20 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**1.09 ± 0.731 (1.01) C:NA T:95%**	pCi/L	12/10/24 14:52	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.752 ± 0.387 (0.667) C:78% T:91%**	pCi/L	12/06/24 14:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-DUP-1 **Lab ID: 60464293008** Collected: 11/11/24 08:00 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.236 ± 0.568 (1.19) C:NA T:95%**	pCi/L	12/10/24 14:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.512 ± 0.388 (0.759) C:74% T:91%**	pCi/L	12/06/24 14:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MS-1 **Lab ID: 60464293009** Collected: 11/11/24 11:12 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**120.42 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/10/24 14:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**73.60 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/06/24 14:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MSD-1 **Lab ID: 60464293010** Collected: 11/11/24 11:12 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**104.86 %REC 13.82RPD ± NA (NA) C:NA T:NA**	pCi/L	12/10/24 14:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**76.91 %REC 4.40RPD ± NA (NA) C:NA T:NA**	pCi/L	12/06/24 14:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-3 **Lab ID: 60464293011** Collected: 11/13/24 15:00 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 1.18 (2.39) C:NA T:93%**	pCi/L	12/12/24 15:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.248 ± 0.810 (1.82) C:77% T:83%**	pCi/L	12/11/24 16:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.248 ± 1.99 (4.21)**	pCi/L	12/12/24 17:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-4 **Lab ID: 60464293012** Collected: 11/13/24 13:27 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.152 ± 0.517 (0.955) C:NA T:103%**	pCi/L	12/12/24 15:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.815 ± 0.418 (0.736) C:78% T:93%**	pCi/L	12/11/24 16:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.967 ± 0.935 (1.69)**	pCi/L	12/12/24 17:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

Sample: R-MW-B2 **Lab ID: 60464293013** Collected: 11/13/24 17:08 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.123 ± 0.567 (1.07) C:NA T:95%**	pCi/L	12/12/24 15:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.53 ± 0.566 (0.853) C:77% T:82%**	pCi/L	12/11/24 16:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.65 ± 1.13 (1.92)**	pCi/L	12/12/24 17:16	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 711095
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464293011, 60464293012, 60464293013

METHOD BLANK: 3463171 Matrix: Water
Associated Lab Samples: 60464293011, 60464293012, 60464293013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0423 ± 0.219 (0.455) C:NA T:98%	pCi/L	12/12/24 15:06	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 710547
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464293001, 60464293002, 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008, 60464293009, 60464293010

METHOD BLANK: 3460196 Matrix: Water
Associated Lab Samples: 60464293001, 60464293002, 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008, 60464293009, 60464293010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.586 ± 0.349 (0.332) C:NA T:91%	pCi/L	12/10/24 14:16	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 710549
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464293001, 60464293002, 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008, 60464293009, 60464293010

METHOD BLANK: 3460199 Matrix: Water
Associated Lab Samples: 60464293001, 60464293002, 60464293003, 60464293004, 60464293005, 60464293006, 60464293007, 60464293008, 60464293009, 60464293010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.330 ± 0.316 (0.640) C:77% T:87%	pCi/L	12/06/24 14:40	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA
Pace Project No.: 60464293

QC Batch: 711096
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464293011, 60464293012, 60464293013

METHOD BLANK: 3463177 Matrix: Water
Associated Lab Samples: 60464293011, 60464293012, 60464293013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.447 ± 0.310 (0.584) C:80% T:89%	pCi/L	12/11/24 16:26	

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QUALIFIERS

Project: AMEREN RCPA
Pace Project No.: 60464293

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA
Pace Project No.: 60464293

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464293001	**R-MW-5**	EPA 200.7	915872	EPA 200.7	915929
60464293002	**R-FB-1**	EPA 200.7	915896	EPA 200.7	915912
60464293003	**R-MW-1**	EPA 200.7	916309	EPA 200.7	916338
60464293004	**R-MW-2**	EPA 200.7	916309	EPA 200.7	916338
60464293005	**R-MW-6**	EPA 200.7	916309	EPA 200.7	916338
60464293006	**R-MW-7(r)**	EPA 200.7	916309	EPA 200.7	916338
60464293007	**R-MW-B1**	EPA 200.7	916309	EPA 200.7	916338
60464293008	**R-DUP-1**	EPA 200.7	916309	EPA 200.7	916338
60464293011	**R-MW-3**	EPA 200.7	916636	EPA 200.7	916671
60464293012	**R-MW-4**	EPA 200.7	916636	EPA 200.7	916671
60464293013	**R-MW-B2**	EPA 200.7	916636	EPA 200.7	916671
60464293001	**R-MW-5**	EPA 200.8	916118	EPA 200.8	916147
60464293002	**R-FB-1**	EPA 200.8	916118	EPA 200.8	916147
60464293003	**R-MW-1**	EPA 200.8	916373	EPA 200.8	916423
60464293004	**R-MW-2**	EPA 200.8	916373	EPA 200.8	916423
60464293005	**R-MW-6**	EPA 200.8	916373	EPA 200.8	916423
60464293006	**R-MW-7(r)**	EPA 200.8	916373	EPA 200.8	916423
60464293007	**R-MW-B1**	EPA 200.8	916373	EPA 200.8	916423
60464293008	**R-DUP-1**	EPA 200.8	916373	EPA 200.8	916423
60464293011	**R-MW-3**	EPA 200.8	918235	EPA 200.8	918280
60464293012	**R-MW-4**	EPA 200.8	918235	EPA 200.8	918280
60464293013	**R-MW-B2**	EPA 200.8	918235	EPA 200.8	918280
60464293001	**R-MW-5**	EPA 903.1	710547		
60464293002	**R-FB-1**	EPA 903.1	710547		
60464293003	**R-MW-1**	EPA 903.1	710547		
60464293004	**R-MW-2**	EPA 903.1	710547		
60464293005	**R-MW-6**	EPA 903.1	710547		
60464293006	**R-MW-7(r)**	EPA 903.1	710547		
60464293007	**R-MW-B1**	EPA 903.1	710547		
60464293008	**R-DUP-1**	EPA 903.1	710547		
60464293009	**R-MS-1**	EPA 903.1	710547		
60464293010	**R-MSD-1**	EPA 903.1	710547		
60464293011	**R-MW-3**	EPA 903.1	711095		
60464293012	**R-MW-4**	EPA 903.1	711095		
60464293013	**R-MW-B2**	EPA 903.1	711095		
60464293001	**R-MW-5**	EPA 904.0	710549		
60464293002	**R-FB-1**	EPA 904.0	710549		
60464293003	**R-MW-1**	EPA 904.0	710549		
60464293004	**R-MW-2**	EPA 904.0	710549		
60464293005	**R-MW-6**	EPA 904.0	710549		
60464293006	**R-MW-7(r)**	EPA 904.0	710549		
60464293007	**R-MW-B1**	EPA 904.0	710549		
60464293008	**R-DUP-1**	EPA 904.0	710549		
60464293009	**R-MS-1**	EPA 904.0	710549		

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA
Pace Project No.: 60464293

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464293010	**R-MSD-1**	EPA 904.0	710549		
60464293011	**R-MW-3**	EPA 904.0	711096		
60464293012	**R-MW-4**	EPA 904.0	711096		
60464293013	**R-MW-B2**	EPA 904.0	711096		
60464293011	**R-MW-3**	Total Radium Calculation	715134		
60464293012	**R-MW-4**	Total Radium Calculation	715134		
60464293013	**R-MW-B2**	Total Radium Calculation	715134		
60464293001	**R-MW-5**	SM 2320B	916772		
60464293002	**R-FB-1**	SM 2320B	916772		
60464293003	**R-MW-1**	SM 2320B	917790		
60464293004	**R-MW-2**	SM 2320B	917605		
60464293005	**R-MW-6**	SM 2320B	917605		
60464293006	**R-MW-7(r)**	SM 2320B	917605		
60464293007	**R-MW-B1**	SM 2320B	917605		
60464293008	**R-DUP-1**	SM 2320B	917605		
60464293011	**R-MW-3**	SM 2320B	917790		
60464293012	**R-MW-4**	SM 2320B	917790		
60464293013	**R-MW-B2**	SM 2320B	917909		
60464293001	**R-MW-5**	SM 2540C	916345		
60464293002	**R-FB-1**	SM 2540C	916345		
60464293003	**R-MW-1**	SM 2540C	916764		
60464293004	**R-MW-2**	SM 2540C	916345		
60464293005	**R-MW-6**	SM 2540C	916345		
60464293006	**R-MW-7(r)**	SM 2540C	916345		
60464293007	**R-MW-B1**	SM 2540C	916345		
60464293008	**R-DUP-1**	SM 2540C	916345		
60464293011	**R-MW-3**	SM 2540C	916954		
60464293012	**R-MW-4**	SM 2540C	916954		
60464293013	**R-MW-B2**	SM 2540C	916954		
60464293001	**R-MW-5**	EPA 300.0	917889		
60464293002	**R-FB-1**	EPA 300.0	917889		
60464293003	**R-MW-1**	EPA 300.0	918345		
60464293004	**R-MW-2**	EPA 300.0	918345		
60464293005	**R-MW-6**	EPA 300.0	918350		
60464293006	**R-MW-7(r)**	EPA 300.0	918350		
60464293007	**R-MW-B1**	EPA 300.0	918350		
60464293008	**R-DUP-1**	EPA 300.0	918350		
60464293011	**R-MW-3**	EPA 300.0	918350		
60464293012	**R-MW-4**	EPA 300.0	918350		
60464293013	**R-MW-B2**	EPA 300.0	918350		

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WO# : 60464293

60464293

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Energy

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T298 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 14/17 **Corr. Factor** -0.1 **Corrected** 13/16/15.4

Temperature should be above freezing to 6°C 15.5

Date and initials of person examining contents: JN 11/11/24

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** BE727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

600464293

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-MW-1	WT														
R-MW-2	WT														
R-MW-3	WT														
R-MW-4	WT														
R-MW-5	WT	G			11/8/24	1417	4			✓	✓	✓	✓	✓	
R-MW-6	WT														
R MW-7(r)	WT														
R-MW-B1	WT														
R-MW-B2	WT														
R-DUP-1	WT														

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160597

Preservation non-conformance identified for sample:

Additional Instructions from Pace®:
APPEND TO PROJECT
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo & 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				1.3	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
John Rasmussen / Rocksmith	11/8/24 1600		11/9 0615 KH +815	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464293

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043
Customer Project #:	COC# 5
Project Name:	AMEREN RCPA
Site Collection Info/Facility ID (as applicable):	
Contact/Report To:	Mark Haddock
Phone #:	314-974-6578
E-Mail:	mark.haddock@rocksmithgeo.com
Cc E-Mail:	
Invoice To:	Mark Haddock
Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Purchase Order # (if applicable):	
Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-FB-1	WT	G			11/8/24	1236	4			✓	✓	✓	✓	✓	
R-MS-1	WT														
R-MSD-1	WT														

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160597

Preservation non conformance identified for sample

Additional Instructions from Pace®:
APPEND TO PROJECT
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo & 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name)

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				1.3	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
John Rasmussen / Rocksmith	11/8/24 1600		11/9 0615 KH OGS	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 2

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ENV-FRM-CORQ-0019_v02_110123 ©

1/2

Client: Rocksmith Geoeng

Profile(EZ)#: 3160597

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2																																
3																																
4																																
5	WT																		1			2	1									
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1B	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2B	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 604164293

2/2

Client: Rocksmith Geoeng

Profile/EZ#: 3160597

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1			2	1								
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60464293

WO# : 60464293

60464293

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoens

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T198 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 6/1.8/2.6 Corr. Factor -0.1 Corrected 5/1.7/1.4

Temperature should be above freezing to 6°C 12.2/14.4 12.1/14.3

Date and initials of person examining contents: 11/13/24

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	TWO Sample Cross out on CoC but received Sample. R-MW-2 and R-MW-B1.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: EE727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464293

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-MW-1	WT	G			11/12/24	1304	6			✓	✓	✓	✓	✓	
~~R-MW-2~~	WT														
~~R-MW-3~~	WT														
~~R-MW-4~~	WT	G			~~11/12/24~~	~~1304~~	6			✓				✓	
~~R-MW-5~~	WT														
R-MW-6	WT	G			11/11/24	1310	6			✓	✓	✓	✓	✓	
R-MW-7(r)	WT	G			11/11/24	1112	6			✓	✓	✓	✓	✓	
~~R-MW-B1~~	WT														
~~R-MW-B2~~	WT														
R-DUP-1	WT	G			11/11/24	1310	6			✓	✓	✓	✓	✓	

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

** Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3160597

Preservation non conformance identified for sample

Additional Instructions from Pace®:
APPEND TO PROJECT
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo & 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T298	-0.1	1.5/1.7/1.9	12.1/14.3	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Rocksmith	11/12/24		11/13/24 0526
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier
[ ] FedEX [ ] UPS [ ] Other

Page: 1 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464293

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Missouri
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other		Regulatory Program (DW, RCRA, etc.) as applicable:	Reportable [ ] Yes [ ] No
		Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other	DW PWSID # or WW Permit # as applicable:
		Date Results Requested:	Field Filtered (if applicable): [ ] Yes [ ] No
			Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
~~R-FB-1~~	WT														
R-MS-1	WT	G			11/11/24	1112	6			✓	✓	✓	✓	✓	
R-MSD-1	WT	G			11/11/24	1112	6			✓	✓	✓	✓	✓	

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

** Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160597

Preservation non-conformance identified for sample

Additional Instructions from Pace®:
APPEND TO PROJECT
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo & 200.8 Metals - Sb, As, Cr, Se

Collected By:
(Printed Name) John Rasmussen
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T198	-0.1	1.5/1.7/1.9/12.1	1.4/1.6/1.8/12.0	Y

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Rocksmith	11/12/24 1600		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
			11/13/24 0526
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

Client: Rocksmith Geoeng

Profile/EZ # Only print what you log.

Site:

Notes Append to 60464293

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1			2	1									
2	↓				Log this sample (R-MW-2 11/11/24 12:31)														1			2	1									
3																																
4																																
5																																
6	WT																		1			2	1									
7	WT																		3			2	3		(MS/MSD)							
8	WT			Log this sample (R-MW-B1 11/11/24 16:20)															1			2	1									
9																																
10	WT																		1			2	1									
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60464293

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

2/2

Client: Rocksmith Geoeng

Profile/EZ # Only print what you log.

Site:

Notes Append to 60464293

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2	WT																					2	(Only log RAD)									
3	WT																					2										
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60464293

WO# : 60464293

60464293

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Green

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T198 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.0/13.0 **Corr. Factor** -0.1 **Corrected** 1.9/12.9/1.0

Temperature should be above freezing to 6°C 1.1

Date and initials of person examining contents: PW 11/15/24

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 82727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd, Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain of Custody is a LEGAL DOCUMENT. Complete all relevant fields.

LAB USE ONLY- Affix Workorder/Login Label Here

60464293

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 5		
Project Name:	AMEREN RCPA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQuIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other

(DW PWSID # or WW Permit # as applicable)

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Specify Container Size **

Specify Container Preservative Type***

Analysis Requested

**Container Size: (1) 500mL (2) 250mL (3) 125mL (4) 100mL (5) 40mL vial (6) 1mCore (7) 5mCore (8) 5035Core (9) 80mL (10) Other

*** Preservative Type: (1) None (2) HNO3 (3) H2SO4 (4) HCl (5) NaOH (6) Zn Acetate (7) NaHSO4 (8) Sod. Thiosulfate (9) Ascorbic Acid (10) MeOH (11) Other

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Lab Use Only	Sample Comment	Preservation non conformance identified for sample:
R-MW-1	WT																
R-MW-2	WT																
R-MW-3	WT	G			11/13/24	1500	4			✓	✓	✓	✓	✓			
R-MW-4	WT	G			11/13/24	1327	4			✓	✓	✓	✓	✓			
R-MW-5	WT																
R-MW-6	WT																
R-MW-7(r)	WT																
R-MW-B1	WT																
R-MW-B2	WT	G			11/13/24	1708	4			J	✓	✓	✓	✓			
R-DUP-1	WT																

Lab Use Only
Proj. Mgr: Jamie Church
Acct/Num / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3160597

Additional Instructions from Pace®:
APPEND TO PROJECT
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo & 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	T298	-0.1	1.9	1.9	1.0

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	11/14/24 1600		11/15 05:55	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Client: Rocksmith Geseng

Profile/EZ # Only Print What You Log

Site:

Notes Append to 6c464293

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2																																
3	WT																		1			2	1									
4	WT																		1			2	1									
5																																
6																																
7																																
8																																
9	WT																		1			2	1									
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 6c464293

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☒ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☒ No

Workorder: 60464293 Workorder Name: AMEREN RCPA

Owner Received Date: 11/9/2024 Results Requested By: 11/27/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis: Radium 226	Radium 228											LAB USE ONLY
1	R-MW-5	PS	11/8/2024 14:17	60464293001	Water	2						X	X											001
2	R-FB-1	PS	11/8/2024 12:36	60464293002	Water	2						X	X											002
3	R-MW-1	PS	11/12/2024 13:04	60464293003	Water	2						X	X			-								003
4	R-MW-2	PS	11/11/2024 12:31	60464293004	Water	2						X	X											004
5	R-MW-6	PS	11/11/2024 13:10	60464293005	Water	2						X	X											005
6	R-MW-7(r)	RQS	11/11/2024 11:12	60464293006	Water	2						X	X											MS/MSD 006
7	R-MW-B1	PS	11/11/2024 16:20	60464293007	Water	2						X	X											007
8	R-DUP-1	PS	11/11/2024 13:10	60464293008	Water	2						X	X											008
9	R-MS-1	PS	11/11/2024 11:12	60464293009	Water	2						X	X											009
10	R-MSD-1	PS	11/11/2024 11:12	60464293010	Water	2						X	X											010

Transfers	Released By	Date/Time	Received By	Date/Time
1			Evan Laughlin	11/15/24 1030
2				
3				

Comments: KS sample location: 60-R01-S3A

Cooler Temperature on Receipt ____ °C | Custody Seal Y or (N) | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30735121

30735121

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO# : 30735121

PM: MAR Due Date: 12/10/24

CLIENT: PACE_60_LEKS

Client Name: Pace - KS

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 403364528175

Examined By: PS 11/18/24

Labeled By: PJ 11/18/24

Temped By:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☐ No

Thermometer Used: **Type of Ice:** Wet Blue (None)

Cooler Temperature: Observed Temp °C Correction Factor: °C Final Temp: °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 1001041 / D.P.D. Residual Chlorine Lot #
Chain of Custody Present	✓			1.
Chain of Custody Filled Out: -Were client corrections present on COC	✓	✓		2.
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used	✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dichlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements:	✓			Initial when completed PJ / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed EL / Date: 11/15/24 / Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Page 1 of 1

Qualtrax ID: 55680

Memorandum

December 17, 2024

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008-24
CC:	Mark Haddock, Jeffrey Ingram		
From:	Valerie Hurt	**Email:**	valerie.hurt@rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA – Data Package 60464293**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a compound was detected in a blank (i.e. method, field), and the blank comparison criterion was not met, associated sample results were qualified as estimates (J) or non-detects (U).
- When a compound was detected in a sample result between the Method Detection Limit (MDL) and Practical Quantification Limit (PQL), the results were recorded at the detection value and qualified as estimates (J).
- When a duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a matrix spike/matrix spike duplicate (MS/MSD) criterion was not met, the associated sample result was qualified as an estimate (J, J+ for estimates based high, and J- for estimates based low). When the associated sample result was a non-detect, and matrix spike recovery was below 10%, the result was rejected (R).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA
Project Number: 23008-24
Reviewer: V. Hurt
Validation Date: 12/17/2024

Laboratory: Pace Analytical
SDG #: 60464293
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); SM 2320B (Alkalinity); SM 2540C (TDS); EPA 300.0 (Anions);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ EPA 903.1/904.0 (Radium 226+228)
Sample Names R-MW-5, R-FB-1, R-MW-1, R-MW-2, R-MW-6, R-MW-7(r), R-MW-B1, R-DUP-1, R-MS-1, R-MSD-1, R-MW-3, R-MW-4, R-MW-B2

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			11/08/24-11/13/24
b) Sampling team indicated?	x			JTR & JDQ
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?	x			
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?	x			See Notes
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	x			See Notes
b) Were analytes detected in the field blank(s)?	x			See Notes
c) Were analytes detected in the equipment blank(s)?			x	
d) Were analytes detected in the trip blank(s)?			x	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	x			
b) Were the proper analytes included in the LCS?	x			
c) Was the LCS accuracy criteria met?	x			

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	x			See Notes
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			See Notes
d) Were lab dup. precision criteria met (note RPD)?	x			

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?			x	
b) Was the %D within control limits?			x	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
b) Was MSD accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
c) Were MS/MSD precision criteria met?		x		See Notes

Comments/Notes:

General:

Sulfate, chloride, and alkalinity diluted in some samples; no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blanks:

3626370: calcium (225), iron (84.8), and manganese (0.75J), associated with sample -001.

All results were > RL and > 10x the blank, no qualification necessary.

3627818: iron (11.0J), associated with samples -003 through -008. -003 < RL and < 10x blank, result qualified as ND (U).

-004 > than RL and < 10x the blank, result qualified as an estimate (J). All other results > 10x blank, no qualification necessary.

3629486: iron (43.4J) and manganese (2.4J) associated with samples -011 through -013. -011 iron and manganese

> RL and < 10x blank, results qualified as estimates (J). All other results > RL and > 10x blank, no qualification necessary.

3460196: radium-226 (0.586) associated with samples -001 through -010. -007 > than RL and < 10x blank, result qualified as an estimate (J).

All other results ND, no qualification necessary.

Field Blanks:

R-FB-1 @ R-MW-5: iron (16.5J), result detected > RL and > 10x blank, no qualification necessary.

Duplicates:

R-DUP-1 @ R-MW-6: field duplicate exceeds control limit (20%) for boron (21%), results qualified as estimate (J).

R-DUP-1 @ R-MW-6: chromium detected in parent sample and not detected in field duplicate, results qualified as estimate.

Lab duplicate max RPD: metals: 20%, chloride, fluoride, and sulfate: 15%, TDS and alkalinity: 10%

MS/MSD:

3626374: MS recovery low for sodium, RPD within control limits. Associated with unrelated sample, no qualification necessary.

3626531/3626532: MS/MSD recovery high for calcium, RPD within control limits. Associated with unrelated sample, no qualification necessary.

3629488/3629489: MS/MSD recovery high for sodium, RPD within control limits. Associated with an unrelated sample, no qualification necessary.

3629490: MS recovery low for sodium. Associated with -011, result qualified as estimate.

3268119/3628120: MSD recovery high for arsenic, MS recovery and RPD within control limits. Associated with R-MW-7(r), no qualification necessary.

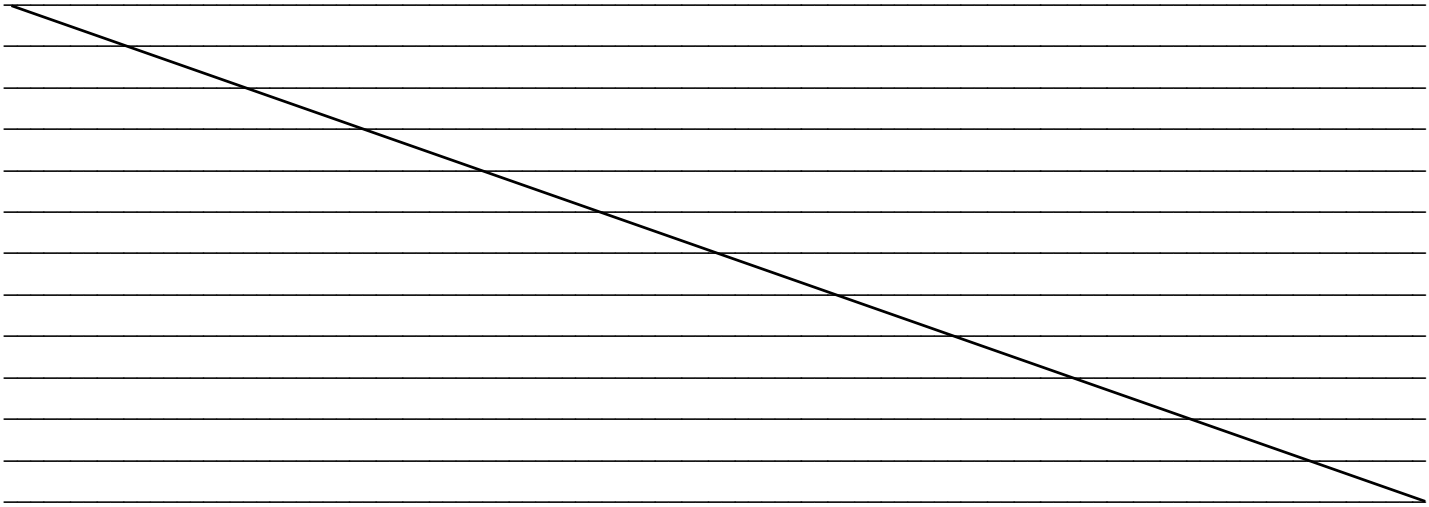
3634913/3634914: MS recovery low and MSD recovery high for fluoride, RPD high. Associated with unrelated sample,

no qualification necessary.

3636651/3636652: MS/MSD recovery high for fluoride, RPD within control limits. Associated with unrelated sample, no qualification necessary.

3636672/3636673: MSD recovery high for fluoride, MS recovery and RPD within control limits. Associated with sample -006, no qualification necessary.

3636675: MS recovery low for chloride. Associated with unrelated sample, no qualification necessary.



QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-MW-1	Iron	50	U	Detected in method blank, result < RL
R-MW-2	Iron	51.6	J	Detected in method blank, result > RL and < 10x blank.
R-MW-3	Iron	148	J	Detected in method blank, result > RL and < 10x blank
"	Manganese	21.1	J	"
R-MW-B1	Radium-226	1.09	J	Detected in method blank, result > RL and < 10x blank
R-DUP-1	Boron	1400	J	RPD exceeds control limit
R-MW-6	Boron	1720	J	"
R-DUP-1	Chromium	0.30	UJ	Detected in parent sample and not in DUP
R-MW-6	Chromium	0.33	J	"
R-MW-3	Sodium	209000	J-	MS recovery low, RPD OK

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: 12/17/2024

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

December 12, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between November 09, 2024 and November 15, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.
Austin Nieman, Ameren

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 2000302023-6
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60464294001	**R-P-10S**	Water	11/08/24 09:56	11/09/24 10:06
60464294002	**R-P-16S**	Water	11/08/24 13:16	11/09/24 10:06
60464294003	**R-CA-FB-1**	Water	11/08/24 09:46	11/09/24 10:06
60464294004	**R-CA-MS-1**	Water	11/08/24 13:16	11/09/24 10:06
60464294005	**R-CA-MSD-1**	Water	11/08/24 13:16	11/09/24 10:06
60464294006	**R-P-17S**	Water	11/12/24 10:24	11/13/24 05:26
60464294007	**R-P-17I**	Water	11/12/24 11:26	11/13/24 05:26
60464294008	**R-P-17D**	Water	11/11/24 13:32	11/13/24 05:26
60464294009	**R-P-19S**	Water	11/11/24 09:45	11/13/24 05:26
60464294010	**R-P-19I**	Water	11/11/24 10:31	11/13/24 05:26
60464294011	**R-P-19D**	Water	11/11/24 11:23	11/13/24 05:26
60464294012	**R-P-21D**	Water	11/12/24 14:30	11/13/24 05:26
60464294013	**R-P-22S**	Water	11/12/24 14:15	11/13/24 05:26
60464294014	**R-P-22D**	Water	11/12/24 11:45	11/13/24 05:26
60464294015	**R-CA-DUP-1**	Water	11/12/24 00:00	11/13/24 05:26
60464294016	**R-CA-DUP-2**	Water	11/12/24 00:00	11/13/24 05:26
60464294017	**R-CA-FB-2**	Water	11/11/24 13:55	11/13/24 05:26
60464294018	**R-P-05S**	Water	11/13/24 11:55	11/15/24 05:55
60464294019	**R-P-21S**	Water	11/13/24 13:58	11/15/24 05:55
60464294020	**R-P-21I**	Water	11/13/24 11:05	11/15/24 05:55
60464294021	**R-P-29S**	Water	11/13/24 16:15	11/15/24 05:55
60464294022	**R-P-29D**	Water	11/13/24 14:56	11/15/24 05:55
60464294023	**R-P-30S**	Water	11/13/24 09:47	11/15/24 05:55

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60464294001	**R-P-10S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294002	**R-P-16S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294003	**R-CA-FB-1**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294004	**R-CA-MS-1**	EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60464294005	**R-CA-MSD-1**	EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60464294006	**R-P-17S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294007	**R-P-17I**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294008	**R-P-17D**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294009	**R-P-19S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294010	**R-P-19I**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294011	**R-P-19D**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294012	**R-P-21D**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60464294013	**R-P-22S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294014	**R-P-22D**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294015	**R-CA-DUP-1**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294016	**R-CA-DUP-2**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294017	**R-CA-FB-2**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294018	**R-P-05S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294019	**R-P-21S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294020	**R-P-21I**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294021	**R-P-29S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294022	**R-P-29D**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464294023	**R-P-30S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	TML	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-10S **Lab ID: 60464294001** Collected: 11/08/24 09:56 Received: 11/09/24 10:06 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**206**	ug/L	5.0	0.64	1	11/11/24 11:40	11/27/24 15:13	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/11/24 11:40	11/27/24 15:13	7440-41-7	
Boron	**1220**	ug/L	100	6.4	1	11/11/24 11:40	11/27/24 15:13	7440-42-8	
Calcium	**138000**	ug/L	200	26.9	1	11/11/24 11:40	11/27/24 15:13	7440-70-2	
Iron	**224**	ug/L	50.0	9.1	1	11/11/24 11:40	11/27/24 15:13	7439-89-6	
Lithium	**26.4**	ug/L	10.0	3.7	1	11/11/24 11:40	11/27/24 15:13	7439-93-2	
Magnesium	**17800**	ug/L	50.0	20.1	1	11/11/24 11:40	11/27/24 15:13	7439-95-4	
Manganese	**377**	ug/L	5.0	0.39	1	11/11/24 11:40	11/27/24 15:13	7439-96-5	
Molybdenum	**31.3**	ug/L	20.0	1.0	1	11/11/24 11:40	11/27/24 15:13	7439-98-7	
Potassium	**5380**	ug/L	500	69.7	1	11/11/24 11:40	11/27/24 15:13	7440-09-7	
Sodium	**54400**	ug/L	500	115	1	11/11/24 11:40	11/27/24 15:13	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/12/24 15:15	12/02/24 09:45	7440-36-0	
Arsenic	**2.2**	ug/L	1.0	0.13	1	11/12/24 15:15	12/02/24 09:45	7440-38-2	
Chromium	**1.2**	ug/L	1.0	0.30	1	11/12/24 15:15	12/02/24 09:45	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/12/24 15:15	12/02/24 09:45	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**479**	mg/L	20.0	10.5	1		11/18/24 13:24		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**625**	mg/L	13.3	13.3	1		11/14/24 13:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.9**	mg/L	1.0	0.53	1		12/03/24 12:33	16887-00-6	
Fluoride	**0.22**	mg/L	0.20	0.12	1		12/03/24 12:33	16984-48-8	
Sulfate	**59.6**	mg/L	20.0	11.0	20		12/03/24 12:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-16S **Lab ID: 60464294002** Collected: 11/08/24 13:16 Received: 11/09/24 10:06 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**119**	ug/L	5.0	0.64	1	11/11/24 11:40	11/27/24 15:18	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/11/24 11:40	11/27/24 15:18	7440-41-7	
Boron	**368**	ug/L	100	6.4	1	11/11/24 11:40	11/27/24 15:18	7440-42-8	
Calcium	**116000**	ug/L	200	26.9	1	11/11/24 11:40	11/27/24 15:18	7440-70-2	M1
Iron	**48.8J**	ug/L	50.0	9.1	1	11/11/24 11:40	11/27/24 15:18	7439-89-6	
Lithium	**25.2**	ug/L	10.0	3.7	1	11/11/24 11:40	11/27/24 15:18	7439-93-2	
Magnesium	**29500**	ug/L	50.0	20.1	1	11/11/24 11:40	11/27/24 15:18	7439-95-4	
Manganese	**8.9**	ug/L	5.0	0.39	1	11/11/24 11:40	11/27/24 15:18	7439-96-5	
Molybdenum	**12.4J**	ug/L	20.0	1.0	1	11/11/24 11:40	11/27/24 15:18	7439-98-7	
Potassium	**2700**	ug/L	500	69.7	1	11/11/24 11:40	11/27/24 15:18	7440-09-7	
Sodium	**18400**	ug/L	500	115	1	11/11/24 11:40	11/27/24 15:18	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/12/24 15:15	12/02/24 09:47	7440-36-0	
Arsenic	**1.4**	ug/L	1.0	0.13	1	11/12/24 15:15	12/02/24 09:47	7440-38-2	
Chromium	**0.32J**	ug/L	1.0	0.30	1	11/12/24 15:15	12/02/24 09:47	7440-47-3	
Selenium	**0.43J**	ug/L	1.0	0.18	1	11/12/24 15:15	12/02/24 09:47	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**423**	mg/L	20.0	10.5	1		11/18/24 13:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**481**	mg/L	10.0	10.0	1		11/14/24 13:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.8**	mg/L	1.0	0.53	1		12/03/24 10:15	16887-00-6	M1
Fluoride	**0.31**	mg/L	0.20	0.12	1		12/03/24 10:15	16984-48-8	M1
Sulfate	**36.0**	mg/L	5.0	2.8	5		12/03/24 10:29	14808-79-8	M1

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-FB-1 **Lab ID: 60464294003** Collected: 11/08/24 09:46 Received: 11/09/24 10:06 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**<0.64**	ug/L	5.0	0.64	1	11/11/24 11:40	11/27/24 15:15	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/11/24 11:40	11/27/24 15:15	7440-41-7	
Boron	**<6.4**	ug/L	100	6.4	1	11/11/24 11:40	11/27/24 15:15	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	11/11/24 11:40	11/27/24 15:15	7440-70-2	
Iron	**13.2J**	ug/L	50.0	9.1	1	11/11/24 11:40	11/27/24 15:15	7439-89-6	
Lithium	**<3.7**	ug/L	10.0	3.7	1	11/11/24 11:40	11/27/24 15:15	7439-93-2	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	11/11/24 11:40	11/27/24 15:15	7439-95-4	
Manganese	**0.56J**	ug/L	5.0	0.39	1	11/11/24 11:40	11/27/24 15:15	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/11/24 11:40	11/27/24 15:15	7439-98-7	
Potassium	**<69.7**	ug/L	500	69.7	1	11/11/24 11:40	11/27/24 15:15	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	11/11/24 11:40	11/27/24 15:15	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/12/24 15:15	11/27/24 16:33	7440-36-0	
Arsenic	**<0.13**	ug/L	1.0	0.13	1	11/12/24 15:15	11/27/24 16:33	7440-38-2	
Chromium	**0.36J**	ug/L	1.0	0.30	1	11/12/24 15:15	11/27/24 16:33	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/12/24 15:15	11/27/24 16:33	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		11/18/24 13:54		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**9.5**	mg/L	5.0	5.0	1		11/14/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.53**	mg/L	1.0	0.53	1		12/03/24 13:01	16887-00-6	
Fluoride	**0.16J**	mg/L	0.20	0.12	1		12/03/24 13:01	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		12/03/24 13:01	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-17S **Lab ID: 60464294006** Collected: 11/12/24 10:24 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**98.0**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:22	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:22	7440-41-7	
Boron	**2430**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:22	7440-42-8	
Calcium	**99600**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:22	7440-70-2	
Iron	**542**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:22	7439-89-6	
Lithium	**31.1**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:22	7439-93-2	
Magnesium	**22700**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:22	7439-95-4	
Manganese	**1960**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:22	7439-96-5	
Molybdenum	**107**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:22	7439-98-7	
Potassium	**4020**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:22	7440-09-7	
Sodium	**139000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:22	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.15J**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:11	7440-36-0	
Arsenic	**9.8**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:11	7440-38-2	
Chromium	**0.32J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:11	7440-47-3	
Selenium	**0.82J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:11	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**361**	mg/L	20.0	10.5	1		11/26/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**825**	mg/L	13.3	13.3	1		11/19/24 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**35.3**	mg/L	20.0	10.5	20		12/04/24 12:45	16887-00-6	
Fluoride	**1.0**	mg/L	0.20	0.12	1		12/04/24 12:31	16984-48-8	
Sulfate	**251**	mg/L	20.0	11.0	20		12/04/24 12:45	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-17I **Lab ID: 60464294007** Collected: 11/12/24 11:26 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**29.6**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:23	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:23	7440-41-7	
Boron	**2120**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:23	7440-42-8	
Calcium	**14800**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:23	7440-70-2	
Iron	**136**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:23	7439-89-6	
Lithium	**4.8J**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:23	7439-93-2	
Magnesium	**1000**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:23	7439-95-4	
Manganese	**11.1**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:23	7439-96-5	
Molybdenum	**108**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:23	7439-98-7	
Potassium	**2770**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:23	7440-09-7	
Sodium	**253000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:23	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.12J**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:14	7440-36-0	
Arsenic	**28.2**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:14	7440-38-2	
Chromium	**0.52J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:14	7440-47-3	
Selenium	**0.78J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:14	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**162**	mg/L	20.0	10.5	1		11/25/24 16:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**828**	mg/L	13.3	13.3	1		11/18/24 11:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**141**	mg/L	50.0	26.4	50		12/04/24 13:26	16887-00-6	
Fluoride	**1.6**	mg/L	0.20	0.12	1		12/04/24 13:13	16984-48-8	
Sulfate	**256**	mg/L	50.0	27.5	50		12/04/24 13:26	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-17D **Lab ID: 60464294008** Collected: 11/11/24 13:32 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**97.9**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:25	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:25	7440-41-7	
Boron	**6960**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:25	7440-42-8	
Calcium	**44400**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:25	7440-70-2	
Iron	**2310**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:25	7439-89-6	
Lithium	**36.9**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:25	7439-93-2	
Magnesium	**9030**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:25	7439-95-4	
Manganese	**380**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:25	7439-96-5	
Molybdenum	**564**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:25	7439-98-7	
Potassium	**7060**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:25	7440-09-7	
Sodium	**145000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:25	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:17	7440-36-0	
Arsenic	**1.0**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:17	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:17	7440-47-3	
Selenium	**0.19J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:17	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**173**	mg/L	20.0	10.5	1		11/25/24 16:59		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**656**	mg/L	13.3	13.3	1		11/18/24 11:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**62.2**	mg/L	5.0	2.6	5		12/04/24 14:22	16887-00-6	
Fluoride	**0.63**	mg/L	0.20	0.12	1		12/04/24 14:08	16984-48-8	
Sulfate	**243**	mg/L	50.0	27.5	50		12/04/24 14:36	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-19S **Lab ID: 60464294009** Collected: 11/11/24 09:45 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**242**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:27	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:27	7440-41-7	
Boron	**168**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:27	7440-42-8	
Calcium	**110000**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:27	7440-70-2	
Iron	**4130**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:27	7439-89-6	
Lithium	**22.3**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:27	7439-93-2	
Magnesium	**18000**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:27	7439-95-4	
Manganese	**1100**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:27	7439-96-5	
Molybdenum	**2.6J**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:27	7439-98-7	
Potassium	**4600**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:27	7440-09-7	
Sodium	**6530**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:27	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:24	7440-36-0	
Arsenic	**6.0**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:24	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:24	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:24	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**360**	mg/L	20.0	10.5	1		11/25/24 17:04		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**392**	mg/L	10.0	10.0	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1.5**	mg/L	1.0	0.53	1		12/04/24 14:50	16887-00-6	
Fluoride	**0.26**	mg/L	0.20	0.12	1		12/04/24 14:50	16984-48-8	
Sulfate	**15.1**	mg/L	1.0	0.55	1		12/04/24 14:50	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-19I **Lab ID: 60464294010** Collected: 11/11/24 10:31 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**57.7**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:30	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:30	7440-41-7	
Boron	**4540**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:30	7440-42-8	
Calcium	**15700**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:30	7440-70-2	
Iron	**120**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:30	7439-89-6	
Lithium	**73.5**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:30	7439-93-2	
Magnesium	**274**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:30	7439-95-4	
Manganese	**3.2J**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:30	7439-96-5	
Molybdenum	**213**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:30	7439-98-7	
Potassium	**31800**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:30	7440-09-7	
Sodium	**174000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:30	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.28J**	ug/L	1.0	0.12	1	11/14/24 09:52	11/27/24 17:26	7440-36-0	
Arsenic	**42.9**	ug/L	1.0	0.13	1	11/14/24 09:52	11/27/24 17:26	7440-38-2	
Chromium	**0.54J**	ug/L	1.0	0.30	1	11/14/24 09:52	11/27/24 17:26	7440-47-3	
Selenium	**0.72J**	ug/L	1.0	0.18	1	11/14/24 09:52	11/27/24 17:26	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**268**	mg/L	20.0	10.5	1		11/25/24 17:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**659**	mg/L	13.3	13.3	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**24.2**	mg/L	5.0	2.6	5		12/05/24 18:40	16887-00-6	
Fluoride	**1.1**	mg/L	0.20	0.12	1		12/04/24 15:17	16984-48-8	
Sulfate	**198**	mg/L	50.0	27.5	50		12/04/24 15:31	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-19D **Lab ID: 60464294011** Collected: 11/11/24 11:23 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**97.0**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:32	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:32	7440-41-7	
Boron	**9200**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:32	7440-42-8	
Calcium	**32200**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:32	7440-70-2	
Iron	**1840**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:32	7439-89-6	
Lithium	**19.2**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:32	7439-93-2	
Magnesium	**4510**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:32	7439-95-4	
Manganese	**265**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:32	7439-96-5	
Molybdenum	**753**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:32	7439-98-7	
Potassium	**3480**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:32	7440-09-7	
Sodium	**177000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:32	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:10	7440-36-0	
Arsenic	**0.69J**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:10	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:10	7440-47-3	
Selenium	**0.23J**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:10	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**257**	mg/L	20.0	10.5	1		11/25/24 17:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**667**	mg/L	13.3	13.3	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**30.5**	mg/L	20.0	10.5	20		12/04/24 15:58	16887-00-6	
Fluoride	**2.0**	mg/L	0.20	0.12	1		12/04/24 15:45	16984-48-8	
Sulfate	**196**	mg/L	20.0	11.0	20		12/04/24 15:58	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-21D **Lab ID: 60464294012** Collected: 11/12/24 14:30 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**201**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:34	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:34	7440-41-7	
Boron	**2980**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:34	7440-42-8	
Calcium	**156000**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:34	7440-70-2	
Iron	**3810**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:34	7439-89-6	
Lithium	**237**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:34	7439-93-2	
Magnesium	**53600**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:34	7439-95-4	
Manganese	**1160**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:34	7439-96-5	
Molybdenum	**234**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:34	7439-98-7	
Potassium	**13100**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:34	7440-09-7	
Sodium	**502000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:34	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:24	7440-36-0	
Arsenic	**0.72J**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:24	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:24	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:24	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**247**	mg/L	20.0	10.5	1		11/25/24 17:22		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**2090**	mg/L	100	100	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1230**	mg/L	50.0	26.4	50		12/04/24 17:08	16887-00-6	E,M1
Fluoride	**0.25**	mg/L	0.20	0.12	1		12/04/24 16:54	16984-48-8	
Sulfate	**141**	mg/L	50.0	27.5	50		12/04/24 17:08	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-22S **Lab ID: 60464294013** Collected: 11/12/24 14:15 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**148**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:41	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:41	7440-41-7	
Boron	**678**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:41	7440-42-8	
Calcium	**158000**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:41	7440-70-2	
Iron	**3800**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:41	7439-89-6	
Lithium	**44.1**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:41	7439-93-2	
Magnesium	**35400**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:41	7439-95-4	
Manganese	**479**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:41	7439-96-5	
Molybdenum	**10.6J**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:41	7439-98-7	
Potassium	**6710**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:41	7440-09-7	
Sodium	**63800**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:41	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:27	7440-36-0	
Arsenic	**4.2**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:27	7440-38-2	
Chromium	**0.39J**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:27	7440-47-3	
Selenium	**0.66J**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:27	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**502**	mg/L	20.0	10.5	1		11/25/24 17:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**751**	mg/L	13.3	13.3	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**42.2**	mg/L	20.0	10.5	20		12/04/24 18:03	16887-00-6	
Fluoride	**0.24**	mg/L	0.20	0.12	1		12/04/24 17:49	16984-48-8	
Sulfate	**144**	mg/L	20.0	11.0	20		12/04/24 18:03	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-22D **Lab ID: 60464294014** Collected: 11/12/24 11:45 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**81.1**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:43	7440-39-3	
Beryllium	**0.15J**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:43	7440-41-7	
Boron	**8780**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:43	7440-42-8	
Calcium	**22100**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:43	7440-70-2	
Iron	**1170**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:43	7439-89-6	
Lithium	**24.7**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:43	7439-93-2	
Magnesium	**2710**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:43	7439-95-4	
Manganese	**76.4**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:43	7439-96-5	
Molybdenum	**304**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:43	7439-98-7	
Potassium	**3860**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:43	7440-09-7	
Sodium	**178000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:43	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:30	7440-36-0	
Arsenic	**12.8**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:30	7440-38-2	
Chromium	**1.3**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:30	7440-47-3	
Selenium	**0.84J**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:30	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**298**	mg/L	40.0	21.0	2		11/25/24 17:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**613**	mg/L	13.3	13.3	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**44.0**	mg/L	10.0	5.3	10		12/04/24 18:31	16887-00-6	
Fluoride	**2.3**	mg/L	0.20	0.12	1		12/04/24 18:17	16984-48-8	
Sulfate	**104**	mg/L	10.0	5.5	10		12/04/24 18:31	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-DUP-1 **Lab ID: 60464294015** Collected: 11/12/24 00:00 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**99.4**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:44	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:44	7440-41-7	
Boron	**2460**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:44	7440-42-8	
Calcium	**101000**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:44	7440-70-2	
Iron	**550**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:44	7439-89-6	
Lithium	**29.0**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:44	7439-93-2	
Magnesium	**23000**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:44	7439-95-4	
Manganese	**1940**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:44	7439-96-5	
Molybdenum	**107**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:44	7439-98-7	
Potassium	**3970**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:44	7440-09-7	
Sodium	**141000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:44	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.15J**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:33	7440-36-0	
Arsenic	**10.3**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:33	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:33	7440-47-3	
Selenium	**0.89J**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:33	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**361**	mg/L	20.0	10.5	1		11/25/24 17:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**813**	mg/L	13.3	13.3	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**33.2**	mg/L	10.0	5.3	10		12/04/24 18:59	16887-00-6	
Fluoride	**1.0**	mg/L	0.20	0.12	1		12/04/24 18:45	16984-48-8	
Sulfate	**249**	mg/L	50.0	27.5	50		12/05/24 19:31	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-DUP-2 **Lab ID: 60464294016** Collected: 11/12/24 00:00 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**27.7**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:46	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:46	7440-41-7	
Boron	**2060**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:46	7440-42-8	
Calcium	**13900**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:46	7440-70-2	
Iron	**130**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:46	7439-89-6	
Lithium	**6.0J**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:46	7439-93-2	
Magnesium	**902**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:46	7439-95-4	
Manganese	**10.6**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:46	7439-96-5	
Molybdenum	**106**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:46	7439-98-7	
Potassium	**2730**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:46	7440-09-7	
Sodium	**246000**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:46	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.15J**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:40	7440-36-0	
Arsenic	**28.2**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:40	7440-38-2	
Chromium	**0.38J**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:40	7440-47-3	
Selenium	**0.86J**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:40	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**163**	mg/L	20.0	10.5	1		11/25/24 17:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**827**	mg/L	13.3	13.3	1		11/18/24 11:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**136**	mg/L	10.0	5.3	10		12/04/24 19:54	16887-00-6	
Fluoride	**1.6**	mg/L	0.20	0.12	1		12/04/24 19:40	16984-48-8	
Sulfate	**271**	mg/L	50.0	27.5	50		12/05/24 19:44	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-FB-2 **Lab ID: 60464294017** Collected: 11/11/24 13:55 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**<0.64**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:48	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:48	7440-41-7	
Boron	**7.7J**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:48	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:48	7440-70-2	
Iron	**<9.1**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:48	7439-89-6	
Lithium	**<3.7**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:48	7439-93-2	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:48	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:48	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:48	7439-98-7	
Potassium	**<69.7**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:48	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:48	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:43	7440-36-0	
Arsenic	**<0.13**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:43	7440-38-2	
Chromium	**<0.30**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:43	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:43	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		11/25/24 18:24		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**<5.0**	mg/L	5.0	5.0	1		11/18/24 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.53**	mg/L	1.0	0.53	1		12/04/24 20:08	16887-00-6	
Fluoride	**0.16J**	mg/L	0.20	0.12	1		12/04/24 20:08	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		12/04/24 20:08	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-05S **Lab ID: 60464294018** Collected: 11/13/24 11:55 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**166**	ug/L	5.0	0.64	1	11/18/24 09:30	11/27/24 15:43	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/18/24 09:30	11/27/24 15:43	7440-41-7	
Boron	**4090**	ug/L	100	6.4	1	11/18/24 09:30	11/27/24 15:43	7440-42-8	
Calcium	**66900**	ug/L	200	26.9	1	11/18/24 09:30	11/27/24 15:43	7440-70-2	
Iron	**9470**	ug/L	50.0	9.1	1	11/18/24 09:30	11/27/24 15:43	7439-89-6	
Lithium	**16.7**	ug/L	10.0	3.7	1	11/18/24 09:30	11/27/24 15:43	7439-93-2	
Magnesium	**22000**	ug/L	50.0	20.1	1	11/18/24 09:30	11/27/24 15:43	7439-95-4	
Manganese	**246**	ug/L	5.0	0.39	1	11/18/24 09:30	11/27/24 15:43	7439-96-5	
Molybdenum	**2.4J**	ug/L	20.0	1.0	1	11/18/24 09:30	11/27/24 15:43	7439-98-7	
Potassium	**5930**	ug/L	500	69.7	1	11/18/24 09:30	11/27/24 15:43	7440-09-7	
Sodium	**24800**	ug/L	500	115	1	11/18/24 09:30	11/27/24 15:43	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:19	7440-36-0	
Arsenic	**168**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:19	7440-38-2	
Chromium	**18.6**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:19	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:19	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**303**	mg/L	40.0	21.0	2		11/27/24 16:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**399**	mg/L	10.0	10.0	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**23.9**	mg/L	5.0	2.6	5		12/10/24 21:13	16887-00-6	
Fluoride	**0.28**	mg/L	0.20	0.12	1		12/06/24 11:45	16984-48-8	M1
Sulfate	**13.6**	mg/L	5.0	2.8	5		12/10/24 21:13	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-21S **Lab ID: 60464294019** Collected: 11/13/24 13:58 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**217**	ug/L	5.0	0.64	1	11/18/24 09:30	11/27/24 15:50	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/18/24 09:30	11/27/24 15:50	7440-41-7	
Boron	**126**	ug/L	100	6.4	1	11/18/24 09:30	11/27/24 15:50	7440-42-8	
Calcium	**130000**	ug/L	200	26.9	1	11/18/24 09:30	11/27/24 15:50	7440-70-2	
Iron	**2340**	ug/L	50.0	9.1	1	11/18/24 09:30	11/27/24 15:50	7439-89-6	
Lithium	**12.9**	ug/L	10.0	3.7	1	11/18/24 09:30	11/27/24 15:50	7439-93-2	
Magnesium	**26600**	ug/L	50.0	20.1	1	11/18/24 09:30	11/27/24 15:50	7439-95-4	
Manganese	**594**	ug/L	5.0	0.39	1	11/18/24 09:30	11/27/24 15:50	7439-96-5	
Molybdenum	**1.2J**	ug/L	20.0	1.0	1	11/18/24 09:30	11/27/24 15:50	7439-98-7	
Potassium	**3560**	ug/L	500	69.7	1	11/18/24 09:30	11/27/24 15:50	7440-09-7	
Sodium	**12900**	ug/L	500	115	1	11/18/24 09:30	11/27/24 15:50	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:21	7440-36-0	
Arsenic	**8.3**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:21	7440-38-2	
Chromium	**0.39J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:21	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:21	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**430**	mg/L	20.0	10.5	1		11/27/24 16:12		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**489**	mg/L	10.0	10.0	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.0**	mg/L	1.0	0.53	1		12/06/24 12:24	16887-00-6	
Fluoride	**0.28**	mg/L	0.20	0.12	1		12/06/24 12:24	16984-48-8	
Sulfate	**23.6**	mg/L	5.0	2.8	5		12/06/24 13:02	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-21I **Lab ID: 60464294020** Collected: 11/13/24 11:05 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**68.8**	ug/L	5.0	0.64	1	11/18/24 09:30	11/27/24 15:51	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/18/24 09:30	11/27/24 15:51	7440-41-7	
Boron	**5840**	ug/L	100	6.4	1	11/18/24 09:30	11/27/24 15:51	7440-42-8	
Calcium	**30500**	ug/L	200	26.9	1	11/18/24 09:30	11/27/24 15:51	7440-70-2	
Iron	**422**	ug/L	50.0	9.1	1	11/18/24 09:30	11/27/24 15:51	7439-89-6	
Lithium	**20.3**	ug/L	10.0	3.7	1	11/18/24 09:30	11/27/24 15:51	7439-93-2	
Magnesium	**3680**	ug/L	50.0	20.1	1	11/18/24 09:30	11/27/24 15:51	7439-95-4	
Manganese	**73.3**	ug/L	5.0	0.39	1	11/18/24 09:30	11/27/24 15:51	7439-96-5	
Molybdenum	**414**	ug/L	20.0	1.0	1	11/18/24 09:30	11/27/24 15:51	7439-98-7	
Potassium	**5850**	ug/L	500	69.7	1	11/18/24 09:30	11/27/24 15:51	7440-09-7	
Sodium	**130000**	ug/L	500	115	1	11/18/24 09:30	11/27/24 15:51	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:24	7440-36-0	
Arsenic	**6.3**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:24	7440-38-2	
Chromium	**3.2**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:24	7440-47-3	
Selenium	**0.43J**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:24	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**203**	mg/L	20.0	10.5	1		11/27/24 16:18		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**492**	mg/L	10.0	10.0	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**80.0**	mg/L	20.0	10.5	20		12/06/24 13:28	16887-00-6	
Fluoride	**1.1**	mg/L	0.20	0.12	1		12/06/24 13:15	16984-48-8	
Sulfate	**83.6**	mg/L	20.0	11.0	20		12/06/24 13:28	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-29S **Lab ID: 60464294021** Collected: 11/13/24 16:15 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**320**	ug/L	5.0	0.64	1	11/18/24 09:30	12/04/24 12:46	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/18/24 09:30	12/04/24 12:46	7440-41-7	
Boron	**70.1J**	ug/L	100	6.4	1	11/18/24 09:30	12/04/24 12:46	7440-42-8	
Calcium	**120000**	ug/L	200	26.9	1	11/18/24 09:30	12/04/24 12:46	7440-70-2	M1
Iron	**5100**	ug/L	50.0	9.1	1	11/18/24 09:30	12/04/24 12:46	7439-89-6	
Lithium	**18.3**	ug/L	10.0	3.7	1	11/18/24 09:30	12/04/24 12:46	7439-93-2	
Magnesium	**25900**	ug/L	50.0	20.1	1	11/18/24 09:30	12/04/24 12:46	7439-95-4	
Manganese	**357**	ug/L	5.0	0.39	1	11/18/24 09:30	12/04/24 12:46	7439-96-5	
Molybdenum	**<1.0**	ug/L	20.0	1.0	1	11/18/24 09:30	12/04/24 12:46	7439-98-7	
Potassium	**4870**	ug/L	500	69.7	1	11/18/24 09:30	12/04/24 12:46	7440-09-7	
Sodium	**13800**	ug/L	500	115	1	11/18/24 09:30	12/04/24 12:46	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:29	7440-36-0	
Arsenic	**19.6**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:29	7440-38-2	
Chromium	**0.51J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:29	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:29	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**427**	mg/L	20.0	10.5	1		11/27/24 16:24		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**482**	mg/L	10.0	10.0	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**17.3**	mg/L	5.0	2.6	5		12/06/24 13:54	16887-00-6	
Fluoride	**0.26**	mg/L	0.20	0.12	1		12/06/24 13:41	16984-48-8	
Sulfate	**10.8**	mg/L	1.0	0.55	1		12/06/24 13:41	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-29D **Lab ID: 60464294022** Collected: 11/13/24 14:56 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**117**	ug/L	5.0	0.64	1	11/18/24 09:30	12/04/24 12:49	7440-39-3	
Beryllium	**0.13J**	ug/L	1.0	0.12	1	11/18/24 09:30	12/04/24 12:49	7440-41-7	
Boron	**113**	ug/L	100	6.4	1	11/18/24 09:30	12/04/24 12:49	7440-42-8	
Calcium	**84800**	ug/L	200	26.9	1	11/18/24 09:30	12/04/24 12:49	7440-70-2	
Iron	**2620**	ug/L	50.0	9.1	1	11/18/24 09:30	12/04/24 12:49	7439-89-6	
Lithium	**67.1**	ug/L	10.0	3.7	1	11/18/24 09:30	12/04/24 12:49	7439-93-2	
Magnesium	**30500**	ug/L	50.0	20.1	1	11/18/24 09:30	12/04/24 12:49	7439-95-4	
Manganese	**77.8**	ug/L	5.0	0.39	1	11/18/24 09:30	12/04/24 12:49	7439-96-5	
Molybdenum	**1.1J**	ug/L	20.0	1.0	1	11/18/24 09:30	12/04/24 12:49	7439-98-7	
Potassium	**6700**	ug/L	500	69.7	1	11/18/24 09:30	12/04/24 12:49	7440-09-7	
Sodium	**94600**	ug/L	500	115	1	11/18/24 09:30	12/04/24 12:49	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:32	7440-36-0	
Arsenic	**0.86J**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:32	7440-38-2	
Chromium	**0.34J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:32	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:32	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**300**	mg/L	20.0	10.5	1		11/27/24 16:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**647**	mg/L	13.3	13.3	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**226**	mg/L	20.0	10.5	20		12/10/24 21:51	16887-00-6	
Fluoride	**0.25**	mg/L	0.20	0.12	1		12/06/24 14:19	16984-48-8	
Sulfate	**34.4**	mg/L	10.0	5.5	10		12/06/24 14:32	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-30S **Lab ID: 60464294023** Collected: 11/13/24 09:47 Received: 11/15/24 05:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**106**	ug/L	5.0	0.64	1	11/18/24 09:30	12/04/24 12:51	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/18/24 09:30	12/04/24 12:51	7440-41-7	
Boron	**828**	ug/L	100	6.4	1	11/18/24 09:30	12/04/24 12:51	7440-42-8	
Calcium	**170000**	ug/L	200	26.9	1	11/18/24 09:30	12/04/24 12:51	7440-70-2	
Iron	**153**	ug/L	50.0	9.1	1	11/18/24 09:30	12/04/24 12:51	7439-89-6	
Lithium	**44.9**	ug/L	10.0	3.7	1	11/18/24 09:30	12/04/24 12:51	7439-93-2	
Magnesium	**28500**	ug/L	50.0	20.1	1	11/18/24 09:30	12/04/24 12:51	7439-95-4	
Manganese	**29.2**	ug/L	5.0	0.39	1	11/18/24 09:30	12/04/24 12:51	7439-96-5	
Molybdenum	**1.2J**	ug/L	20.0	1.0	1	11/18/24 09:30	12/04/24 12:51	7439-98-7	
Potassium	**5920**	ug/L	500	69.7	1	11/18/24 09:30	12/04/24 12:51	7440-09-7	
Sodium	**51800**	ug/L	500	115	1	11/18/24 09:30	12/04/24 12:51	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	12/03/24 09:30	12/09/24 14:34	7440-36-0	
Arsenic	**1.0**	ug/L	1.0	0.13	1	12/03/24 09:30	12/09/24 14:34	7440-38-2	
Chromium	**0.30J**	ug/L	1.0	0.30	1	12/03/24 09:30	12/09/24 14:34	7440-47-3	
Selenium	**2.5**	ug/L	1.0	0.18	1	12/03/24 09:30	12/09/24 14:34	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**447**	mg/L	20.0	10.5	1		11/27/24 16:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**703**	mg/L	13.3	13.3	1		11/19/24 12:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**38.2**	mg/L	10.0	5.3	10		12/06/24 14:58	16887-00-6	
Fluoride	**0.29**	mg/L	0.20	0.12	1		12/06/24 14:45	16984-48-8	
Sulfate	**128**	mg/L	10.0	5.5	10		12/06/24 14:58	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 915896
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294001, 60464294002, 60464294003

METHOD BLANK: 3626529 Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/27/24 15:08	
Beryllium	ug/L	<0.12	1.0	0.12	11/27/24 15:08	
Boron	ug/L	<6.4	100	6.4	11/27/24 15:08	
Calcium	ug/L	<26.9	200	26.9	11/27/24 15:08	
Iron	ug/L	<9.1	50.0	9.1	11/27/24 15:08	
Lithium	ug/L	<3.7	10.0	3.7	11/27/24 15:08	
Magnesium	ug/L	<20.1	50.0	20.1	11/27/24 15:08	
Manganese	ug/L	<0.39	5.0	0.39	11/27/24 15:08	
Molybdenum	ug/L	<1.0	20.0	1.0	11/27/24 15:08	
Potassium	ug/L	<69.7	500	69.7	11/27/24 15:08	
Sodium	ug/L	<115	500	115	11/27/24 15:08	

LABORATORY CONTROL SAMPLE: 3626530

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	985	98	85-115	
Beryllium	ug/L	1000	983	98	85-115	
Boron	ug/L	1000	913	91	85-115	
Calcium	ug/L	10000	9810	98	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lithium	ug/L	1000	988	99	85-115	
Magnesium	ug/L	10000	9380	94	85-115	
Manganese	ug/L	1000	1020	102	85-115	
Molybdenum	ug/L	1000	997	100	85-115	
Potassium	ug/L	10000	9500	95	85-115	
Sodium	ug/L	10000	9750	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626531 3626532

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	119	1000	1000	1150	1140	103	102	70-130	1	20	
Beryllium	ug/L	<0.12	1000	1000	1060	1050	106	105	70-130	0	20	
Boron	ug/L	368	1000	1000	1340	1340	97	97	70-130	0	20	
Calcium	ug/L	116000	10000	10000	130000	132000	136	157	70-130	2	20	M1
Iron	ug/L	48.8J	10000	10000	10600	10400	106	104	70-130	2	20	
Lithium	ug/L	25.2	1000	1000	1060	1060	104	103	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626531 3626532

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	29500	10000	10000	40100	40500	106	110	70-130	1	20	
Manganese	ug/L	8.9	1000	1000	1050	1050	105	104	70-130	0	20	
Molybdenum	ug/L	12.4J	1000	1000	1050	1060	104	105	70-130	0	20	
Potassium	ug/L	2700	10000	10000	12800	13000	102	103	70-130	1	20	
Sodium	ug/L	18400	10000	10000	29000	29000	106	107	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916309
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017

METHOD BLANK: 3627818 Matrix: Water
Associated Lab Samples: 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/22/24 20:59	
Beryllium	ug/L	<0.12	1.0	0.12	11/22/24 20:59	
Boron	ug/L	<6.4	100	6.4	11/22/24 20:59	
Calcium	ug/L	<26.9	200	26.9	11/22/24 20:59	
Iron	ug/L	11.0J	50.0	9.1	11/22/24 20:59	
Lithium	ug/L	<3.7	10.0	3.7	11/22/24 20:59	
Magnesium	ug/L	<20.1	50.0	20.1	11/22/24 20:59	
Manganese	ug/L	<0.39	5.0	0.39	11/22/24 20:59	
Molybdenum	ug/L	<1.0	20.0	1.0	11/22/24 20:59	
Potassium	ug/L	<69.7	500	69.7	11/22/24 20:59	
Sodium	ug/L	<115	500	115	11/22/24 20:59	

LABORATORY CONTROL SAMPLE: 3627819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	982	98	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	921	92	85-115	
Calcium	ug/L	10000	9870	99	85-115	
Iron	ug/L	10000	9980	100	85-115	
Lithium	ug/L	1000	988	99	85-115	
Magnesium	ug/L	10000	9510	95	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9390	94	85-115	
Sodium	ug/L	10000	9560	96	85-115	

MATRIX SPIKE SAMPLE: 3627820

Parameter	Units	60464293006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	297	1000	1300	100	70-130	
Beryllium	ug/L	<0.12	1000	1030	103	70-130	
Boron	ug/L	1880	1000	2860	99	70-130	
Calcium	ug/L	83700	10000	94600	109	70-130	
Iron	ug/L	18000	10000	28500	105	70-130	
Lithium	ug/L	28.8	1000	1040	101	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

MATRIX SPIKE SAMPLE: 3627820

Parameter	Units	60464293006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Magnesium	ug/L	23200	10000	33000	98	70-130	
Manganese	ug/L	366	1000	1400	104	70-130	
Molybdenum	ug/L	35.7	1000	1070	104	70-130	
Potassium	ug/L	5390	10000	15400	100	70-130	
Sodium	ug/L	18200	10000	27900	98	70-130	

MATRIX SPIKE SAMPLE: 3627822

Parameter	Units	60464294009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	242	1000	1230	99	70-130	
Beryllium	ug/L	<0.12	1000	1040	104	70-130	
Boron	ug/L	168	1000	1100	93	70-130	
Calcium	ug/L	110000	10000	120000	97	70-130	
Iron	ug/L	4130	10000	14200	101	70-130	
Lithium	ug/L	22.3	1000	1040	101	70-130	
Magnesium	ug/L	18000	10000	27500	95	70-130	
Manganese	ug/L	1100	1000	2120	103	70-130	
Molybdenum	ug/L	2.6J	1000	1030	103	70-130	
Potassium	ug/L	4600	10000	14600	100	70-130	
Sodium	ug/L	6530	10000	16300	98	70-130	

SAMPLE DUPLICATE: 3635086

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Barium	ug/L	297	312	5	20	
Beryllium	ug/L	<0.12	<0.12		20	
Boron	ug/L	1880	1890	1	20	
Calcium	ug/L	83700	84500	1	20	
Iron	ug/L	18000	18400	2	19	
Lithium	ug/L	28.8	28.5	1	20	
Magnesium	ug/L	23200	23400	1	20	
Manganese	ug/L	366	370	1	12	
Molybdenum	ug/L	35.7	35.6	0	20	
Potassium	ug/L	5390	5380	0	20	
Sodium	ug/L	18200	18400	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916731
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

METHOD BLANK: 3630013 Matrix: Water
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/27/24 15:29	
Beryllium	ug/L	<0.12	1.0	0.12	11/27/24 15:29	
Boron	ug/L	<6.4	100	6.4	11/27/24 15:29	
Calcium	ug/L	<26.9	200	26.9	11/27/24 15:29	
Iron	ug/L	<9.1	50.0	9.1	11/27/24 15:29	
Lithium	ug/L	<3.7	10.0	3.7	11/27/24 15:29	
Magnesium	ug/L	<20.1	50.0	20.1	11/27/24 15:29	
Manganese	ug/L	<0.39	5.0	0.39	11/27/24 15:29	
Molybdenum	ug/L	<1.0	20.0	1.0	11/27/24 15:29	
Potassium	ug/L	<69.7	500	69.7	11/27/24 15:29	
Sodium	ug/L	<115	500	115	11/27/24 15:29	

LABORATORY CONTROL SAMPLE: 3630019

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	982	98	85-115	
Beryllium	ug/L	1000	991	99	85-115	
Boron	ug/L	1000	906	91	85-115	
Calcium	ug/L	10000	9760	98	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lithium	ug/L	1000	982	98	85-115	
Magnesium	ug/L	10000	9330	93	85-115	
Manganese	ug/L	1000	1010	101	85-115	
Molybdenum	ug/L	1000	982	98	85-115	
Potassium	ug/L	10000	9480	95	85-115	
Sodium	ug/L	10000	9680	97	85-115	

MATRIX SPIKE SAMPLE: 3629944

Parameter	Units	60464294021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	320	1000	1330	101	70-130	
Beryllium	ug/L	<0.12	1000	1060	106	70-130	
Boron	ug/L	70.1J	1000	1030	96	70-130	
Calcium	ug/L	120000	10000	133000	134	70-130	M1
Iron	ug/L	5100	10000	15900	108	70-130	
Lithium	ug/L	18.3	1000	1040	102	70-130	
Magnesium	ug/L	25900	10000	36200	103	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

MATRIX SPIKE SAMPLE: 3629944

Parameter	Units	60464294021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Manganese	ug/L	357	1000	1390	103	70-130	
Molybdenum	ug/L	<1.0	1000	1030	103	70-130	
Potassium	ug/L	4870	10000	14800	100	70-130	
Sodium	ug/L	13800	10000	24200	104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3630020 3630021

Parameter	Units	60464667005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	131	1000	1000	1140	1120	101	99	70-130	1	20	
Beryllium	ug/L	ND	1000	1000	1040	1020	104	102	70-130	1	20	
Boron	ug/L	140	1000	1000	1070	1080	93	94	70-130	1	20	
Calcium	ug/L	63600	10000	10000	72800	72700	92	91	70-130	0	20	
Iron	ug/L	895	10000	10000	11500	11200	106	103	70-130	3	20	
Lithium	ug/L	48.8	1000	1000	1050	1050	100	100	70-130	0	20	
Magnesium	ug/L	36200	10000	10000	45700	45600	95	93	70-130	0	20	
Manganese	ug/L	31.6	1000	1000	1050	1040	102	101	70-130	1	20	
Molybdenum	ug/L	ND	1000	1000	1030	1020	102	101	70-130	1	20	
Potassium	ug/L	21000	10000	10000	30600	31100	96	101	70-130	2	20	
Sodium	ug/L	280000	10000	10000	287000	289000	73	90	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916118
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294001, 60464294002, 60464294003

METHOD BLANK: 3627082 Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	11/27/24 16:10	
Arsenic	ug/L	<0.13	1.0	0.13	11/27/24 16:10	
Chromium	ug/L	<0.30	1.0	0.30	11/27/24 16:10	
Selenium	ug/L	<0.18	1.0	0.18	11/27/24 16:10	

LABORATORY CONTROL SAMPLE: 3627083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.5	99	85-115	
Arsenic	ug/L	40	38.8	97	85-115	
Chromium	ug/L	40	41.4	104	85-115	
Selenium	ug/L	40	40.4	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3627084 3627085

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.4	39.1	98	98	70-130	1	20	
Arsenic	ug/L	1.4	40	40	39.9	39.4	96	95	70-130	1	20	
Chromium	ug/L	0.32J	40	40	40.3	40.1	100	100	70-130	0	20	
Selenium	ug/L	0.43J	40	40	38.2	38.2	94	94	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916373
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294006, 60464294007, 60464294008, 60464294009, 60464294010

METHOD BLANK: 3628117 Matrix: Water
Associated Lab Samples: 60464294006, 60464294007, 60464294008, 60464294009, 60464294010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	11/27/24 16:39	
Arsenic	ug/L	<0.13	1.0	0.13	11/27/24 16:39	
Chromium	ug/L	<0.30	1.0	0.30	11/27/24 16:39	
Selenium	ug/L	<0.18	1.0	0.18	11/27/24 16:39	

LABORATORY CONTROL SAMPLE: 3628118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.4	101	85-115	
Arsenic	ug/L	40	39.6	99	85-115	
Chromium	ug/L	40	42.7	107	85-115	
Selenium	ug/L	40	41.0	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628119 3628120

Parameter	Units	60464293006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.3	44.3	98	111	70-130	12	20	
Arsenic	ug/L	109	40	40	146	165	93	141	70-130	12	20	M1
Chromium	ug/L	<0.30	40	40	40.3	45.7	100	114	70-130	13	20	
Selenium	ug/L	<0.18	40	40	38.1	43.0	95	107	70-130	12	20	

MATRIX SPIKE SAMPLE: 3628121

Parameter	Units	60464294010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	0.28J	40	40.2	100	70-130	
Arsenic	ug/L	42.9	40	82.4	99	70-130	
Chromium	ug/L	0.54J	40	45.6	113	70-130	
Selenium	ug/L	0.72J	40	38.2	94	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916374
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017

METHOD BLANK: 3628124 Matrix: Water
Associated Lab Samples: 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	12/03/24 12:05	
Arsenic	ug/L	<0.13	1.0	0.13	12/03/24 12:05	
Chromium	ug/L	<0.30	1.0	0.30	12/03/24 12:05	
Selenium	ug/L	<0.18	1.0	0.18	12/03/24 12:05	

LABORATORY CONTROL SAMPLE: 3628125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.5	101	85-115	
Arsenic	ug/L	40	40.2	100	85-115	
Chromium	ug/L	40	42.2	106	85-115	
Selenium	ug/L	40	40.8	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628126 3628127

Parameter	Units	60464294011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.4	40.3	98	101	70-130	2	20	
Arsenic	ug/L	0.69J	40	40	40.2	41.1	99	101	70-130	2	20	
Chromium	ug/L	<0.30	40	40	34.3	35.3	85	88	70-130	3	20	
Selenium	ug/L	0.23J	40	40	38.2	38.3	95	95	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 918235
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

METHOD BLANK: 3636110 Matrix: Water
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	12/09/24 13:36	
Arsenic	ug/L	<0.13	1.0	0.13	12/09/24 13:36	
Chromium	ug/L	<0.30	1.0	0.30	12/09/24 13:36	
Selenium	ug/L	<0.18	1.0	0.18	12/09/24 13:36	

LABORATORY CONTROL SAMPLE: 3636111

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.1	103	85-115	
Arsenic	ug/L	40	40.8	102	85-115	
Chromium	ug/L	40	41.9	105	85-115	
Selenium	ug/L	40	40.9	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3636112 3636113

Parameter	Units	60464293012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.7	39.5	99	99	70-130	1	20	
Arsenic	ug/L	7.2	40	40	48.4	49.1	103	105	70-130	2	20	
Chromium	ug/L	0.35J	40	40	44.0	44.0	109	109	70-130	0	20	
Selenium	ug/L	<0.18	40	40	39.9	39.4	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916772 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294001, 60464294002, 60464294003

METHOD BLANK: 3630090 Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/18/24 11:46	

LABORATORY CONTROL SAMPLE: 3630091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	482	96	90-110	

SAMPLE DUPLICATE: 3630092

Parameter	Units	60464022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	142	143	0	10	

SAMPLE DUPLICATE: 3630093

Parameter	Units	60464294002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	423	437	3	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 917608
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016

METHOD BLANK: 3633970 Matrix: Water
Associated Lab Samples: 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/25/24 15:10	

LABORATORY CONTROL SAMPLE: 3633971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	490	98	90-110	

SAMPLE DUPLICATE: 3633972

Parameter	Units	60464421003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	276	275	0	10	

SAMPLE DUPLICATE: 3633973

Parameter	Units	60464294007 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	162	164	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 917609
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464294017

METHOD BLANK: 3633974 Matrix: Water
Associated Lab Samples: 60464294017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/25/24 18:14	

LABORATORY CONTROL SAMPLE: 3633975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	501	100	90-110	

SAMPLE DUPLICATE: 3633976

Parameter	Units	60464294017 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	<10.5		10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 917790
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464294006

METHOD BLANK: 3634573 Matrix: Water
Associated Lab Samples: 60464294006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/26/24 16:21	

LABORATORY CONTROL SAMPLE: 3634574

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	486	97	90-110	

SAMPLE DUPLICATE: 3634575

Parameter	Units	60464465003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	1360	1360	0	10	

SAMPLE DUPLICATE: 3634576

Parameter	Units	60464559003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	96.1	98.5	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 917909 — Analysis Method: SM 2320B
QC Batch Method: SM 2320B — Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

METHOD BLANK: 3634992 — Matrix: Water
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/27/24 15:47	

LABORATORY CONTROL SAMPLE: 3634993

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	480	96	90-110	

SAMPLE DUPLICATE: 3634994

Parameter	Units	60464293013 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	343	347	1	10	

SAMPLE DUPLICATE: 3634995

Parameter	Units	60464699001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	337	339	1	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916345
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294001, 60464294002, 60464294003

METHOD BLANK: 3627980 Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/14/24 13:46	

LABORATORY CONTROL SAMPLE: 3627981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	970	97	80-120	

SAMPLE DUPLICATE: 3627982

Parameter	Units	60464294002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	481	467	3	10	

SAMPLE DUPLICATE: 3627983

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	418	427	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916760
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016

METHOD BLANK: 3630052 Matrix: Water
Associated Lab Samples: 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/18/24 11:33	

LABORATORY CONTROL SAMPLE: 3630053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3630054

Parameter	Units	60464421003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	928	956	3	10	

SAMPLE DUPLICATE: 3630055

Parameter	Units	60464294007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	828	848	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916764
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294017

METHOD BLANK: 3630062 Matrix: Water
Associated Lab Samples: 60464294017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/18/24 11:37	

LABORATORY CONTROL SAMPLE: 3630063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 3630064

Parameter	Units	60464294017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	<5.0	<5.0		10	

SAMPLE DUPLICATE: 3630065

Parameter	Units	60464421013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	856	832	3	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916953
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294006

METHOD BLANK: 3630618 Matrix: Water
Associated Lab Samples: 60464294006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/19/24 12:12	

LABORATORY CONTROL SAMPLE: 3630619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3630620

Parameter	Units	60464421023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1440	1510	4	10	

SAMPLE DUPLICATE: 3630621

Parameter	Units	60464438002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	311	318	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 916954
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

METHOD BLANK: 3630622 Matrix: Water
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/19/24 12:16	

LABORATORY CONTROL SAMPLE: 3630623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 3630624

Parameter	Units	60464559003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	140	140	0	10	

SAMPLE DUPLICATE: 3630625

Parameter	Units	60464294022 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	647	664	3	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 918071
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294001, 60464294002, 60464294003

METHOD BLANK: 3635653 Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	12/03/24 09:37	
Fluoride	mg/L	<0.12	0.20	0.12	12/03/24 09:37	
Sulfate	mg/L	<0.55	1.0	0.55	12/03/24 09:37	

LABORATORY CONTROL SAMPLE: 3635654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3635655 3635656

Parameter	Units	60464294002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.8	5	5	9.7	9.1	137	124	80-120	7	15	M1
Fluoride	mg/L	0.31	2.5	2.5	4.6	4.2	172	157	80-120	9	15	M1
Sulfate	mg/L	36.0	25	25	61.7	70.1	103	137	80-120	13	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3635658 3635659

Parameter	Units	60465540009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.7	25	25	30.9	31.0	85	85	80-120	0	15	
Fluoride	mg/L	2.5	12.5	12.5	15.7	15.8	106	106	80-120	1	15	
Sulfate	mg/L	19.5	25	25	43.9	43.1	97	94	80-120	2	15	

SAMPLE DUPLICATE: 3635657

Parameter	Units	60464294002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	2.8	2.9	1	15	
Fluoride	mg/L	0.31	0.31	3	15	
Sulfate	mg/L	36.0	36.3	1	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

SAMPLE DUPLICATE: 3635660

Parameter	Units	60465540009 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	9.7	9.7	1	15	
Fluoride	mg/L	2.5	2.5	1	15	
Sulfate	mg/L	19.5	19.9	2	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 918350
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017

METHOD BLANK: 3636670 Matrix: Water
Associated Lab Samples: 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	12/04/24 02:38	
Fluoride	mg/L	<0.12	0.20	0.12	12/04/24 02:38	
Sulfate	mg/L	<0.55	1.0	0.55	12/04/24 02:38	

LABORATORY CONTROL SAMPLE: 3636671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3636672 3636673

Parameter	Units	60464293006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	20.2	25	25	41.9	42.1	87	88	80-120	0	15	
Fluoride	mg/L	0.22	2.5	2.5	3.1	3.3	116	123	80-120	5	15	M1
Sulfate	mg/L	97.2	25	25	123	123	103	102	80-120	0	15	E

MATRIX SPIKE SAMPLE: 3636675

Parameter	Units	60464294012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1230	250	1390	66	80-120	E,M1
Fluoride	mg/L	0.25	2.5	3.1	114	80-120	
Sulfate	mg/L	141	250	386	98	80-120	

SAMPLE DUPLICATE: 3636674

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	20.2	20.1	1	15	
Fluoride	mg/L	0.22	0.23	5	15	
Sulfate	mg/L	97.2	96.6	1	15	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 918465
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

METHOD BLANK: 3637242 Matrix: Water
Associated Lab Samples: 60464294018, 60464294019, 60464294020, 60464294021, 60464294022, 60464294023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	12/06/24 11:19	
Fluoride	mg/L	<0.12	0.20	0.12	12/06/24 11:19	
Sulfate	mg/L	<0.55	1.0	0.55	12/06/24 11:19	

LABORATORY CONTROL SAMPLE: 3637243

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	93	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3637244 3637245

Parameter	Units	60464294018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	23.9	25	25	44.9	44.8	84	84	80-120	0	15	
Fluoride	mg/L	0.28	2.5	2.5	3.4	3.7	126	135	80-120	6	15	M1
Sulfate	mg/L	13.6	25	25	35.0	35.1	86	86	80-120	0	15	

MATRIX SPIKE SAMPLE: 3637246

Parameter	Units	60465234003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2080	1000	3110	103	80-120	
Fluoride	mg/L	1.2	12.5	12.4	89	80-120	
Sulfate	mg/L	113	50	152	79	80-120	M1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-10S **Lab ID: 60464294001** Collected: 11/08/24 09:56 Received: 11/09/24 10:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.518 ± 0.590 (0.960) C:NA T:92%**	pCi/L	12/12/24 14:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.07 ± 0.600 (1.12) C:67% T:84%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-16S **Lab ID: 60464294002** Collected: 11/08/24 13:16 Received: 11/09/24 10:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.209 ± 0.411 (0.728) C:NA T:97%**	pCi/L	12/12/24 14:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.607 ± 0.408 (0.777) C:73% T:89%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-FB-1 **Lab ID: 60464294003** Collected: 11/08/24 09:46 Received: 11/09/24 10:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.602 (1.16) C:NA T:96%**	pCi/L	12/12/24 14:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.561 ± 0.341 (0.616) C:73% T:93%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-MS-1 **Lab ID: 60464294004** Collected: 11/08/24 13:16 Received: 11/09/24 10:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**139.15 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/12/24 14:52	13982-63-3	1e
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**72.88 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-MSD-1 **Lab ID: 60464294005** Collected: 11/08/24 13:16 Received: 11/09/24 10:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**106.72 %REC 26.38RPD ± NA (NA) C:NA T:NA**	pCi/L	12/12/24 14:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**76.92 %REC 5.39RPD ± NA (NA) C:NA T:NA**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-17S **Lab ID: 60464294006** Collected: 11/12/24 10:24 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.959 ± 0.954 (2.01) C:NA T:85%**	pCi/L	12/12/24 14:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.16 ± 0.624 (1.15) C:66% T:87%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-17I **Lab ID: 60464294007** Collected: 11/12/24 11:26 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.288 ± 1.79 (3.31) C:NA T:86%**	pCi/L	12/12/24 14:13	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.67 ± 1.02 (1.92) C:67% T:93%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-17D **Lab ID: 60464294008** Collected: 11/11/24 13:32 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.261 ± 0.789 (1.57) C:NA T:81%**	pCi/L	12/12/24 14:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.570 (1.03) C:71% T:84%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-19S **Lab ID: 60464294009** Collected: 11/11/24 09:45 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.695 ± 0.573 (0.828) C:NA T:89%**	pCi/L	12/12/24 14:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0862 ± 0.444 (1.01) C:72% T:88%**	pCi/L	12/10/24 14:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-19I **Lab ID: 60464294010** Collected: 11/11/24 10:31 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.566 ± 1.18 (2.56) C:NA T:94%**	pCi/L	12/12/24 14:27	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.03 ± 0.870 (1.76) C:73% T:92%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-19D **Lab ID: 60464294011** Collected: 11/11/24 11:23 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.353 ± 0.653 (1.15) C:NA T:89%**	pCi/L	12/12/24 14:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.09 ± 0.489 (0.813) C:70% T:94%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-21D **Lab ID: 60464294012** Collected: 11/12/24 14:30 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**1.18 ± 1.02 (1.61) C:NA T:85%**	pCi/L	12/12/24 14:27	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.85 ± 0.664 (0.982) C:64% T:86%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-22S **Lab ID: 60464294013** Collected: 11/12/24 14:15 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**1.03 ± 0.876 (1.34) C:NA T:86%**	pCi/L	12/12/24 14:27	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.729 ± 0.568 (1.14) C:64% T:86%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-22D **Lab ID: 60464294014** Collected: 11/12/24 11:45 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0703 ± 0.925 (1.72) C:NA T:93%**	pCi/L	12/12/24 14:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.476 ± 0.554 (1.17) C:64% T:86%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-DUP-1 **Lab ID: 60464294015** Collected: 11/12/24 00:00 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.185 ± 0.715 (1.31) C:NA T:89%**	pCi/L	12/12/24 14:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.18 ± 0.549 (0.936) C:65% T:88%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-DUP-2 **Lab ID: 60464294016** Collected: 11/12/24 00:00 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.795 (1.50) C:NA T:87%**	pCi/L	12/12/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.740 ± 0.500 (0.972) C:70% T:88%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-CA-FB-2 **Lab ID: 60464294017** Collected: 11/11/24 13:55 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0574 ± 0.515 (0.999) C:NA T:91%**	pCi/L	12/12/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.905 ± 0.588 (1.14) C:69% T:89%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-05S **Lab ID: 60464294018** Collected: 11/13/24 11:55 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.245 ± 0.612 (1.27) C:NA T:95%**	pCi/L	12/12/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.112 ± 0.433 (0.977) C:66% T:90%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-21S **Lab ID: 60464294019** Collected: 11/13/24 13:58 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.408 (0.835) C:NA T:95%**	pCi/L	12/12/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.12 ± 0.520 (0.878) C:66% T:91%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-21I **Lab ID: 60464294020** Collected: 11/13/24 11:05 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.329 ± 0.505 (0.869) C:NA T:94%**	pCi/L	12/12/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.01 ± 0.550 (0.987) C:60% T:89%**	pCi/L	12/10/24 14:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-29S **Lab ID: 60464294021** Collected: 11/13/24 16:15 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.121 ± 0.530 (1.10) C:NA T:86%**	pCi/L	12/12/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.359 ± 0.349 (0.715) C:76% T:89%**	pCi/L	12/11/24 16:26	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-29D **Lab ID: 60464294022** Collected: 11/13/24 14:56 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.396 ± 0.403 (0.609) C:NA T:93%**	pCi/L	12/12/24 15:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.626 ± 0.441 (0.863) C:75% T:92%**	pCi/L	12/11/24 16:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Sample: R-P-30S **Lab ID: 60464294023** Collected: 11/13/24 09:47 Received: 11/15/24 05:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.41 ± 0.611 (0.174) C:NA T:88%**	pCi/L	12/12/24 15:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.12 ± 0.525 (0.908) C:76% T:87%**	pCi/L	12/11/24 16:27	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 711093
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464294001, 60464294002, 60464294003, 60464294004, 60464294005, 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017, 60464294018, 60464294019, 60464294020

METHOD BLANK: 3463154
Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003, 60464294004, 60464294005, 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017, 60464294018, 60464294019, 60464294020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.536 ± 0.350 (0.650) C:72% T:91%	pCi/L	12/10/24 14:47	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 711095
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464294021, 60464294022, 60464294023

METHOD BLANK: 3463171 Matrix: Water
Associated Lab Samples: 60464294021, 60464294022, 60464294023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0423 ± 0.219 (0.455) C:NA T:98%	pCi/L	12/12/24 15:06	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 711091
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464294001, 60464294002, 60464294003, 60464294004, 60464294005, 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017, 60464294018, 60464294019, 60464294020

METHOD BLANK: 3463147
Matrix: Water
Associated Lab Samples: 60464294001, 60464294002, 60464294003, 60464294004, 60464294005, 60464294006, 60464294007, 60464294008, 60464294009, 60464294010, 60464294011, 60464294012, 60464294013, 60464294014, 60464294015, 60464294016, 60464294017, 60464294018, 60464294019, 60464294020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.197 (0.442) C:NA T:98%	pCi/L	12/12/24 14:13	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

QC Batch: 711096
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464294021, 60464294022, 60464294023

METHOD BLANK: 3463177 Matrix: Water
Associated Lab Samples: 60464294021, 60464294022, 60464294023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.447 ± 0.310 (0.584) C:80% T:89%	pCi/L	12/11/24 16:26	

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QUALIFIERS

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1e	Matrix spike recovery is high and outside of the default acceptance criteria for MS recovery. Results reported based on acceptable RPD for the RQS pair.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464294001	**R-P-10S**	EPA 200.7	915896	EPA 200.7	915912
60464294002	**R-P-16S**	EPA 200.7	915896	EPA 200.7	915912
60464294003	**R-CA-FB-1**	EPA 200.7	915896	EPA 200.7	915912
60464294006	**R-P-17S**	EPA 200.7	916309	EPA 200.7	916338
60464294007	**R-P-17I**	EPA 200.7	916309	EPA 200.7	916338
60464294008	**R-P-17D**	EPA 200.7	916309	EPA 200.7	916338
60464294009	**R-P-19S**	EPA 200.7	916309	EPA 200.7	916338
60464294010	**R-P-19I**	EPA 200.7	916309	EPA 200.7	916338
60464294011	**R-P-19D**	EPA 200.7	916309	EPA 200.7	916338
60464294012	**R-P-21D**	EPA 200.7	916309	EPA 200.7	916338
60464294013	**R-P-22S**	EPA 200.7	916309	EPA 200.7	916338
60464294014	**R-P-22D**	EPA 200.7	916309	EPA 200.7	916338
60464294015	**R-CA-DUP-1**	EPA 200.7	916309	EPA 200.7	916338
60464294016	**R-CA-DUP-2**	EPA 200.7	916309	EPA 200.7	916338
60464294017	**R-CA-FB-2**	EPA 200.7	916309	EPA 200.7	916338
60464294018	**R-P-05S**	EPA 200.7	916731	EPA 200.7	916791
60464294019	**R-P-21S**	EPA 200.7	916731	EPA 200.7	916791
60464294020	**R-P-21I**	EPA 200.7	916731	EPA 200.7	916791
60464294021	**R-P-29S**	EPA 200.7	916731	EPA 200.7	916791
60464294022	**R-P-29D**	EPA 200.7	916731	EPA 200.7	916791
60464294023	**R-P-30S**	EPA 200.7	916731	EPA 200.7	916791
60464294001	**R-P-10S**	EPA 200.8	916118	EPA 200.8	916147
60464294002	**R-P-16S**	EPA 200.8	916118	EPA 200.8	916147
60464294003	**R-CA-FB-1**	EPA 200.8	916118	EPA 200.8	916147
60464294006	**R-P-17S**	EPA 200.8	916373	EPA 200.8	916423
60464294007	**R-P-17I**	EPA 200.8	916373	EPA 200.8	916423
60464294008	**R-P-17D**	EPA 200.8	916373	EPA 200.8	916423
60464294009	**R-P-19S**	EPA 200.8	916373	EPA 200.8	916423
60464294010	**R-P-19I**	EPA 200.8	916373	EPA 200.8	916423
60464294011	**R-P-19D**	EPA 200.8	916374	EPA 200.8	916482
60464294012	**R-P-21D**	EPA 200.8	916374	EPA 200.8	916482
60464294013	**R-P-22S**	EPA 200.8	916374	EPA 200.8	916482
60464294014	**R-P-22D**	EPA 200.8	916374	EPA 200.8	916482
60464294015	**R-CA-DUP-1**	EPA 200.8	916374	EPA 200.8	916482
60464294016	**R-CA-DUP-2**	EPA 200.8	916374	EPA 200.8	916482
60464294017	**R-CA-FB-2**	EPA 200.8	916374	EPA 200.8	916482
60464294018	**R-P-05S**	EPA 200.8	918235	EPA 200.8	918280
60464294019	**R-P-21S**	EPA 200.8	918235	EPA 200.8	918280
60464294020	**R-P-21I**	EPA 200.8	918235	EPA 200.8	918280
60464294021	**R-P-29S**	EPA 200.8	918235	EPA 200.8	918280
60464294022	**R-P-29D**	EPA 200.8	918235	EPA 200.8	918280
60464294023	**R-P-30S**	EPA 200.8	918235	EPA 200.8	918280
60464294001	**R-P-10S**	EPA 903.1	711091		
60464294002	**R-P-16S**	EPA 903.1	711091		
60464294003	**R-CA-FB-1**	EPA 903.1	711091		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464294004	**R-CA-MS-1**	EPA 903.1	711091		
60464294005	**R-CA-MSD-1**	EPA 903.1	711091		
60464294006	**R-P-17S**	EPA 903.1	711091		
60464294007	**R-P-17I**	EPA 903.1	711091		
60464294008	**R-P-17D**	EPA 903.1	711091		
60464294009	**R-P-19S**	EPA 903.1	711091		
60464294010	**R-P-19I**	EPA 903.1	711091		
60464294011	**R-P-19D**	EPA 903.1	711091		
60464294012	**R-P-21D**	EPA 903.1	711091		
60464294013	**R-P-22S**	EPA 903.1	711091		
60464294014	**R-P-22D**	EPA 903.1	711091		
60464294015	**R-CA-DUP-1**	EPA 903.1	711091		
60464294016	**R-CA-DUP-2**	EPA 903.1	711091		
60464294017	**R-CA-FB-2**	EPA 903.1	711091		
60464294018	**R-P-05S**	EPA 903.1	711091		
60464294019	**R-P-21S**	EPA 903.1	711091		
60464294020	**R-P-21I**	EPA 903.1	711091		
60464294021	**R-P-29S**	EPA 903.1	711095		
60464294022	**R-P-29D**	EPA 903.1	711095		
60464294023	**R-P-30S**	EPA 903.1	711095		
60464294001	**R-P-10S**	EPA 904.0	711093		
60464294002	**R-P-16S**	EPA 904.0	711093		
60464294003	**R-CA-FB-1**	EPA 904.0	711093		
60464294004	**R-CA-MS-1**	EPA 904.0	711093		
60464294005	**R-CA-MSD-1**	EPA 904.0	711093		
60464294006	**R-P-17S**	EPA 904.0	711093		
60464294007	**R-P-17I**	EPA 904.0	711093		
60464294008	**R-P-17D**	EPA 904.0	711093		
60464294009	**R-P-19S**	EPA 904.0	711093		
60464294010	**R-P-19I**	EPA 904.0	711093		
60464294011	**R-P-19D**	EPA 904.0	711093		
60464294012	**R-P-21D**	EPA 904.0	711093		
60464294013	**R-P-22S**	EPA 904.0	711093		
60464294014	**R-P-22D**	EPA 904.0	711093		
60464294015	**R-CA-DUP-1**	EPA 904.0	711093		
60464294016	**R-CA-DUP-2**	EPA 904.0	711093		
60464294017	**R-CA-FB-2**	EPA 904.0	711093		
60464294018	**R-P-05S**	EPA 904.0	711093		
60464294019	**R-P-21S**	EPA 904.0	711093		
60464294020	**R-P-21I**	EPA 904.0	711093		
60464294021	**R-P-29S**	EPA 904.0	711096		
60464294022	**R-P-29D**	EPA 904.0	711096		
60464294023	**R-P-30S**	EPA 904.0	711096		
60464294001	**R-P-10S**	SM 2320B	916772		
60464294002	**R-P-16S**	SM 2320B	916772		
60464294003	**R-CA-FB-1**	SM 2320B	916772		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464294006	**R-P-17S**	SM 2320B	917790		
60464294007	**R-P-17I**	SM 2320B	917608		
60464294008	**R-P-17D**	SM 2320B	917608		
60464294009	**R-P-19S**	SM 2320B	917608		
60464294010	**R-P-19I**	SM 2320B	917608		
60464294011	**R-P-19D**	SM 2320B	917608		
60464294012	**R-P-21D**	SM 2320B	917608		
60464294013	**R-P-22S**	SM 2320B	917608		
60464294014	**R-P-22D**	SM 2320B	917608		
60464294015	**R-CA-DUP-1**	SM 2320B	917608		
60464294016	**R-CA-DUP-2**	SM 2320B	917608		
60464294017	**R-CA-FB-2**	SM 2320B	917609		
60464294018	**R-P-05S**	SM 2320B	917909		
60464294019	**R-P-21S**	SM 2320B	917909		
60464294020	**R-P-21I**	SM 2320B	917909		
60464294021	**R-P-29S**	SM 2320B	917909		
60464294022	**R-P-29D**	SM 2320B	917909		
60464294023	**R-P-30S**	SM 2320B	917909		
60464294001	**R-P-10S**	SM 2540C	916345		
60464294002	**R-P-16S**	SM 2540C	916345		
60464294003	**R-CA-FB-1**	SM 2540C	916345		
60464294006	**R-P-17S**	SM 2540C	916953		
60464294007	**R-P-17I**	SM 2540C	916760		
60464294008	**R-P-17D**	SM 2540C	916760		
60464294009	**R-P-19S**	SM 2540C	916760		
60464294010	**R-P-19I**	SM 2540C	916760		
60464294011	**R-P-19D**	SM 2540C	916760		
60464294012	**R-P-21D**	SM 2540C	916760		
60464294013	**R-P-22S**	SM 2540C	916760		
60464294014	**R-P-22D**	SM 2540C	916760		
60464294015	**R-CA-DUP-1**	SM 2540C	916760		
60464294016	**R-CA-DUP-2**	SM 2540C	916760		
60464294017	**R-CA-FB-2**	SM 2540C	916764		
60464294018	**R-P-05S**	SM 2540C	916954		
60464294019	**R-P-21S**	SM 2540C	916954		
60464294020	**R-P-21I**	SM 2540C	916954		
60464294021	**R-P-29S**	SM 2540C	916954		
60464294022	**R-P-29D**	SM 2540C	916954		
60464294023	**R-P-30S**	SM 2540C	916954		
60464294001	**R-P-10S**	EPA 300.0	918071		
60464294002	**R-P-16S**	EPA 300.0	918071		
60464294003	**R-CA-FB-1**	EPA 300.0	918071		
60464294006	**R-P-17S**	EPA 300.0	918350		
60464294007	**R-P-17I**	EPA 300.0	918350		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA
Pace Project No.: 60464294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464294008	**R-P-17D**	EPA 300.0	918350		
60464294009	**R-P-19S**	EPA 300.0	918350		
60464294010	**R-P-19I**	EPA 300.0	918350		
60464294011	**R-P-19D**	EPA 300.0	918350		
60464294012	**R-P-21D**	EPA 300.0	918350		
60464294013	**R-P-22S**	EPA 300.0	918350		
60464294014	**R-P-22D**	EPA 300.0	918350		
60464294015	**R-CA-DUP-1**	EPA 300.0	918350		
60464294016	**R-CA-DUP-2**	EPA 300.0	918350		
60464294017	**R-CA-FB-2**	EPA 300.0	918350		
60464294018	**R-P-05S**	EPA 300.0	918465		
60464294019	**R-P-21S**	EPA 300.0	918465		
60464294020	**R-P-21I**	EPA 300.0	918465		
60464294021	**R-P-29S**	EPA 300.0	918465		
60464294022	**R-P-29D**	EPA 300.0	918465		
60464294023	**R-P-30S**	EPA 300.0	918465		

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WO# : 60464294

60464294

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T298 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 15.1/15.4 **Corr. Factor** -0.1 **Corrected** 15.0/15.3/15.4

Date and initials of person examining contents: PW 11/11/24

Temperature should be above freezing to 6°C 15.5

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 88727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464294

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQuIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 1 1 3 3 1

Identify Container Preservative Type***: 1 1 2 2 2

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-P-05S	WT														
R-P-10S	WT	G			11-8-24	0956	4			✓	✓	✓	✓	✓	
R-P-16S	WT	G			11-8-24	1316	4			✓	✓	✓	✓	✓	R-CA-MS/MSD-1 collected
R-P-17S	WT														
R-P-17I	WT														
R-P-17D	WT														
R-P-19S	WT														
R-P-19I	WT														
R-P-19D	WT														
R-P-21S	WT														

Lab Use Only:
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3160598

Preservation non-conformance identified for sample

Additional Instructions from Pace®:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
	T298	-0.1	1.7	1.6	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
John Rasmussen / Rocksmith	11/8/24 / 1600		11-9 0615	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier [ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464294

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 1 1 3 3 1

Identify Container Preservative Type***: 1 1 2 2 2

** Container Sizes: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-CA-FB-1	WT	G			11-8-24	0946	4			✓	✓	✓	✓	—	
R-CA-FB-2	WT														
R-CA-MS-1	WT	G			11-8-24	1316	4X			✓	✓	✓	—	—	Collected de R-P165
R-CA-MSD-1	WT	G			↓	1316	4X			✓	✓	✓	✓	—	↓

Lab Use Only: Proj. Mgr: Jamie Church; AcctNum / Client ID:; Table #:; Profile / Template: 15854; Prelog / Bottle Ord. ID: EZ 3160598

Preservation non conformance identified for sample

Additional Instructions from Pace®:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice
				1.6	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
John Rasmussen / Rocksmith	11/8/24 1600		11-9 E615	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

Client: Rocksmith Gwong Profile/EZ#: 3160598

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2	WT																		1			2	1									
3	↓																		3			2	3									
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1B	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2B	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: **WO#: 60464294**

PM: JLS Due Date: 11/25/24
CLIENT: Rocksmith

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

Client: Rocksmith Geoeng Profile/EZ# 3160598

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1			2	1									
2																																
3	WT																					2										
4	WT																					2										
5																																
6																																
7																																
8																																
9																																
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Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1B	1L NAOH plastic	I	Wipe/Swab
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DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2B	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: WO#: 60464294
PM: JLS Due Date: 11/25/24
CLIENT: Rocksmith

WO# : 60464294

60464294

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T298 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): As-read 1.8/0.8/1.0 Corr. Factor -0.1 Corrected 1.7/0.7/0.9

Temperature should be above freezing to 6°C 14.3/12.1 14.3/12.1

Date and initials of person examining contents: 11/13/24

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	Container ID for R-P-21D is R-P-29D.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 80717	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace™ Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464294

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
~~R-P-05S~~	WT														
~~R-P-10S~~	WT														
~~R-P-16S~~	WT														
R-P-17S	WT	G			11/12/24	1024	6			✓	✓	✓	✓	✓	
R-P-17I	WT	G			11/12/24	1126	6			✓	✓	✓	✓	✓	
R-P-17D	WT	G			11/11/24	1332	6			✓	✓	✓	✓	✓	
R-P-19S	WT	G			11/11/24	0945	6			✓	✓	✓	✓	✓	
R-P-19I	WT	G			11/11/24	1031	6			✓	✓	✓	✓	✓	
R-P-19D	WT	G			11/11/24	1123	6			✓	✓	✓	✓	✓	
~~R-P-21S~~	WT														

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160598

Preservation non-conformance identified for sample:

Additional Instructions from Pace*:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) Johny Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T298	-0.1	1.1/0.7/0.9/14.3/12.1		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Rocksmith	11/12/24 1600		11/13/24 0526
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [ ] In-Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other

Page: 1 of 3

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Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

6c464294

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160598

Preservation non-conformance identified for sample

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Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
~~R-P-21L~~	WT														
R-P-21D	WT	G			11/12/24	1430	6			✓	✓	✓	✓	✓	
R-P-22S	WT	G			11/12/24	1415	6			✓	✓	✓	✓	✓	
R-P-22D	WT	G			11/12/24	1145	6			✓	✓	✓	✓	✓	
~~R-P-29S~~	WT														
~~R-P-29D~~	WT														
~~R-P-30S~~	WT														
~~R-P-31S~~	WT														
R-CA-DUP-1	WT	G			11/12/24	—	6			✓	✓	✓	✓	✓	
R-CA-DUP-2	WT	G			11/12/24	—	6			✓	✓	✓	✓	✓	

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APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp (°C)	Corrected Temp (°C)	On Ice:
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Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	11/12/24 1600		11/13/24 0526	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

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		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
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[ ] Other

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Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

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Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

** Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160598

Preservation non-conformance identified for sample?

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)+	Appendix IV Metals (200.7/200.8)++	Radium 226 & Radium 228	Sample Comment:
~~R-CA-FB-1~~	WT														
R-CA-FB-2	WT	G			11/11/24	1355	6			✓	✓	✓	✓	✓	
~~R-CA-MS-1~~	WT														
~~R-CA-MSD-1~~	WT														

Additional instructions from Pace®:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
5	T298	-0.1	1.7/0.7/0.9/14.3/12.7		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	11/12/24 1600		11/13/24 0526	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORO-0019_v02_11C123 ©

1/3

Client: Rocksmith Geoeng

Profile/EZ # only print what you log.

Site:

Notes Append to

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2																																
3																																
4	WT																		1			2	1									
5	↓																		↓			↓	↓									
6																																
7																																
8																																
9	↓																															
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60464294

2/3

Client: Rocksmith Geoeng

Profile/EZ #: only print what you log

Site:

Notes: Append to

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2	WT																		1			2	1									
3	↓																		↓			↓	↓									
4																																
5																																
6																																
7																																
8																																
9	↓																		1			2	1									
10																			↓			↓	↓									
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 6046494

Client: Rocksmith Geoeng Profile/EZ # only print what you ioT.

Site: Notes Append to

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2	WT																		1			2	1									
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber g ass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60464294

WO# : 60464294

60464294

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: TL98 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.0/1.1 **Corr. Factor** -0.1 **Corrected** 1.9/1.0/12.9

Date and initials of person examining contents: PV 11/15/24

Temperature should be above freezing to 6°C 13.0

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 88727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464294

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6		
Project Name:	AMEREN RCPA-CA	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-P-05S	WT	G			11/13/24	1155	4			✓	✓	✓	✓	✓	
R-P-10S	WT														
R-P-16S	WT														
R-P-17S	WT														
R-P-17I	WT														
R-P-17D	WT														
R-P-19S	WT														
R-P-19I	WT														
R-P-19D	WT														
R-P-21S	WT	G			11/13/24	1358	4			✓	✓	✓	✓	✓	

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15854
Prelog / Bottle Ord. ID: EZ 3160598

Preservation non conformance identified for sample:

Additional Instructions from Pace®:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice
3	T298	-0.1		1.9/1.0/12.9	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	11/14/24 1600		11/15/24 0555	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60464294

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6	Invoice To:	Mark Haddock
Project Name:	AMEREN RCPA-CA	Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

Date Results Requested:

DW PWSID # or WW Permit # as applicable:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
R-P-21I	WT	G			11/13/24	1105	4			✓	✓	✓	✓	✓	
~~R-P-21D~~	WT														
~~R-P-22S~~	WT														
~~R-P-22D~~	WT														
R-P-29S	WT	G			11/13/24	1615	4			✓	✓	✓	✓	✓	
R-P-29D	WT	G			11/13/24	1456	4			✓	✓	✓	✓	✓	
R-P-30S	WT	G			11/13/24	0947	4			✓	✓	✓	✓	✓	
R-P-31S	WT														
R-CA-DUP-1	WT														
R-CA-DUP-2	WT														

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160598

Preservation non conformance identified for sample:

Additional Instructions from Pace®:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C)	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice
3	T298	-0.1		1.9/1.0/12.9	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	11/14/24 1600		11/15/24 0555	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 2

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1/2

Client: Rocksmith Geoeng

Profile/EZ # only print what you log

Site:

Notes Append to 6c464294

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1			2	1									
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10	WT																		1			2	1									
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 6c464294

2/2

Client: Rocksmith Brewing

Profile/EZ #:

Site:

Notes: Appard to 60464294

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1			2	1									
2																																
3																																
4																																
5	WT																		1			2	1									
6	WT																		1			2	1									
7	WT																		1			2	1									
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisu fate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60464294

Internal Transfer Chain of Custody

☐ Rush Multiplier_____X
☐ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 11/9/2024 Results Requested By: 12/10/2024

Workorder: 60464294 Workorder Name: AMEREN RCPA-CA

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
1	R-P-10S	PS	11/8/2024 09:56	60464294001	Water	2						X	X											001
2	R-P-16S	RQS	11/8/2024 13:16	60464294002	Water	2						X	X											MS/MSD 002
3	R-CA-FB-1	PS	11/8/2024 09:46	60464294003	Water	2						X	X											003
4	R-CA-MS-1	PS	11/8/2024 13:16	60464294004	Water	2						X	X											004
5	R-CA-MSD-1	PS	11/8/2024 13:16	60464294005	Water	2						X	X											005
6	R-P-17S	PS	11/12/2024 10:24	60464294006	Water	2						X	X											006
7	R-P-17I	PS	11/11/2024 11:26	60464294007	Water	2						X	X											007
8	R-P-17D	PS	11/11/2024 13:32	60464294008	Water	2						X	X											008
9	R-P-19S	PS	11/11/2024 09:45	60464294009	Water	2						X	X											009
10	R-P-19I	PS	11/11/2024 10:31	60464294010	Water	2						X	X											010
11	R-P-19D	PS	11/11/2024 11:23	60464294011	Water	2						X	X											011
12	R-P-21D	PS	11/11/2024 14:30	60464294012	Water	2						X	X											012
13	R-P-22S	PS	11/11/2024 14:15	60464294013	Water	2						X	X											013
14	R-P-22D	PS	11/11/2024 11:45	60464294014	Water	2						X	X											014
15	R-CA-DUP-1	PS	11/11/2024 00:00	60464294015	Water	2						X	X											015
16	R-CA-DUP-2	PS	11/11/2024 00:00	60464294016	Water	2						X	X											016
17	R-CA-FB-2	PS	11/11/2024 13:55	60464294017	Water	2						X	X											017
18	R-P-05S	PS	11/13/2024 11:55	60464294018	Water	2						X	X											018
19	R-P-21S	PS	11/13/2024 13:58	60464294019	Water	2						X	X											019

WO# : 30735922

30735922

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 11/9/2024 Results Requested By: 12/10/2024

Workorder: 60464294 Workorder Name: AMEREN RCPA-CA

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
20	R-P-21I	PS	11/13/2024 11:05	60464294020	Water	2						X	X											020
21	R-P-29S	PS	11/13/2024 16:15	60464294021	Water	2						X	X											021
22	R-P-29D	PS	11/13/2024 14:56	60464294022	Water	2						X	X											022
23	R-P-30S	PS	11/13/2024 09:47	60464294023	Water	2						X	X											023
24																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Carmen Jure	11/19/00	[signature]	11/20/24 1000
2				
3				

Comments: KS sample location: 60-R01-S3A

Cooler Temperature on Receipt ___ °C | Custody Seal Y or (N) | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30735922

PM: MAR Due Date: 12/13/24
CLIENT: PACE_60_LEKS

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO# : 30735922

PM: MAR Due Date: 12/13/24

CLIENT: PACE_GO_LEKS

Client Name: Pace-KS

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 403364530462

Examined By: PS 11/20/24

Labeled By: PS 11/20/24

Temped By: ____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☑ No

Thermometer Used: ____ Type of Ice: Wet Blue (None)

Cooler Temperature: Observed Temp ____ °C Correction Factor: ____ °C Final Temp: ____ °C

Temp should be above freezing to 6°C

pH paper Lot# 10D1041 D.P.D. Residual Chlorine Lot # ____

Comments:	Yes	No	NA	
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID				
Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dichlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed PS Date/Time of Preservation
				Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed PS Date: 11/20/24 Survey Meter SN: 2501438O

Comments: * COC says MS/MSD for Sample 002, but it should be Sample 003.

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Memorandum

December 12, 2024

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008-24
CC:	Mark Haddock, Jeffrey Ingram		
From:	Valerie Hurt	**Email:**	valerie.hurt@rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA-CA – Data Package 60464294**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a compound was detected in a blank (i.e. method, field), and the blank comparison criterion was not met, associated sample results were qualified as estimates (J) or non-detects (U).
- When a compound was detected in a sample result between the Method Detection Limit (MDL) and Practical Quantification Limit (PQL), the results were recorded at the detection value and qualified as estimates (J).
- When a duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a matrix spike/matrix spike duplicate (MS/MSD) criterion was not met, the associated sample result was qualified as an estimate (J, J+ for estimates based high, and J- for estimates based low).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA-CA
Project Number: 23008-24
Reviewer: V. Hurt
Validation Date: 12/12/2024

Laboratory: Pace Analytical
SDG #: 60464294
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); SM 2320B (Alkalinity); SM 2540C (TDS);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ EPA 903.1/904.0 (Radium 226+228); SM 3500-Fe B#4
Sample Names R-P-10S, R-P-16S, R-CA-FB-1, R-CA-MS-1, R-CA-MSD-1, R-P-17S, R-P-17I, R-P-17D, R-P-19S, R-P-19I, R-P-19D, R-P-21D, R-P-22S
R-P-22D, R-CA-DUP-1, R-CA-DUP-2, R-CA-FB-2, R-P-05S, R-P-21S, R-P-21I, R-P-29S, R-P-29-D, R-P-30S

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			11/08/24-11/13/24
b) Sampling team indicated?	x			JTR & JDQ
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?	x			
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?	x			See Notes
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	x			See Notes
b) Were analytes detected in the field blank(s)?	x			See Notes
c) Were analytes detected in the equipment blank(s)?			x	
d) Were analytes detected in the trip blank(s)?			x	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	x			
b) Were the proper analytes included in the LCS?	x			
c) Was the LCS accuracy criteria met?	x			

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	x			See Notes
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			See Notes
d) Were lab dup. precision criteria met (note RPD)?	x			

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?			x	
b) Was the %D within control limits?			x	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
b) Was MSD accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
c) Were MS/MSD precision criteria met?	x			

Comments/Notes:

General:

Sulfate, chloride, and alkalinity diluted in some samples; no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blanks:

3627818: Iron (11.0J), associated with samples -006 through -017. -017 was ND, therefore no qualification necessary.

All other samples were detected above RL and > than 10x blank, no qualification necessary.

Field Blanks:

R-CA-FB-1 @ R-P10S: iron (13.2J), manganese (0.56J), chromium (0.36J), total dissolved solids (9.5), and fluoride (0.16J).

Total dissolved solids, iron, and manganese > 10x blank, no qualification necessary.

Chromium and fluoride results > RL and < 10x blank, qualified as estimate.

R-CA-FB-2 @ R-P-17D: boron (7.7J) and fluoride (0.16J). Boron > RL and 10x the blank, no qualification necessary.

Fluoride > RL and < 10x the blank, qualified as estimate.

Duplicates:

R-CA-DUP-1 @ R-P-17S: chromium detected in parent sample and not in field duplicate, results qualified as estimates.

R-CA-DUP-2 @ R-P-17I: field duplicate RPD exceeds control limit (20%) for lithium (22%),

antimony (22%), and chromium (31%), results qualified as estimates.

Lab duplicate max RPD: metals: 20%, chloride, fluoride, and sulfate: 15%, TDS and alkalinity: 10%.

MS/MSD:

3626531/3626532: MS/MSD recovery high for calcium, RPD is within control limits. Associated with sample -002, result qualified as estimate.

3629944: MS recovery high for calcium, RPD is within control limits. Associated with sample-021, result qualified as estimates.

3635655/3635656: MS/MSD recovery high for chloride and fluoride, RPD is within control limits.

MSD recovery high for sulfate, RPD is within control limits. Associated with sample -002, chloride and fluoride results qualified as estimates.

3628119/328120: MS/MSD recovery high for arsenic, RPD is within control limits. Associated with unrelated sample, no qualification necessary.

3637244/3637245: MS/MSD recovery high for fluoride, RPD is within control limits. Associated with sample -018,

result qualified as estimate.

3636672/3636673: MSD high for fluoride, RPD is within control limits. Associated with an unrelated sample, no qualification necessary.

3636675: MS recovery low for chloride, RPD is within control limits. Associated with an unrelated sample, no qualification necessary.

3637246: MS recovery high for sulfate, RPD is within control limits. Associated with unrelated sample, no qualification necessary.

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
R-P-10S	Chromium	1.2	J	Detected in field blank, results ~~> RL and < 10x~~ blank
"	Fluoride	0.22	J	"
R-P-17D	Fluoride	0.63	J	Results > RL and < 10x blank
R-CA-DUP-1	Chromium	0.3	UJ	Detected in parent sample and not in DUP
R-CA-17S	Chromium	0.32	J	Detected in parent sample and not in DUP
R-CA-DUP-2	Lithium	6.0	J	RPD exceeds control limit in DUP
R-P-17I	Lithium	4.8	J	"
R-CA-DUP-2	Chromium	0.38	J	"
R-P-17I	Chromium	0.52	J	"
R-CA-DUP-2	Antimony	0.15	J	"
R-P-17I	Antimony	0.12	J	"
R-P-29S	Calcium	120000	J+	MS/MSD recoveries high, RPD OK.
R-P-16S	Calcium	116000	J+	"
"	Fluoride	0.31	J+	"
"	Chloride	2.8	J+	"
R-P-05S	Fluoride	0.28	J+	"

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: 12/12/2024

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

December 16, 2024

Mark Haddock
Rocksmith Geoengineering, LLC.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on November 13, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

Sample R-P-31S-DISS was field filtered by the client upon collection.

REV-1, 12/16/24: Sample R-P-31S collection time changed from 11/112/24 to 11/11/24 as reflected on COC.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Jeffrey Ingram, Rocksmith Geoengineering, LLC.
Lisa Meyer, Ameren
Grant Morey, Rocksmith Geoengineering, LLC.
Austin Nieman, Ameren

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Kansas

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Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 2000302023-6
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60464438001	**R-P-31S-DISS**	Water	11/12/24 09:08	11/13/24 05:26
60464438002	**R-P-31S**	Water	11/11/24 14:58	11/13/24 05:26

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SAMPLE ANALYTE COUNT

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60464438001	**R-P-31S-DISS**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60464438002	**R-P-31S**	EPA 200.7	ARMN	11	PASI-K
		EPA 200.8	MLD	4	PASI-K
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SR1	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	AAA	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Sample: R-P-31S-DISS **Lab ID: 60464438001** Collected: 11/12/24 09:08 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**162**	ug/L	5.0	0.64	1	11/13/24 16:13	11/22/24 21:49	7440-39-3	
Beryllium	**<0.12**	ug/L	1.0	0.12	1	11/13/24 16:13	11/22/24 21:49	7440-41-7	
Boron	**282**	ug/L	100	6.4	1	11/13/24 16:13	11/22/24 21:49	7440-42-8	
Calcium	**60700**	ug/L	200	26.9	1	11/13/24 16:13	11/22/24 21:49	7440-70-2	
Iron	**550**	ug/L	50.0	9.1	1	11/13/24 16:13	11/22/24 21:49	7439-89-6	
Lithium	**8.1J**	ug/L	10.0	3.7	1	11/13/24 16:13	11/22/24 21:49	7439-93-2	
Magnesium	**10900**	ug/L	50.0	20.1	1	11/13/24 16:13	11/22/24 21:49	7439-95-4	
Manganese	**2780**	ug/L	5.0	0.39	1	11/13/24 16:13	11/22/24 21:49	7439-96-5	
Molybdenum	**9.6J**	ug/L	20.0	1.0	1	11/13/24 16:13	11/22/24 21:49	7439-98-7	
Potassium	**2960**	ug/L	500	69.7	1	11/13/24 16:13	11/22/24 21:49	7440-09-7	
Sodium	**11400**	ug/L	500	115	1	11/13/24 16:13	11/22/24 21:49	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:46	7440-36-0	
Arsenic	**17.9**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:46	7440-38-2	
Chromium	**0.33J**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:46	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:46	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**215**	mg/L	20.0	10.5	1		11/26/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**286**	mg/L	10.0	10.0	1		11/19/24 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**13.6**	mg/L	1.0	0.53	1		11/27/24 14:33	16887-00-6	
Fluoride	**0.16J**	mg/L	0.20	0.12	1		11/27/24 14:33	16984-48-8	
Sulfate	**27.5**	mg/L	20.0	11.0	20		11/27/24 14:47	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Sample: R-P-31S **Lab ID: 60464438002** Collected: 11/11/24 14:58 Received: 11/13/24 05:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Barium	**201**	ug/L	5.0	0.64	1	11/15/24 09:45	11/26/24 22:13	7440-39-3	
Beryllium	**0.15J**	ug/L	1.0	0.12	1	11/15/24 09:45	11/26/24 22:13	7440-41-7	
Boron	**255**	ug/L	100	6.4	1	11/15/24 09:45	11/26/24 22:13	7440-42-8	
Calcium	**65700**	ug/L	200	26.9	1	11/15/24 09:45	11/26/24 22:13	7440-70-2	
Iron	**4360**	ug/L	50.0	9.1	1	11/15/24 09:45	11/26/24 22:13	7439-89-6	
Lithium	**8.0J**	ug/L	10.0	3.7	1	11/15/24 09:45	11/26/24 22:13	7439-93-2	
Magnesium	**11800**	ug/L	50.0	20.1	1	11/15/24 09:45	11/26/24 22:13	7439-95-4	
Manganese	**2810**	ug/L	5.0	0.39	1	11/15/24 09:45	11/26/24 22:13	7439-96-5	
Molybdenum	**9.8J**	ug/L	20.0	1.0	1	11/15/24 09:45	11/26/24 22:13	7439-98-7	
Potassium	**3200**	ug/L	500	69.7	1	11/15/24 09:45	11/26/24 22:13	7440-09-7	
Sodium	**10700**	ug/L	500	115	1	11/15/24 09:45	11/26/24 22:13	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.15J**	ug/L	1.0	0.12	1	11/14/24 14:18	12/03/24 12:49	7440-36-0	
Arsenic	**34.6**	ug/L	1.0	0.13	1	11/14/24 14:18	12/03/24 12:49	7440-38-2	
Chromium	**2.1**	ug/L	1.0	0.30	1	11/14/24 14:18	12/03/24 12:49	7440-47-3	
Selenium	**0.30J**	ug/L	1.0	0.18	1	11/14/24 14:18	12/03/24 12:49	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**202**	mg/L	20.0	10.5	1		11/26/24 16:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**311**	mg/L	10.0	10.0	1		11/19/24 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**20.0**	mg/L	1.0	0.53	1		11/27/24 15:15	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/27/24 15:15	16984-48-8	
Sulfate	**36.5**	mg/L	2.0	1.1	2		11/27/24 15:29	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 916309
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464438001

METHOD BLANK: 3627818 Matrix: Water
Associated Lab Samples: 60464438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/22/24 20:59	
Beryllium	ug/L	<0.12	1.0	0.12	11/22/24 20:59	
Boron	ug/L	<6.4	100	6.4	11/22/24 20:59	
Calcium	ug/L	<26.9	200	26.9	11/22/24 20:59	
Iron	ug/L	11.0J	50.0	9.1	11/22/24 20:59	
Lithium	ug/L	<3.7	10.0	3.7	11/22/24 20:59	
Magnesium	ug/L	<20.1	50.0	20.1	11/22/24 20:59	
Manganese	ug/L	<0.39	5.0	0.39	11/22/24 20:59	
Molybdenum	ug/L	<1.0	20.0	1.0	11/22/24 20:59	
Potassium	ug/L	<69.7	500	69.7	11/22/24 20:59	
Sodium	ug/L	<115	500	115	11/22/24 20:59	

LABORATORY CONTROL SAMPLE: 3627819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	982	98	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	921	92	85-115	
Calcium	ug/L	10000	9870	99	85-115	
Iron	ug/L	10000	9980	100	85-115	
Lithium	ug/L	1000	988	99	85-115	
Magnesium	ug/L	10000	9510	95	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9390	94	85-115	
Sodium	ug/L	10000	9560	96	85-115	

MATRIX SPIKE SAMPLE: 3627820

Parameter	Units	60464293006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	297	1000	1300	100	70-130	
Beryllium	ug/L	<0.12	1000	1030	103	70-130	
Boron	ug/L	1880	1000	2860	99	70-130	
Calcium	ug/L	83700	10000	94600	109	70-130	
Iron	ug/L	18000	10000	28500	105	70-130	
Lithium	ug/L	28.8	1000	1040	101	70-130	
Magnesium	ug/L	23200	10000	33000	98	70-130	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

MATRIX SPIKE SAMPLE: 3627820

Parameter	Units	60464293006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Manganese	ug/L	366	1000	1400	104	70-130	
Molybdenum	ug/L	35.7	1000	1070	104	70-130	
Potassium	ug/L	5390	10000	15400	100	70-130	
Sodium	ug/L	18200	10000	27900	98	70-130	

MATRIX SPIKE SAMPLE: 3627822

Parameter	Units	60464294009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	242	1000	1230	99	70-130	
Beryllium	ug/L	<0.12	1000	1040	104	70-130	
Boron	ug/L	168	1000	1100	93	70-130	
Calcium	ug/L	110000	10000	120000	97	70-130	
Iron	ug/L	4130	10000	14200	101	70-130	
Lithium	ug/L	22.3	1000	1040	101	70-130	
Magnesium	ug/L	18000	10000	27500	95	70-130	
Manganese	ug/L	1100	1000	2120	103	70-130	
Molybdenum	ug/L	2.6J	1000	1030	103	70-130	
Potassium	ug/L	4600	10000	14600	100	70-130	
Sodium	ug/L	6530	10000	16300	98	70-130	

SAMPLE DUPLICATE: 3635086

Parameter	Units	60464293006 Result	Dup Result	RPD	Max RPD	Qualifiers
Barium	ug/L	297	312	5	20	
Beryllium	ug/L	<0.12	<0.12		20	
Boron	ug/L	1880	1890	1	20	
Calcium	ug/L	83700	84500	1	20	
Iron	ug/L	18000	18400	2	19	
Lithium	ug/L	28.8	28.5	1	20	
Magnesium	ug/L	23200	23400	1	20	
Manganese	ug/L	366	370	1	12	
Molybdenum	ug/L	35.7	35.6	0	20	
Potassium	ug/L	5390	5380	0	20	
Sodium	ug/L	18200	18400	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 916520
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60464438002

METHOD BLANK: 3628957 Matrix: Water
Associated Lab Samples: 60464438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.64	5.0	0.64	11/26/24 22:10	
Beryllium	ug/L	<0.12	1.0	0.12	11/26/24 22:10	
Boron	ug/L	<6.4	100	6.4	11/26/24 22:10	
Calcium	ug/L	<26.9	200	26.9	11/26/24 22:10	
Iron	ug/L	27.7J	50.0	9.1	11/26/24 22:10	
Lithium	ug/L	<3.7	10.0	3.7	11/26/24 22:10	
Magnesium	ug/L	<20.1	50.0	20.1	11/26/24 22:10	
Manganese	ug/L	<0.39	5.0	0.39	11/26/24 22:10	
Molybdenum	ug/L	<1.0	20.0	1.0	11/26/24 22:10	
Potassium	ug/L	<69.7	500	69.7	11/26/24 22:10	
Sodium	ug/L	<115	500	115	11/26/24 22:10	

LABORATORY CONTROL SAMPLE: 3628958

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	975	98	85-115	
Beryllium	ug/L	1000	965	96	85-115	
Boron	ug/L	1000	905	90	85-115	
Calcium	ug/L	10000	9620	96	85-115	
Iron	ug/L	10000	10000	100	85-115	
Lithium	ug/L	1000	979	98	85-115	
Magnesium	ug/L	10000	9210	92	85-115	
Manganese	ug/L	1000	996	100	85-115	
Molybdenum	ug/L	1000	974	97	85-115	
Potassium	ug/L	10000	9260	93	85-115	
Sodium	ug/L	10000	9700	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628987 3628988

Parameter	Units	60464438002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	201	1000	1000	1160	1140	95	94	70-130	1	20	
Beryllium	ug/L	0.15J	1000	1000	955	943	95	94	70-130	1	20	
Boron	ug/L	255	1000	1000	1150	1140	89	88	70-130	1	20	
Calcium	ug/L	65700	10000	10000	75000	75900	93	102	70-130	1	20	
Iron	ug/L	4360	10000	10000	14500	14400	102	100	70-130	1	20	
Lithium	ug/L	8.0J	1000	1000	965	956	96	95	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628987 3628988

Parameter	Units	60464438002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	11800	10000	10000	20800	20800	89	90	70-130	0	20	
Manganese	ug/L	2810	1000	1000	3730	3780	92	98	70-130	1	20	
Molybdenum	ug/L	9.8J	1000	1000	974	961	96	95	70-130	1	20	
Potassium	ug/L	3200	10000	10000	12400	12400	92	93	70-130	0	20	
Sodium	ug/L	10700	10000	10000	19800	20000	91	92	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 916374
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464438001, 60464438002

METHOD BLANK: 3628124 Matrix: Water
Associated Lab Samples: 60464438001, 60464438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	12/03/24 12:05	
Arsenic	ug/L	<0.13	1.0	0.13	12/03/24 12:05	
Chromium	ug/L	<0.30	1.0	0.30	12/03/24 12:05	
Selenium	ug/L	<0.18	1.0	0.18	12/03/24 12:05	

LABORATORY CONTROL SAMPLE: 3628125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.5	101	85-115	
Arsenic	ug/L	40	40.2	100	85-115	
Chromium	ug/L	40	42.2	106	85-115	
Selenium	ug/L	40	40.8	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628126 3628127

Parameter	Units	60464294011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.12	40	40	39.4	40.3	98	101	70-130	2	20	
Arsenic	ug/L	0.69J	40	40	40.2	41.1	99	101	70-130	2	20	
Chromium	ug/L	<0.30	40	40	34.3	35.3	85	88	70-130	3	20	
Selenium	ug/L	0.23J	40	40	38.2	38.3	95	95	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 917790
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464438001, 60464438002

METHOD BLANK: 3634573 Matrix: Water
Associated Lab Samples: 60464438001, 60464438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/26/24 16:21	

LABORATORY CONTROL SAMPLE: 3634574

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	486	97	90-110	

SAMPLE DUPLICATE: 3634575

Parameter	Units	60464465003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	1360	1360	0	10	

SAMPLE DUPLICATE: 3634576

Parameter	Units	60464559003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	96.1	98.5	2	10	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 916953
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464438001, 60464438002

METHOD BLANK: 3630618 Matrix: Water
Associated Lab Samples: 60464438001, 60464438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/19/24 12:12	

LABORATORY CONTROL SAMPLE: 3630619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3630620

Parameter	Units	60464421023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1440	1510	4	10	

SAMPLE DUPLICATE: 3630621

Parameter	Units	60464438002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	311	318	2	10	

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QUALITY CONTROL DATA

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 917889
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60464438001, 60464438002

METHOD BLANK: 3634911 Matrix: Water
Associated Lab Samples: 60464438001, 60464438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/27/24 06:10	
Fluoride	mg/L	<0.12	0.20	0.12	11/27/24 06:10	
Sulfate	mg/L	<0.55	1.0	0.55	11/27/24 06:10	

LABORATORY CONTROL SAMPLE: 3634912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3634913 3634914

Parameter	Units	60464795002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	205	100	100	289	292	84	86	80-120	1	15	
Fluoride	mg/L	0.48	2.5	2.5	1.9	4.0	58	141	80-120	70	15	M1,R1
Sulfate	mg/L	745	250	250	983	993	95	99	80-120	1	15	

MATRIX SPIKE SAMPLE: 3634916

Parameter	Units	60464938002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	107	250	338	92	80-120	
Fluoride	mg/L	ND	125	129	103	80-120	
Sulfate	mg/L	52.3	250	297	98	80-120	

SAMPLE DUPLICATE: 3634915

Parameter	Units	60464795002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	205	208	1	15	
Fluoride	mg/L	0.48	0.48	0	15	
Sulfate	mg/L	745	740	1	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Sample: R-P-31S-DISS **Lab ID: 60464438001** Collected: 11/12/24 09:08 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.211 ± 0.535 (1.17) C:NA T:87%**	pCi/L	12/10/24 14:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.625 ± 0.393 (0.734) C:77% T:86%**	pCi/L	12/06/24 14:41	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Sample: R-P-31S **Lab ID: 60464438002** Collected: 11/11/24 14:58 Received: 11/13/24 05:26 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.0587 ± 0.551 (1.06) C:NA T:97%**	pCi/L	12/10/24 14:16	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.340 ± 0.295 (0.586) C:76% T:97%**	pCi/L	12/06/24 14:41	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 710547
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464438001, 60464438002

METHOD BLANK: 3460196 Matrix: Water
Associated Lab Samples: 60464438001, 60464438002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.586 ± 0.349 (0.332) C:NA T:91%	pCi/L	12/10/24 14:16	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

QC Batch: 710549
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60464438001, 60464438002

METHOD BLANK: 3460199 Matrix: Water
Associated Lab Samples: 60464438001, 60464438002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.330 ± 0.316 (0.640) C:77% T:87%	pCi/L	12/06/24 14:40	

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QUALIFIERS

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN RCPA-CA
Pace Project No.: 60464438

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60464438001	**R-P-31S-DISS**	EPA 200.7	916309	EPA 200.7	916338
60464438002	**R-P-31S**	EPA 200.7	916520	EPA 200.7	916588
60464438001	**R-P-31S-DISS**	EPA 200.8	916374	EPA 200.8	916482
60464438002	**R-P-31S**	EPA 200.8	916374	EPA 200.8	916482
60464438001	**R-P-31S-DISS**	EPA 903.1	710547		
60464438002	**R-P-31S**	EPA 903.1	710547		
60464438001	**R-P-31S-DISS**	EPA 904.0	710549		
60464438002	**R-P-31S**	EPA 904.0	710549		
60464438001	**R-P-31S-DISS**	SM 2320B	917790		
60464438002	**R-P-31S**	SM 2320B	917790		
60464438001	**R-P-31S-DISS**	SM 2540C	916953		
60464438002	**R-P-31S**	SM 2540C	916953		
60464438001	**R-P-31S-DISS**	EPA 300.0	917889		
60464438002	**R-P-31S**	EPA 300.0	917889		

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WO# : 60464438

60464438

DC#_Title: ENV-FRM-LENE-0009_Sample Con		
Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Rocksmith Geoeng

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☑ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T298 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.0/4.4 **Corr. Factor** -0.1 **Corrected** 1.9/4.3

Date and initials of person examining contents: 11/13 hz

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 88727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

6046438

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 6	Invoice To:	Mark Haddock
Project Name:	AMEREN RCPA-CA	Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Missouri

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15854

Prelog / Bottle Ord. ID: EZ 3160598

Preservation non-conformance identified for sample:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8)**	Radium 226 & Radium 228	Sample Comment
~~R-P-21I~~	WT														
~~R-P-21D~~	WT														
~~R-P-22S~~	WT														
~~R-P-22D~~	WT														
~~R-P-29S~~	WT														
~~R-P-29D~~	WT				[redacted]										
~~R-P-31S-DISS~~	WT	G			11/12/24	0908	6			✓	✓	✓	✓	✓	log as its own work order
R-P-31S	WT	G			11/11/24	1458	6			✓	✓	✓	✓	✓	log as its own work order One radium collected on 11/12/24 @ 1017
~~R-CA-DUP-1~~	WT														
~~R-CA-DUP-2~~	WT														

Additional Instructions from Pace®:
APPEND TO PROJECT*
App III and Cat/An Metals* - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B
**App IV Metals - EPA 200.7 -Ba, Be, Li, Mo and 200.8 Metals - Sb, As, Cr, Se

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
2	T198	-0.1	2.0/14.4	1.9/14.3	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	11/12/24 1600	[signature]	11/13/24 0526	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Client: Rocksmith Profile/EZ #: 3160598

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2																																
3																																
4																																
5																																
6																																
7	WT																		1			2	1									
8	1																		1			2	1									
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 6046438

Internal Transfer Chain of Custody

Pace

☐ Rush Multiplier____X
☒ Samples Pre-Logged into eCOC

State Of Origin: MO
Cert. Needed: ☐ Yes ☒ No

Workorder: 60464438 Workorder Name: AMEREN RCPA-CA

Owner Received Date: 11/13/2024 Results Requested By: 12/6/2024

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis Radium 226	Radium 228											LAB USE ONLY
1	R-P-31S-DISS	PS	11/12/2024 09:08	60464438001	Water	2						X	X											001
2	R-P-31S	PS	11/12/2024 14:58	60464438002	Water	2						X	X											002
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1			Evan Laughlin	11/15/24 1030
2				
3				

Comments: KS sample location: 60-R01-S3B

Cooler Temperature on Receipt ____ °C | Custody Seal Y or (N) | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30734709

30734709

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO#: 30734709

PM: MAR Due Date: 12/10/24

CLIENT: PACE_60_LEKS

Client Name: Pace - KS

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 403364528175

Initial / Date

Examined By: PS 11/17/24

Labeled By: PS 11/18/24

Temped By: ___

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

Thermometer Used: ___ Type of Ice: Wet Blue (None)

Cooler Temperature: Observed Temp ___ °C Correction Factor: ___ °C Final Temp: ___ °C

Temp should be above freezing to 6°C

pH paper Lot# 1001041 D.P.D. Residual Chlorine Lot #

Comments:	Yes	No	NA	
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished PS 11/17/24	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dichlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed PS Date/Time of Preservation
				Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed EL Date: 11/15/24 Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Memorandum

January 29, 2025

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23008-24
CC:	Mark Haddock, Jeffrey Ingram		
From:	Grant Morey	**Email:**	grant.morey@rocksmithgeo.com
RE:	**Data Validation Summary, Rush Island Energy Center – RCPA-CA – Data Package 60464438**		

The following is a summary of instances where quality control criteria in the functional guidelines were not met and data qualification was required:

- When a compound was detected in a sample result between the Method Detection Limit (MDL) and Practical Quantification Limit (PQL), the results were recorded at the detection value and qualified as estimates (J).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren RCPA-CA
Project Number: 23008-24
Reviewer: G. Morey
Validation Date: 01/29/2025

Laboratory: Pace Analytical
SDG #: 60464438
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 903.1; EPA 904; SM 2320B (Alkalinity); SM 2540C (TDS); EPA 300.0 (Anions);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ EPA 903.1/904.0 (Radium 226+228)
Sample Names R-P-31S-DISS and R-P-31S

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			11/11/2024 - 11/12/2024
b) Sampling team indicated?	x			JTR & JDQ
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	x			
b) Was the COC signed by both field and laboratory personnel?	x			
c) Were samples received in good condition?	x			

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	x			
b) Were hold times met for sample analysis?	x			
c) Were the correct preservatives used?	x			
d) Was the correct method used?	x			
e) Were appropriate reporting limits achieved?	x			
f) Were any sample dilutions noted?	x			See Notes
g) Were any matrix problems noted?		x		

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	x			See Notes
b) Were analytes detected in the field blank(s)?			x	Noted in other CA data packet
c) Were analytes detected in the equipment blank(s)?			x	
d) Were analytes detected in the trip blank(s)?			x	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	x			
b) Were the proper analytes included in the LCS?	x			
c) Was the LCS accuracy criteria met?	x			

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?			x	Noted in other CA data packet
b) Were field dup. precision criteria met (note RPD)?			x	
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			See Notes
d) Were lab dup. precision criteria met (note RPD)?	x			See Notes

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?			x	
b) Was the %D within control limits?			x	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
b) Was MSD accuracy criteria met?		x		See Notes
Recovery could not be calculated since sample contained high concentration of analyte?			x	
c) Were MS/MSD precision criteria met?	x			

Comments/Notes:

General:

Sulfate diluted in both samples samples; no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blanks:

3627818: Iron (11.0J), associated with sample -001. Result > RL and 10x blank, no qualification necessary.

3628957: iron (27.7J), associated with sample -002. Result > RL and 10x blank, no qualification necessary.

3460196: radium-226 (0.586), associated with samples -001 and -002. All results are non-detect, no qualification necessary.

Duplicates:

Lab duplicate max RPD: 20%: metals; 15%: chloride, fluoride, sulfate; 10%: alkalinity, TDS. Lab duplicate RPDs within control limits.

MS/MSD:

3634913/3634914: MS recovery low, MSD recovery high, and RPD exceeds control limits for fluoride. Associated with unrelated sample; no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: Grant Morey Date: 1/29/2025

Appendix B

November 2023 Assessment Monitoring Statistical Evaluation

Memorandum

March 8, 2024

To:	Ameren Missouri – Lisa Meyer	**Project Number:**	23008
CC:	Ameren Missouri - Susan Knowles, Craig Giesmann, Charlie Henderson, Bill Kutosky		
From:	Rocksmith Geoengineering - Mark Haddock, P.E., Jeff Ingram, R.G., Grant Morey	**Email:**	Jeff.Ingram@Rocksmithgeo.com
RE:	**Assessment Monitoring Statistical Evaluation, RCPA Surface Impoundment Rush Island Energy Center, Jefferson County, Missouri**		

This Technical Memorandum provides the results of the Assessment Monitoring Statistical Evaluation for the November 2023 sampling event at the RCPA Surface Impoundment at the Rush Island Energy Center located in Jefferson County, Missouri. Included in the memorandum is a summary of constituents that are present at a Statistically Significant Level (SSL), a list of site-specific Groundwater Protection Standards (**Table 1**), and the Sanitas Technologies™ (Sanitas) statistical software output for each of the Appendix IV parameters (**Appendix A and Appendix B**).

The Appendix IV constituents were evaluated for SSLs using the methods and procedures outlined in the Statistical Analysis Plan (SAP). In addition to outliers noted in previous statistical evaluations, the following outlier was removed prior to the calculation of confidence limits:

- Fluoride
    - R-MW-6 at non-detect (<0.19 milligrams per liter [mg/L]) on 1/4/2019: result is statistically lower than other fluoride results at the same monitoring well. This low result is not consistent with previous or subsequent fluoride results at the well and is an outlier.

An analysis of the outliers removed from the dataset to-date was completed. The following previously identified outliers were added back into the dataset prior to the calculation of confidence intervals in **Appendix A** and trending confidence bands in **Appendix B**:

- Fluoride
    - R-MW-3 at 0.63 mg/L on 9/6/2016: removed during the statistical evaluation for the July 2019 sampling event because the result was statistically lower than other fluoride results at the same monitoring well. Based on subsequent sampling results, the low result was confirmed, and the result is no longer an outlier.
    - R-MW-6 at 0.45 mg/L on 1/7/2021: removed during the statistical evaluation for the April 2023 sampling event because the result was statistically higher than other fluoride results at the same

monitoring well. Based on subsequent sampling results, the high result was confirmed, and the result is no longer an outlier.

- Molybdenum
    - R-MW-2 at 295 micrograms per liter (µg/L) on 4/6/2020: removed during the statistical evaluation for the April 2020 sampling event because the result was statistically higher than other molybdenum results at the same monitoring well. Based on subsequent sampling results, the high result was confirmed, and the result is no longer an outlier.

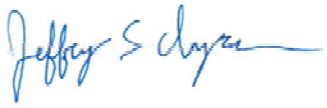
Based on the results from the confidence interval and trend analysis, no new SSLs were noted. SSLs at the RCPA Surface Impoundment as of November 2023 continue to be:

- Arsenic at R-MW-2, R-MW-3, and R-MW-7/R-MW-7(R)
- Molybdenum at R-MW-2 and R-MW-3

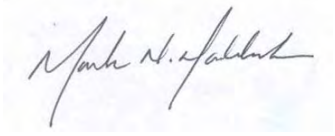
Rocksmith appreciates this opportunity to provide hydrogeological and engineering support services to Ameren. If you have any questions or comments regarding the information provided, please contact the undersigned.

Sincerely,

Rocksmith Geoengineering, LLC



Jeff Ingram, R.G.
Senior Geologist, Partner



Mark Haddock, P.E., R.G.
Principal Engineer, Senior Partner

Attachments

Tables

Table 1 – RCPA Groundwater Protection Standards

Appendices

Appendix A – Sanitas Confidence Interval Statistical Output

Appendix B – Sanitas Trending Confidence Bands Statistical Output

Tables

Table 1 - RCPA Groundwater Protection Standards
RCPA Surface Impoundment
Rush Island Energy Center

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring[6]
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	30	30
Barium	µg/L	2000	2000	548.6
Beryllium	µg/L	4	4	DQR
Cadmium	µg/L	5	5	DQR
Chromium	µg/L	100	100	2.363
Cobalt	µg/L	6	6	DQR
Fluoride	mg/L	4	4	0.2896
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	64.7	64.7
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	2.297
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter
2. mg/L - milligrams per liter
3. pCi/L - picocuries per liter
4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Updated January 9, 2023 at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.
5. Health Based Groundwater Protection Standards (GWPS) were adoped for Appendix IV parameters without an MCL (i.e. cobalt, lithium, molybdenum, and lead). Information available at https://www.epa.gov/coalash/coal-ash-rule.
6. Values were calculated using statistical methods outlined for Detection Monitoring and are used for returning to Detection Monitoring based on available data to date.
7. DQR - Double Quantification Rule. If all baseline data are less than the Practical Quantitation Limit (PQL), then the DQR will be used. More information on the DQR is provided in the Statistical Analysis Plan.
8. Site GWPS is either the MCL/Health Based GWPS or based on background levels (calculated as described in the Statistical Analysis Plan for Assessment Monitoring), whichever is higher.
9. GWPS and background values calculated using results up through April 2023 from monitoring wells MW-B1 and MW-B2.

ROCKSMITH GEOENGINEERING

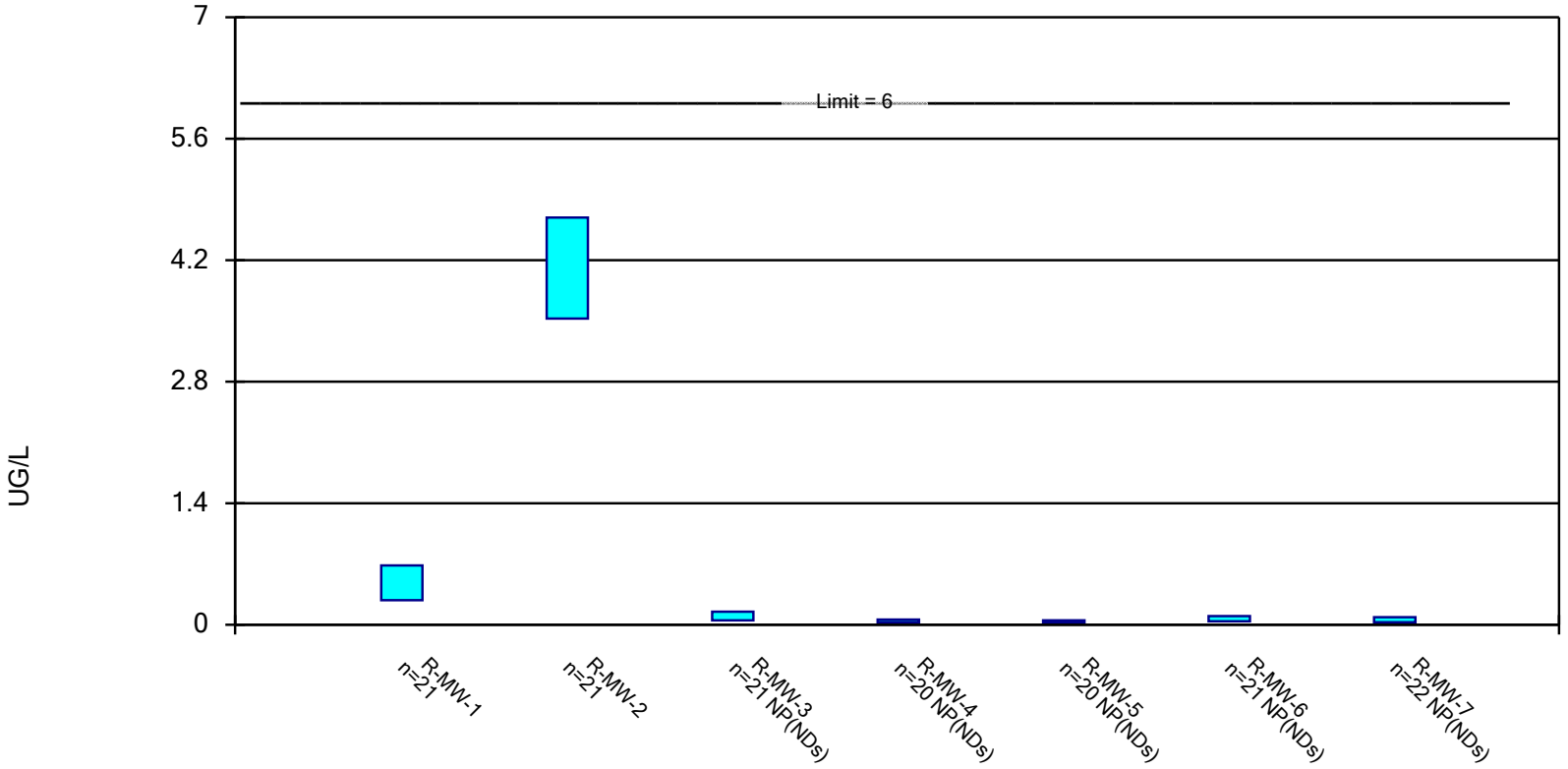
Prepared by: GTM
Checked by: JSI
Reviewed by: MNH

Appendix A
Sanitas Confidence Interval Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



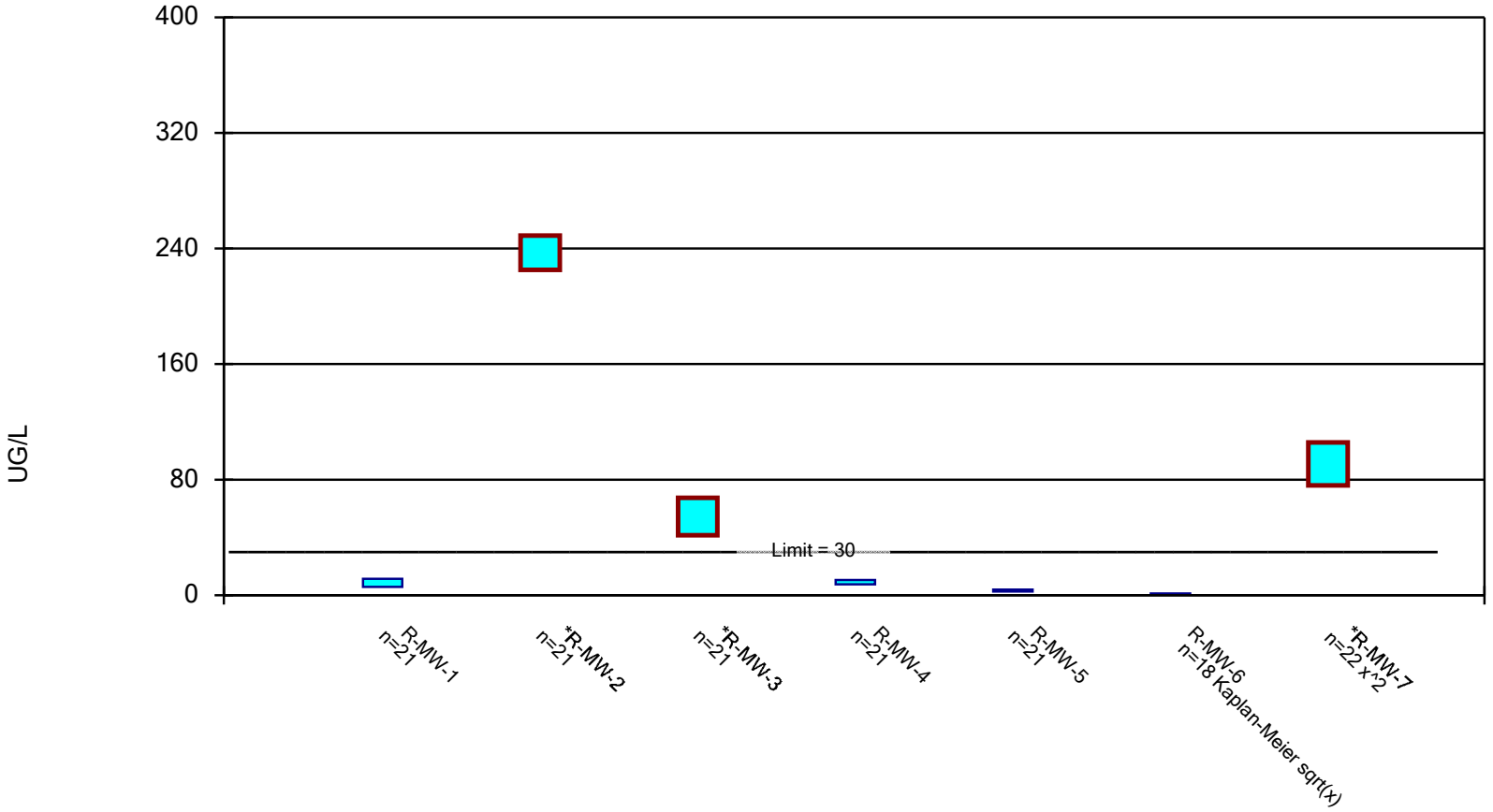
Constituent: ANTIMONY, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

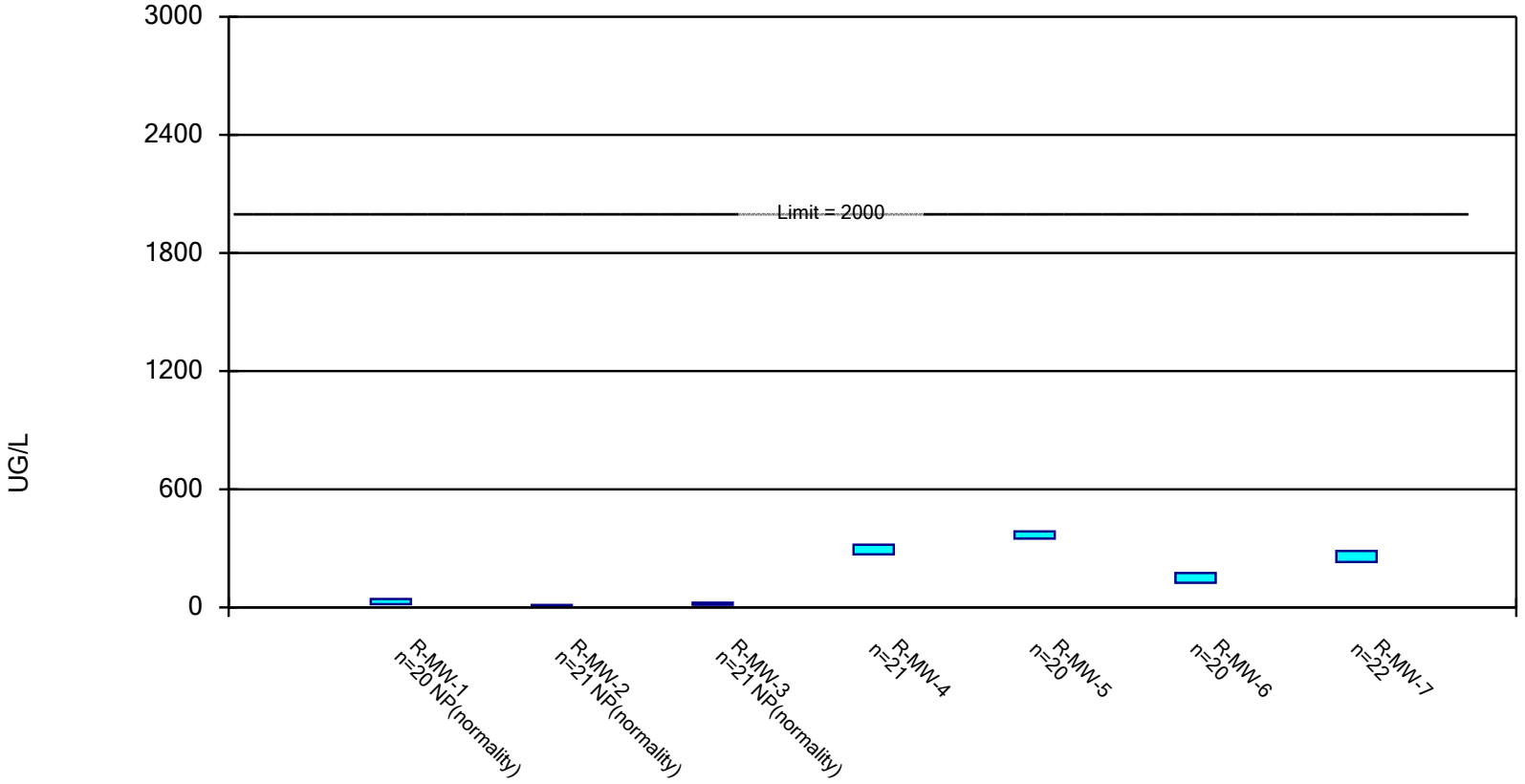


Constituent: ARSENIC, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval

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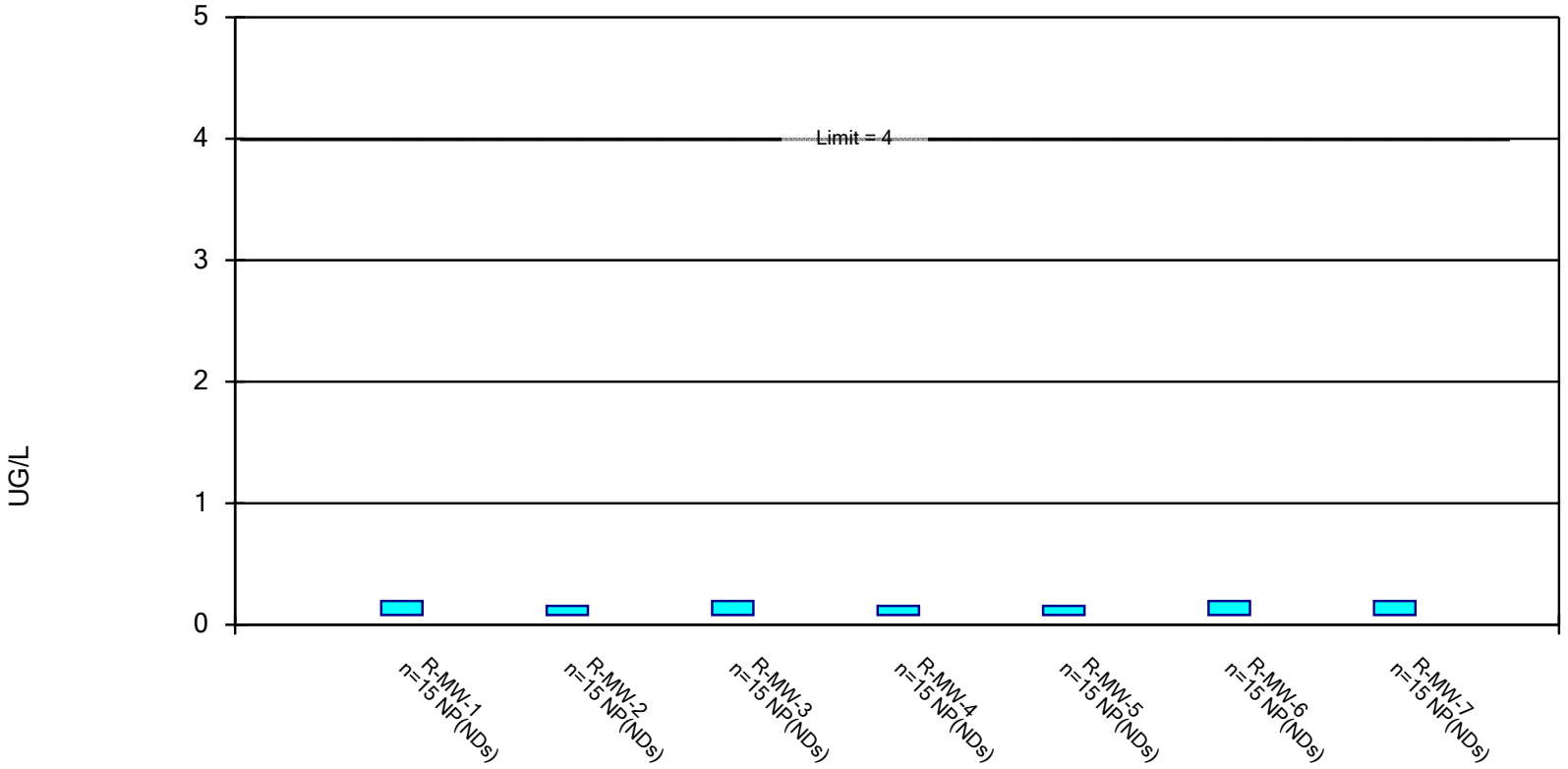


Constituent: BARIUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



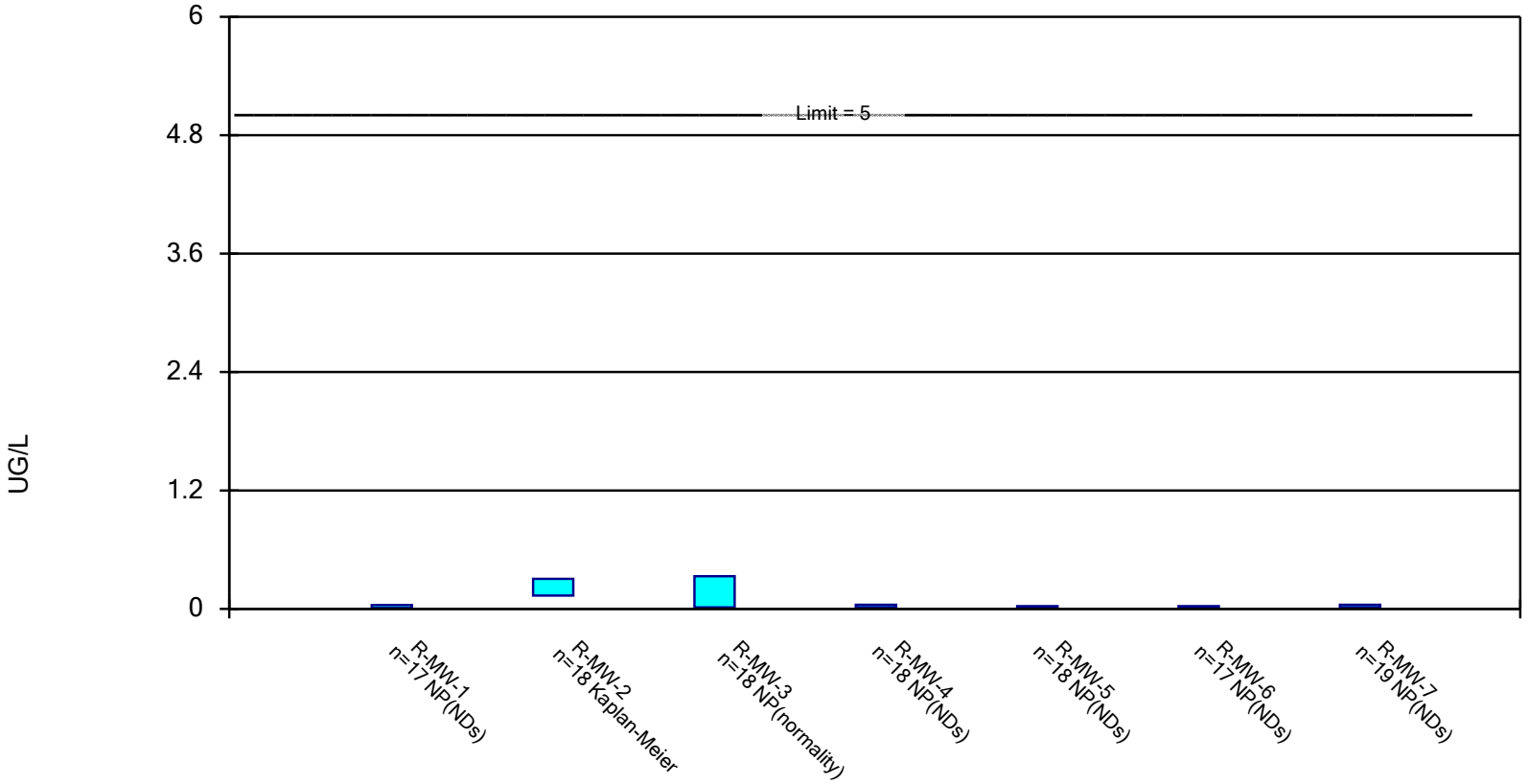
Constituent: BERYLLIUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

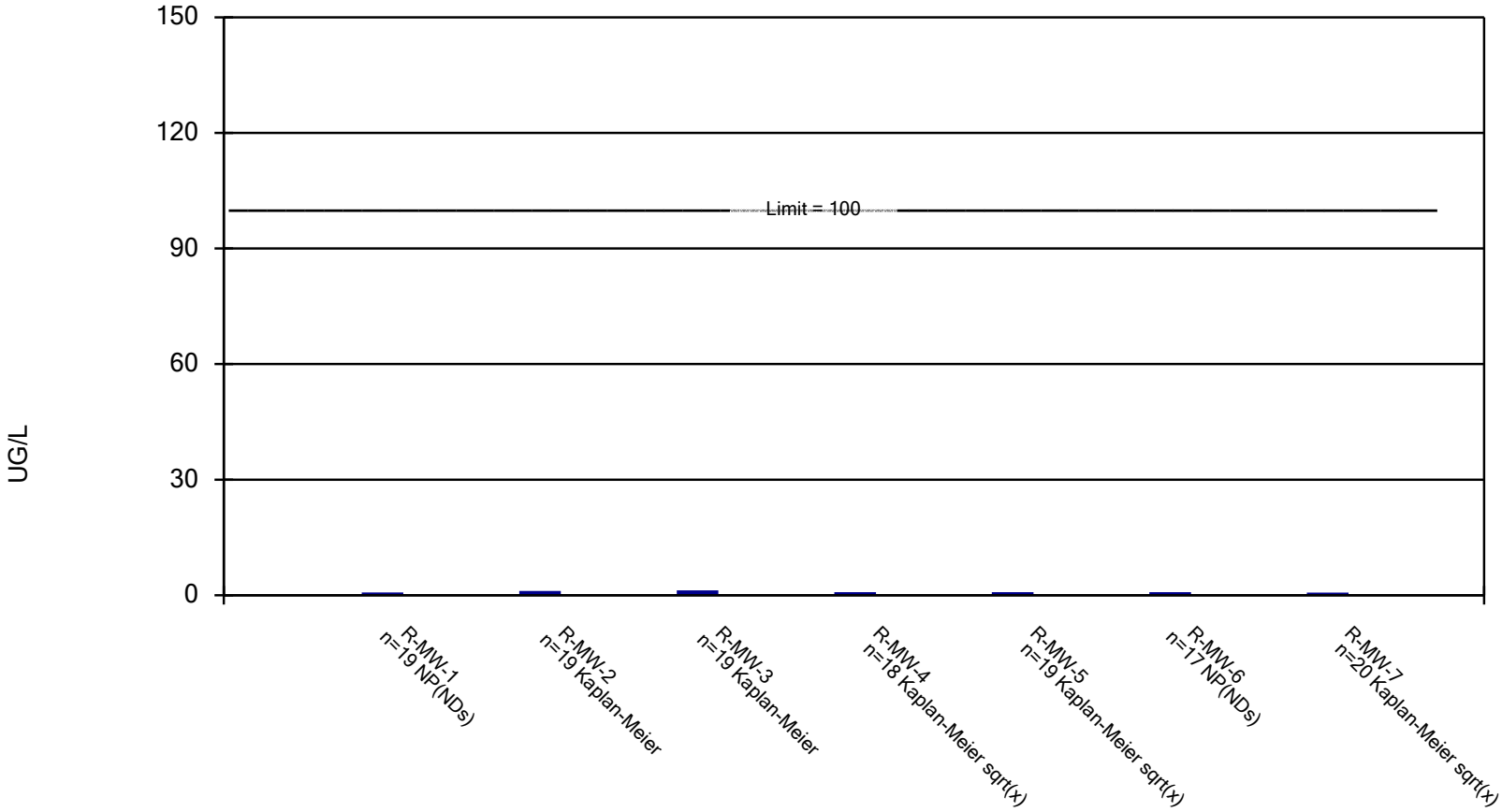


Constituent: CADMIUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



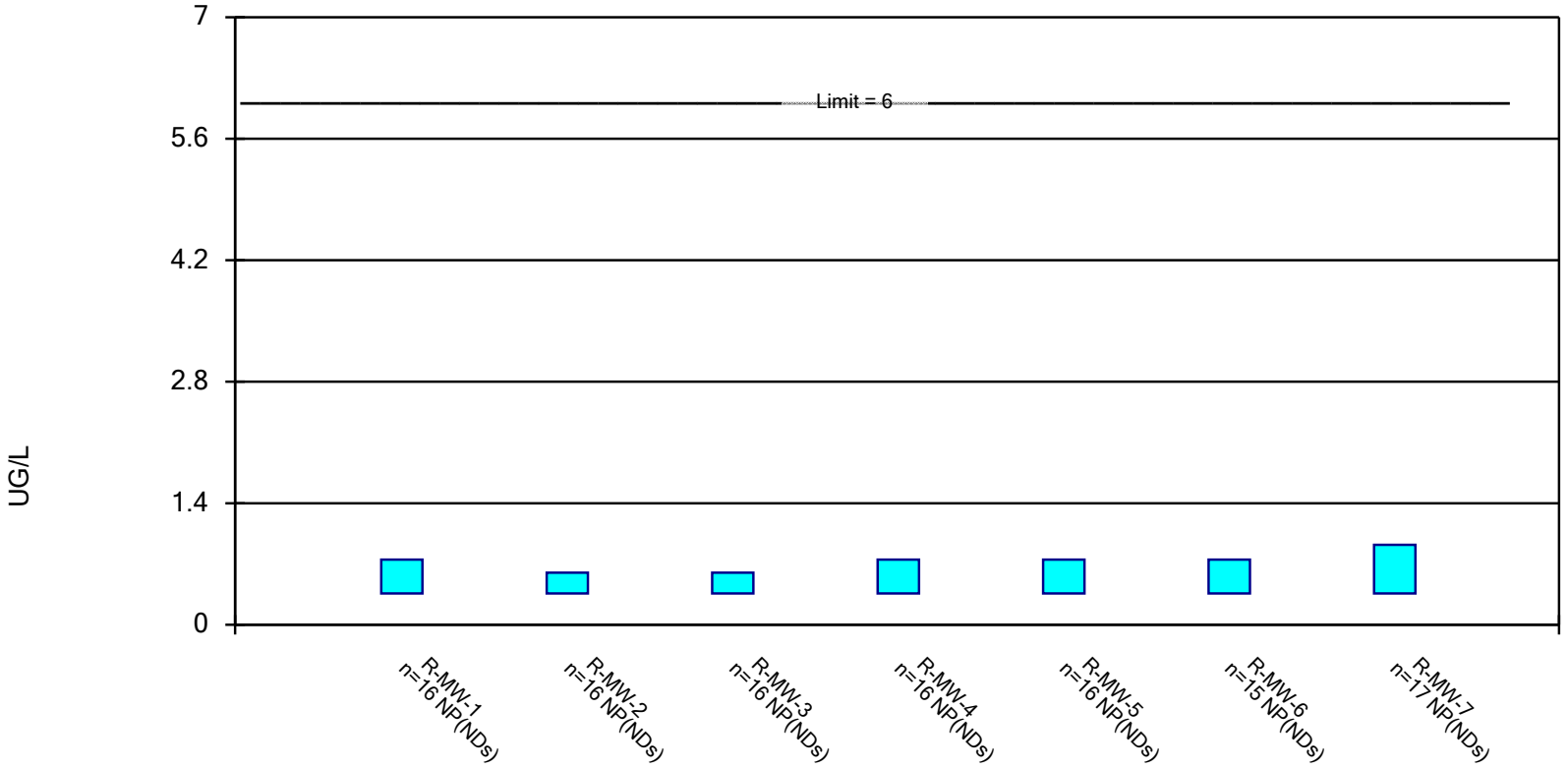
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



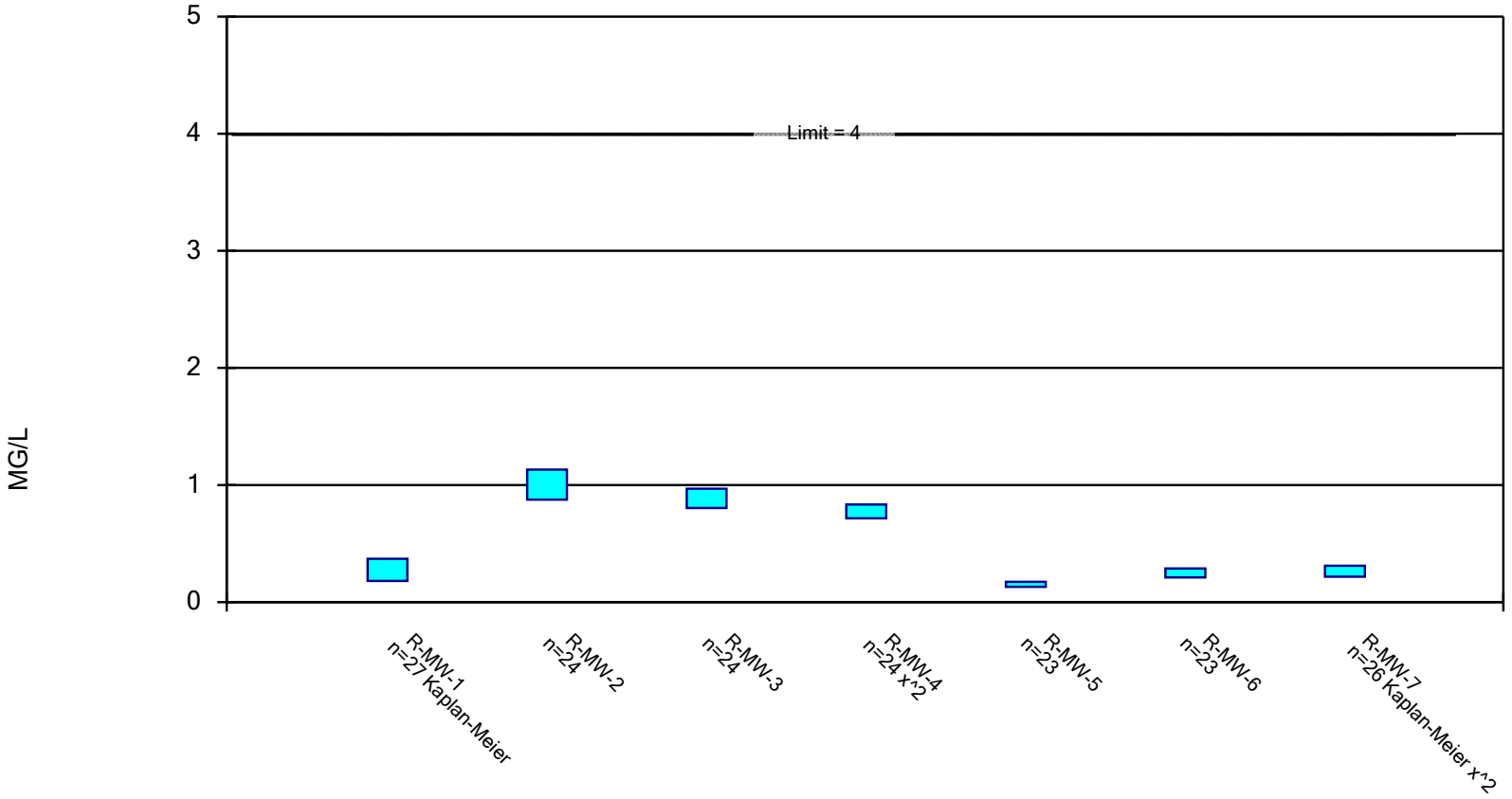
Constituent: COBALT, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



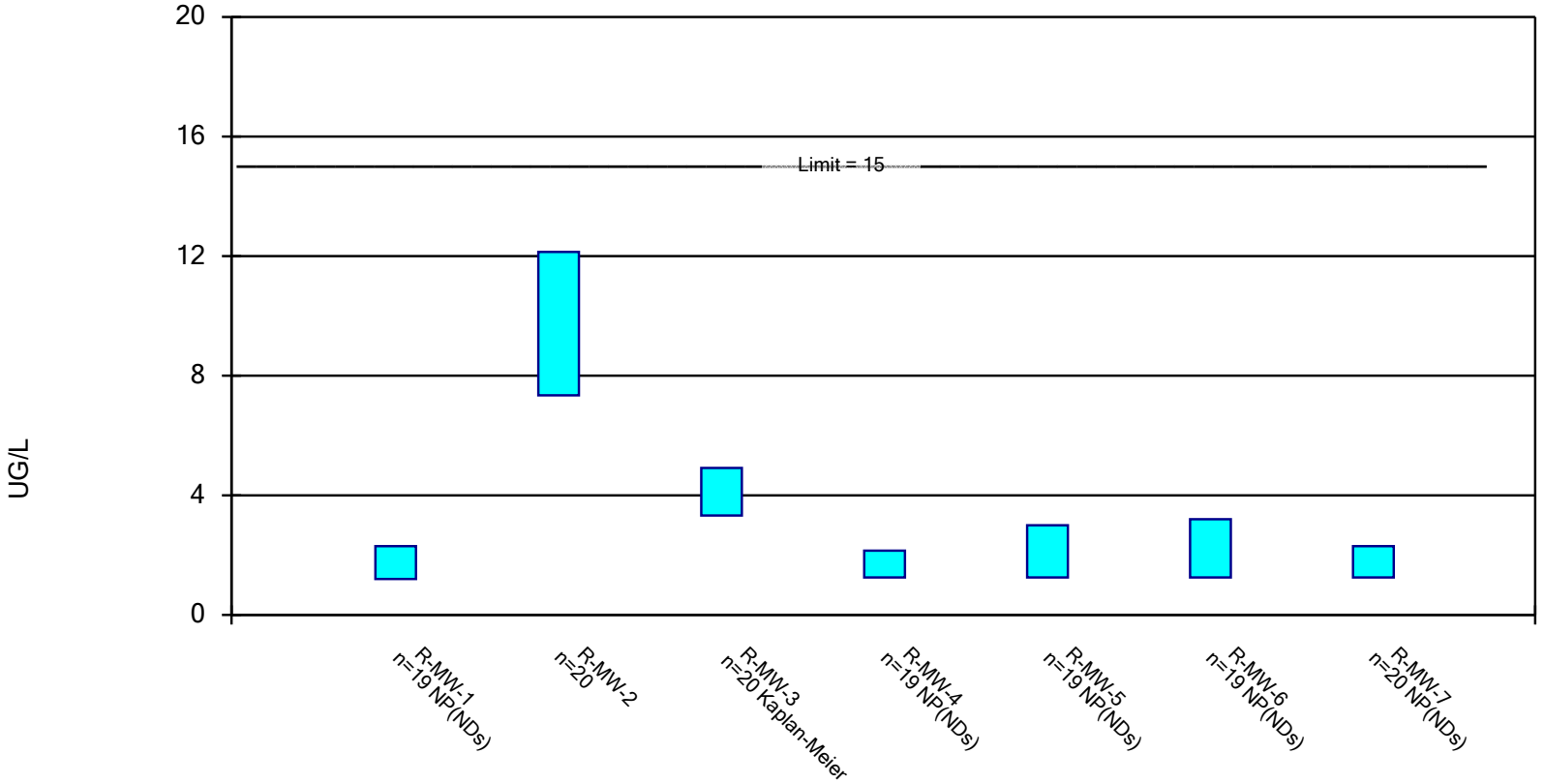
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



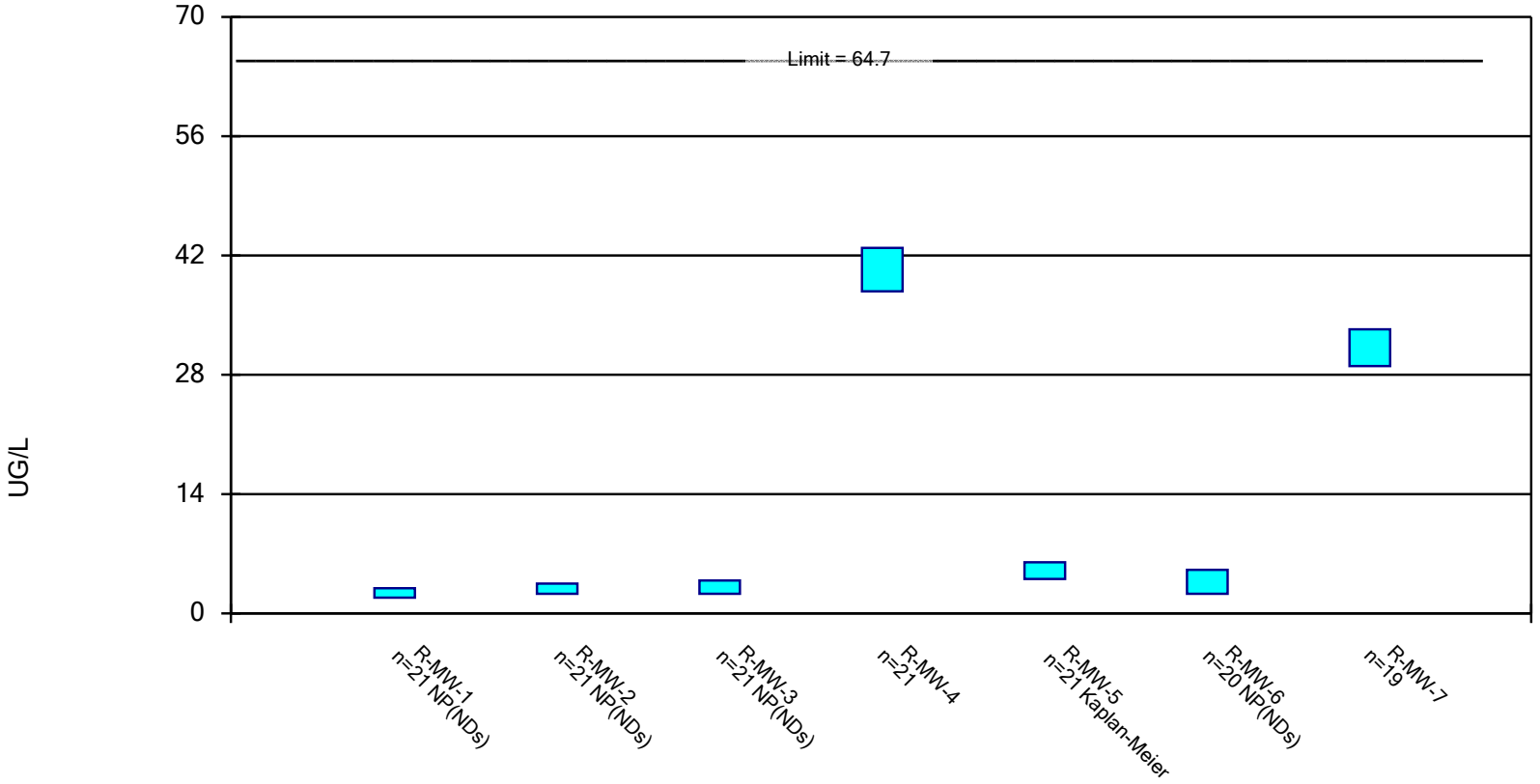
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



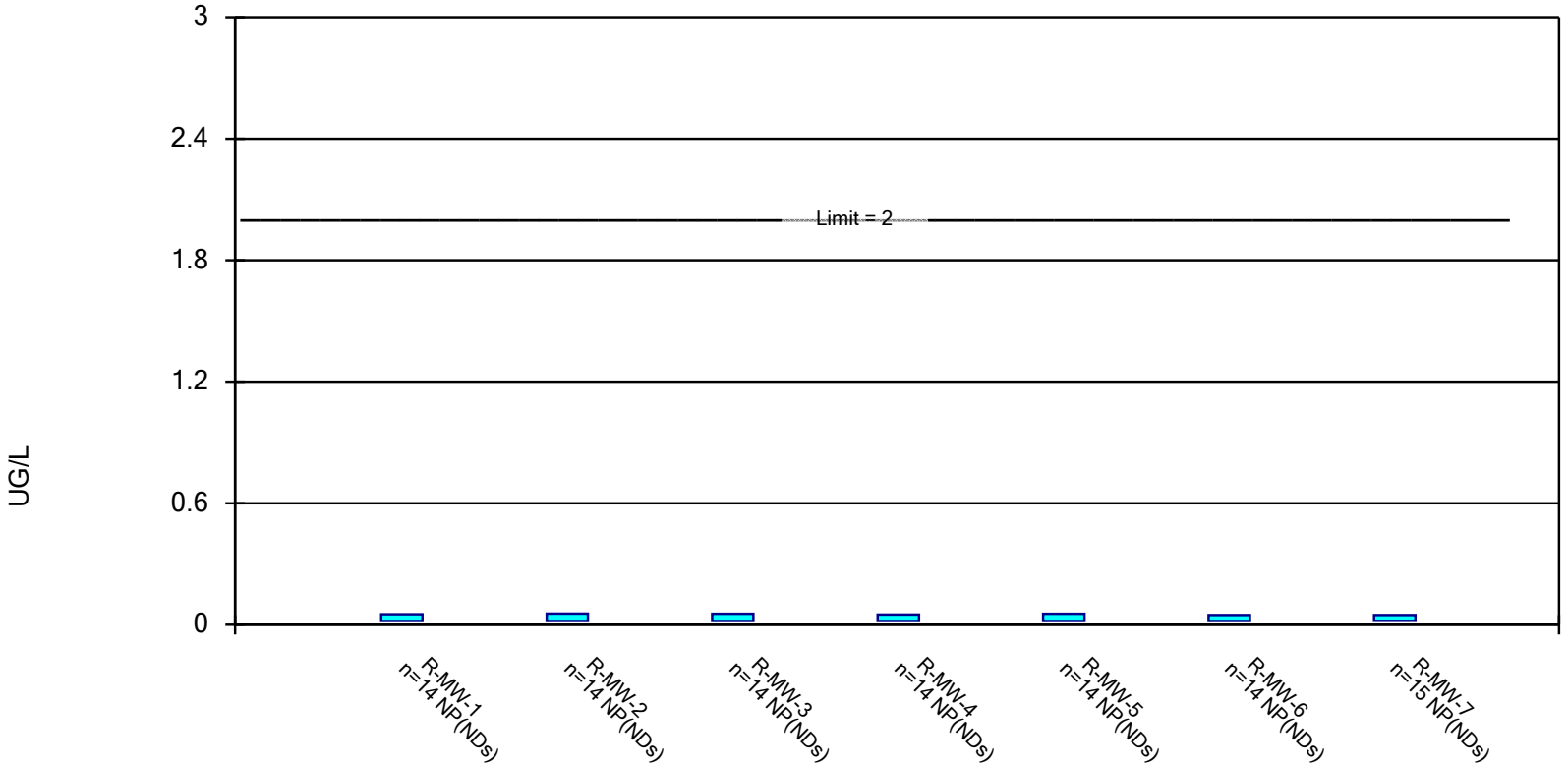
Constituent: LITHIUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



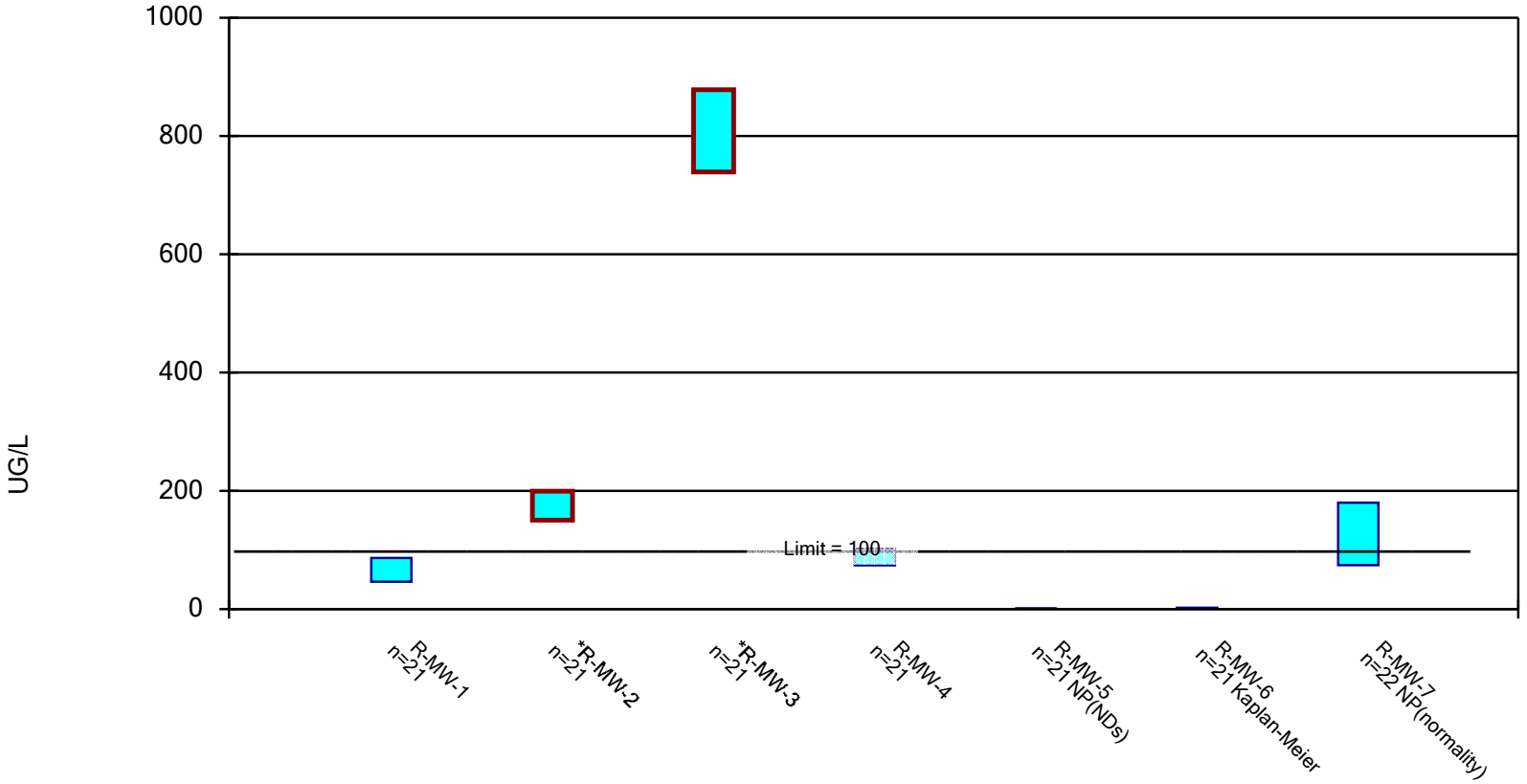
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



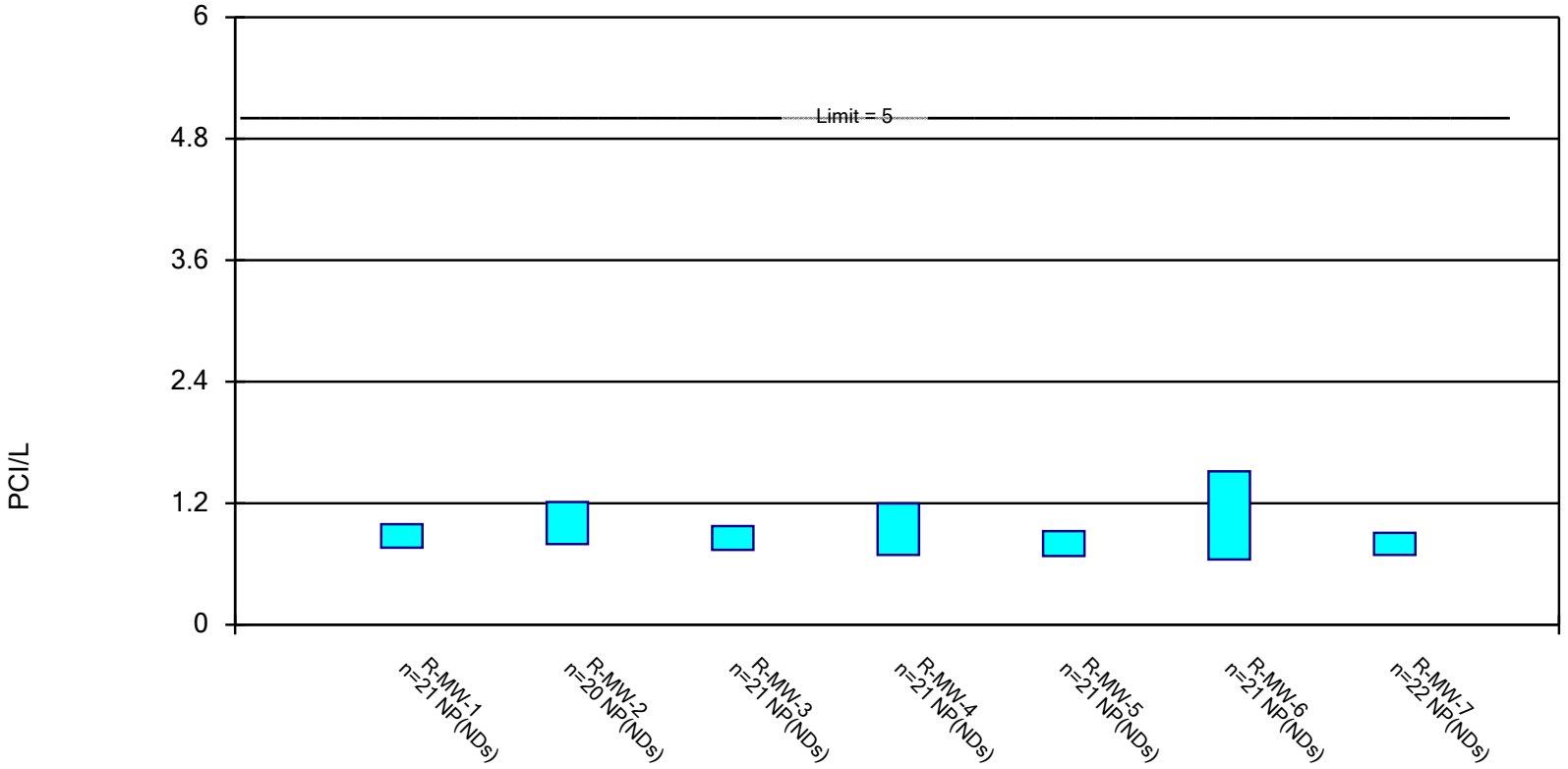
Constituent: MOLYBDENUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



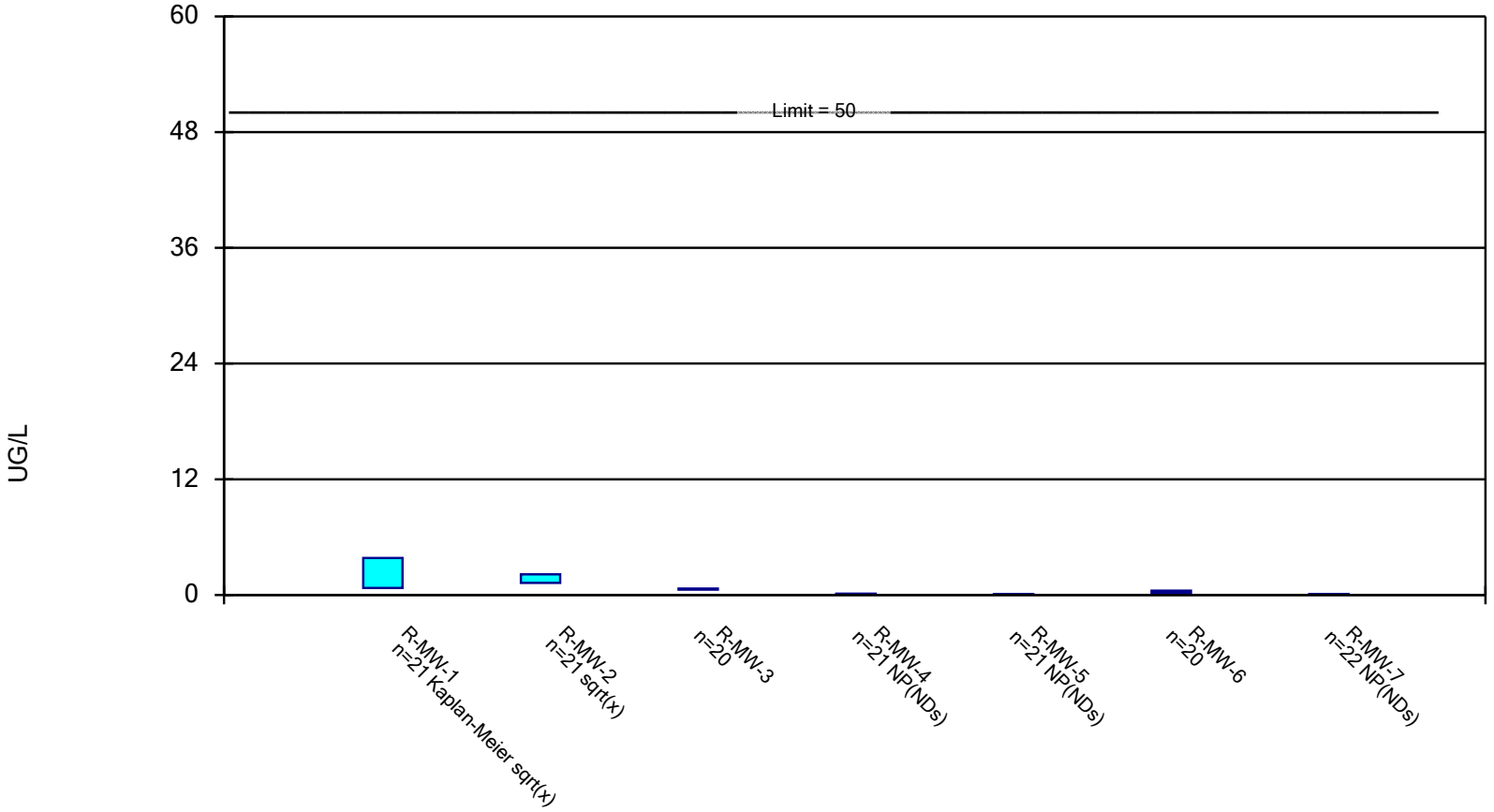
Constituent: RADIUM [226 + 228] Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

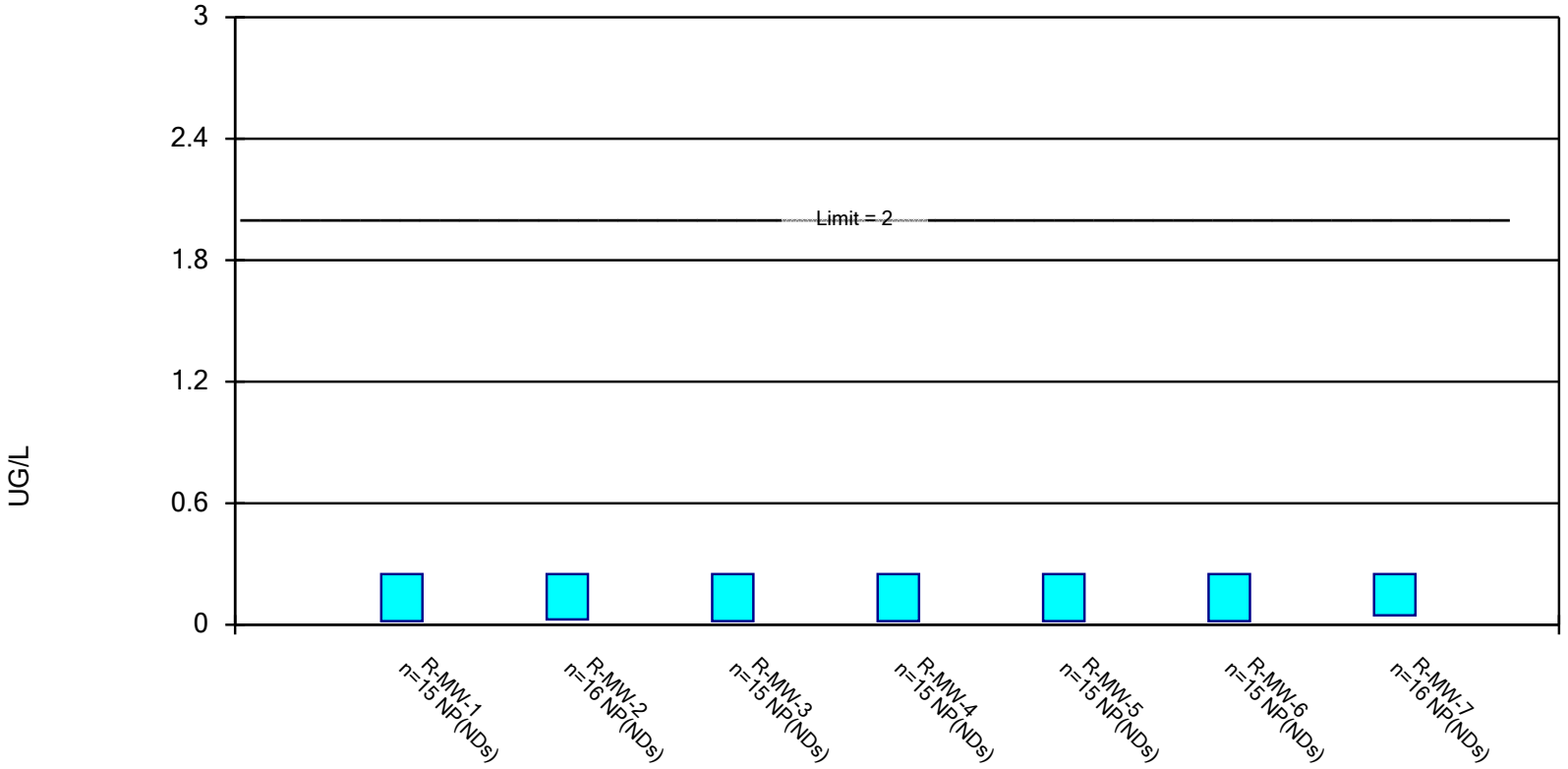


Constituent: SELENIUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: THALLIUM, TOTAL Analysis Run 3/4/2024 11:12 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/4/2024, 11:14 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	R-MW-1	0.6826	0.2819	6	No	21	14.29	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-MW-2	4.692	3.527	6	No	21	0	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-MW-3	0.15	0.05	6	No	21	52.38	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-4	0.06	0.029	6	No	20	85	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-5	0.05	0.029	6	No	20	95	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-6	0.1	0.039	6	No	21	66.67	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-7	0.086	0.029	6	No	22	81.82	No	0.01	NP (NDs)
ARSENIC, TOTAL (UG/L)	R-MW-1	11.4	5.768	30	No	21	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	**R-MW-2**	**248.9**	**225.2**	**30**	**Yes**	**21**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	**R-MW-3**	**67.45**	**41.57**	**30**	**Yes**	**21**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-MW-4	10.5	7.501	30	No	21	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-MW-5	3.904	2.562	30	No	21	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-MW-6	1.182	0.3125	30	No	18	16.67	sqrt(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	**R-MW-7**	**105.8**	**76.01**	**30**	**Yes**	**22**	**0**	**x^2**	**0.01**	**Param.**
BARIUM, TOTAL (UG/L)	R-MW-1	42.2	16	2000	No	20	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	R-MW-2	12.4	9.8	2000	No	21	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	R-MW-3	23.8	13.4	2000	No	21	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	R-MW-4	318.3	269.8	2000	No	21	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-5	386.2	349.4	2000	No	20	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-6	174.3	124.7	2000	No	20	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-7	286.5	230.9	2000	No	22	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	R-MW-1	0.195	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-2	0.155	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-3	0.195	0.08	4	No	15	93.33	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-4	0.155	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-5	0.155	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-6	0.195	0.08	4	No	15	93.33	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-7	0.195	0.08	4	No	15	93.33	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-1	0.039	0.009	5	No	17	82.35	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-2	0.304	0.1345	5	No	18	16.67	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-MW-3	0.33	0.0145	5	No	18	44.44	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	R-MW-4	0.041	0.0145	5	No	18	77.78	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-5	0.028	0.0145	5	No	18	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-6	0.028	0.009	5	No	17	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-7	0.041	0.0145	5	No	19	78.95	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-MW-1	0.42	0.08	100	No	19	57.89	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-MW-2	0.7872	0.3794	100	No	19	26.32	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-3	0.9554	0.3732	100	No	19	26.32	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-4	0.4799	0.177	100	No	18	38.89	sqrt(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-5	0.496	0.1683	100	No	19	31.58	sqrt(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-6	0.5	0.08	100	No	17	58.82	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-MW-7	0.3876	0.137	100	No	20	45	sqrt(x)	0.01	Param.
COBALT, TOTAL (UG/L)	R-MW-1	0.75	0.36	6	No	16	87.5	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-2	0.6	0.36	6	No	16	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-3	0.6	0.36	6	No	16	93.75	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-4	0.75	0.36	6	No	16	81.25	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-5	0.75	0.36	6	No	16	87.5	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-6	0.75	0.36	6	No	15	93.33	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-7	0.92	0.36	6	No	17	76.47	No	0.01	NP (NDs)
FLUORIDE, TOTAL (MG/L)	R-MW-1	0.3701	0.1813	4	No	27	18.52	No	0.01	Param.

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/4/2024, 11:14 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
FLUORIDE, TOTAL (MG/L)	R-MW-2	1.131	0.8753	4	No	24	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-3	0.9681	0.8044	4	No	24	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-4	0.8335	0.7154	4	No	24	0	x^2	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-5	0.1729	0.1302	4	No	23	8.696	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-6	0.2877	0.2114	4	No	23	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-7	0.3106	0.2169	4	No	26	15.38	x^2	0.01	Param.
LEAD, TOTAL (UG/L)	R-MW-1	2.3	1.2	15	No	19	100	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-2	12.14	7.347	15	No	20	5	No	0.01	Param.
LEAD, TOTAL (UG/L)	R-MW-3	4.916	3.325	15	No	20	40	No	0.01	Param.
LEAD, TOTAL (UG/L)	R-MW-4	2.15	1.25	15	No	19	94.74	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-5	3	1.25	15	No	19	84.21	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-6	3.2	1.25	15	No	19	78.95	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-7	2.3	1.25	15	No	20	90	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-1	2.95	1.85	64.7	No	21	95.24	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-2	3.5	2.3	64.7	No	21	80.95	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-3	3.85	2.3	64.7	No	21	80.95	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-4	42.9	37.8	64.7	No	21	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-MW-5	5.992	4.034	64.7	No	21	47.62	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-MW-6	5.1	2.3	64.7	No	20	70	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-7	33.33	29.03	64.7	No	19	0	No	0.01	Param.
MERCURY, TOTAL (UG/L)	R-MW-1	0.052	0.0185	2	No	14	92.86	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-2	0.055	0.0185	2	No	14	92.86	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-3	0.054	0.0185	2	No	14	92.86	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-4	0.05	0.0185	2	No	14	92.86	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-5	0.054	0.0185	2	No	14	92.86	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-6	0.048	0.0185	2	No	14	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-7	0.048	0.0195	2	No	15	100	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-MW-1	86.37	46.29	100	No	21	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-MW-2**	**199.5**	**150.3**	**100**	**Yes**	**21**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-MW-3**	**878.3**	**739.2**	**100**	**Yes**	**21**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-MW-4	102	73.94	100	No	21	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	R-MW-5	1.1	0.45	100	No	21	80.95	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-MW-6	2.191	0.9129	100	No	21	38.1	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	R-MW-7	180	74.4	100	No	22	0	No	0.01	NP (normality)
RADIUM [226 + 228] (PCI/L)	R-MW-1	0.992	0.7615	5	No	21	100	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-2	1.211	0.797	5	No	20	95	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-3	0.9735	0.7395	5	No	21	95.24	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-4	1.197	0.689	5	No	21	80.95	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-5	0.925	0.679	5	No	21	80.95	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-6	1.515	0.645	5	No	21	76.19	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-7	0.9065	0.689	5	No	22	90.91	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-MW-1	3.836	0.7318	50	No	21	33.33	sqrt(x)	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-2	2.137	1.255	50	No	21	0	sqrt(x)	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-3	0.6658	0.5552	50	No	20	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-4	0.13	0.09	50	No	21	66.67	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-MW-5	0.09	0.043	50	No	21	100	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-MW-6	0.448	0.2285	50	No	20	15	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-7	0.097	0.06	50	No	22	81.82	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-1	0.25	0.018	2	No	15	93.33	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-2	0.25	0.026	2	No	16	100	No	0.01	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/4/2024, 11:14 AM

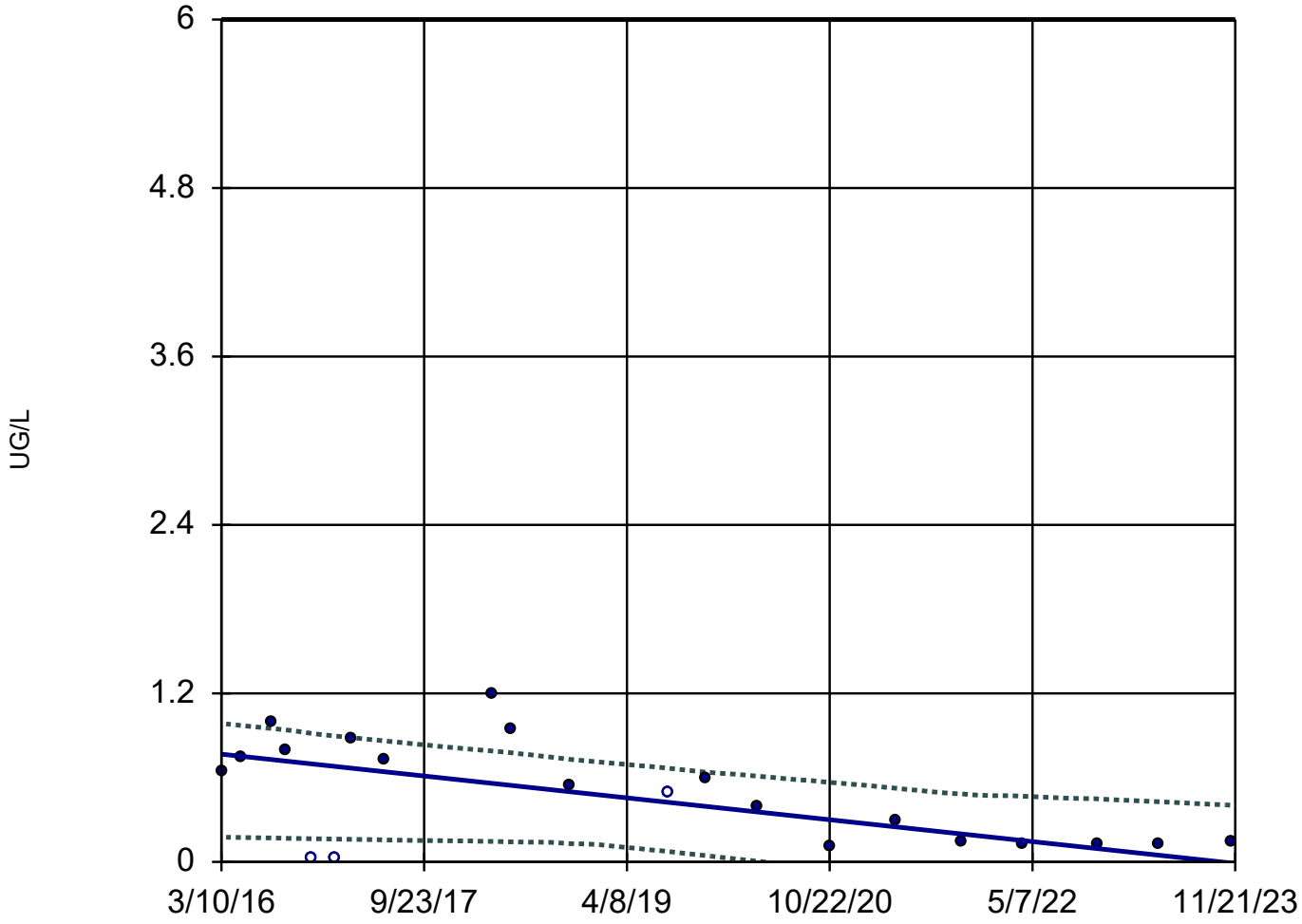
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
THALLIUM, TOTAL (UG/L)	R-MW-3	0.25	0.018	2	No	15	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-4	0.25	0.018	2	No	15	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-5	0.25	0.018	2	No	15	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-6	0.25	0.018	2	No	15	93.33	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-7	0.25	0.0465	2	No	16	93.75	No	0.01	NP (NDs)

Appendix B
Sanitas Trending Confidence Bands Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 21

Slope = -0.1011 units per year.

Mann-Kendall statistic = -85
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

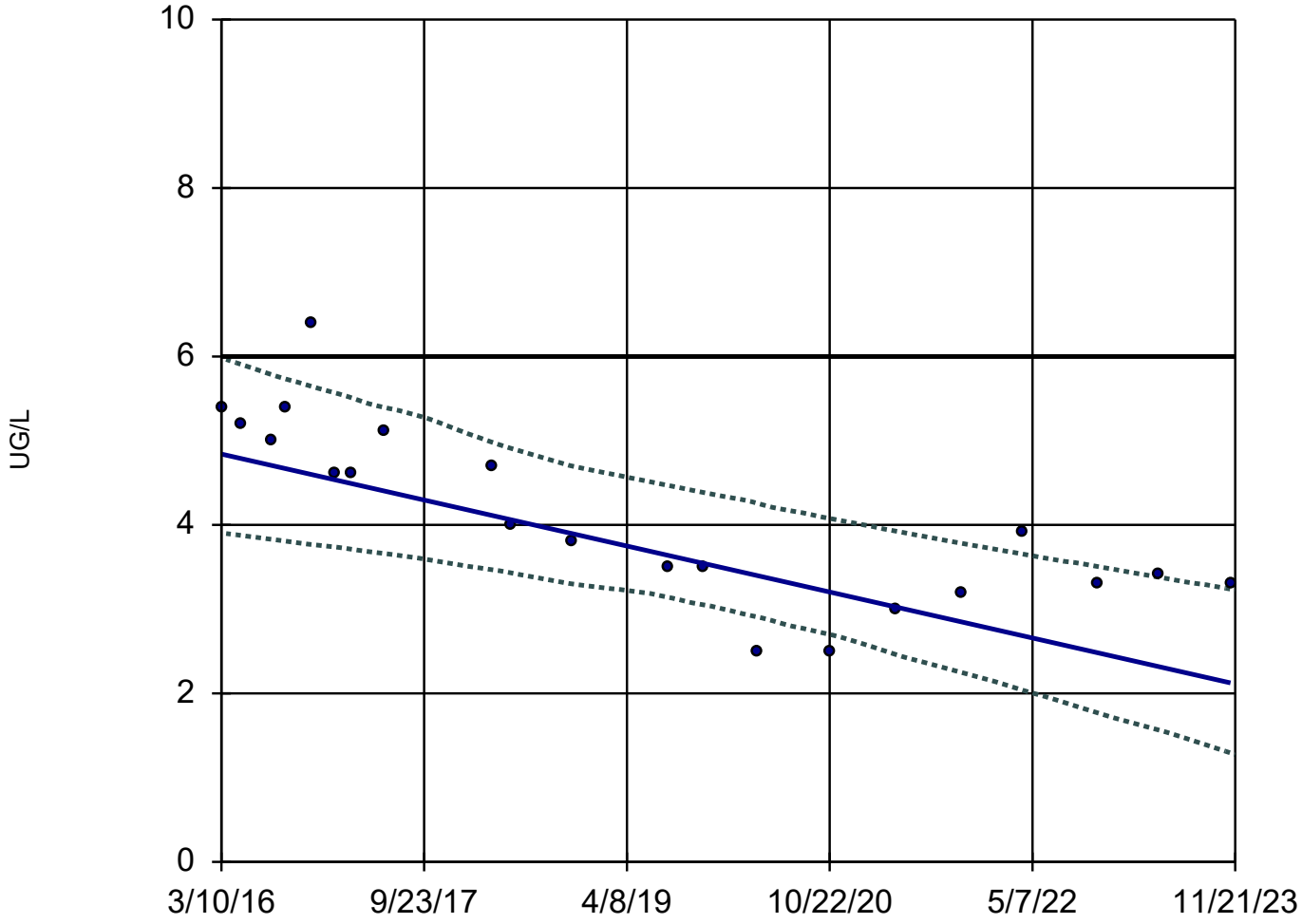
Constituent: ANTIMONY, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-2



n = 21

Slope = -0.3541 units per year.

Mann-Kendall statistic = -133 critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

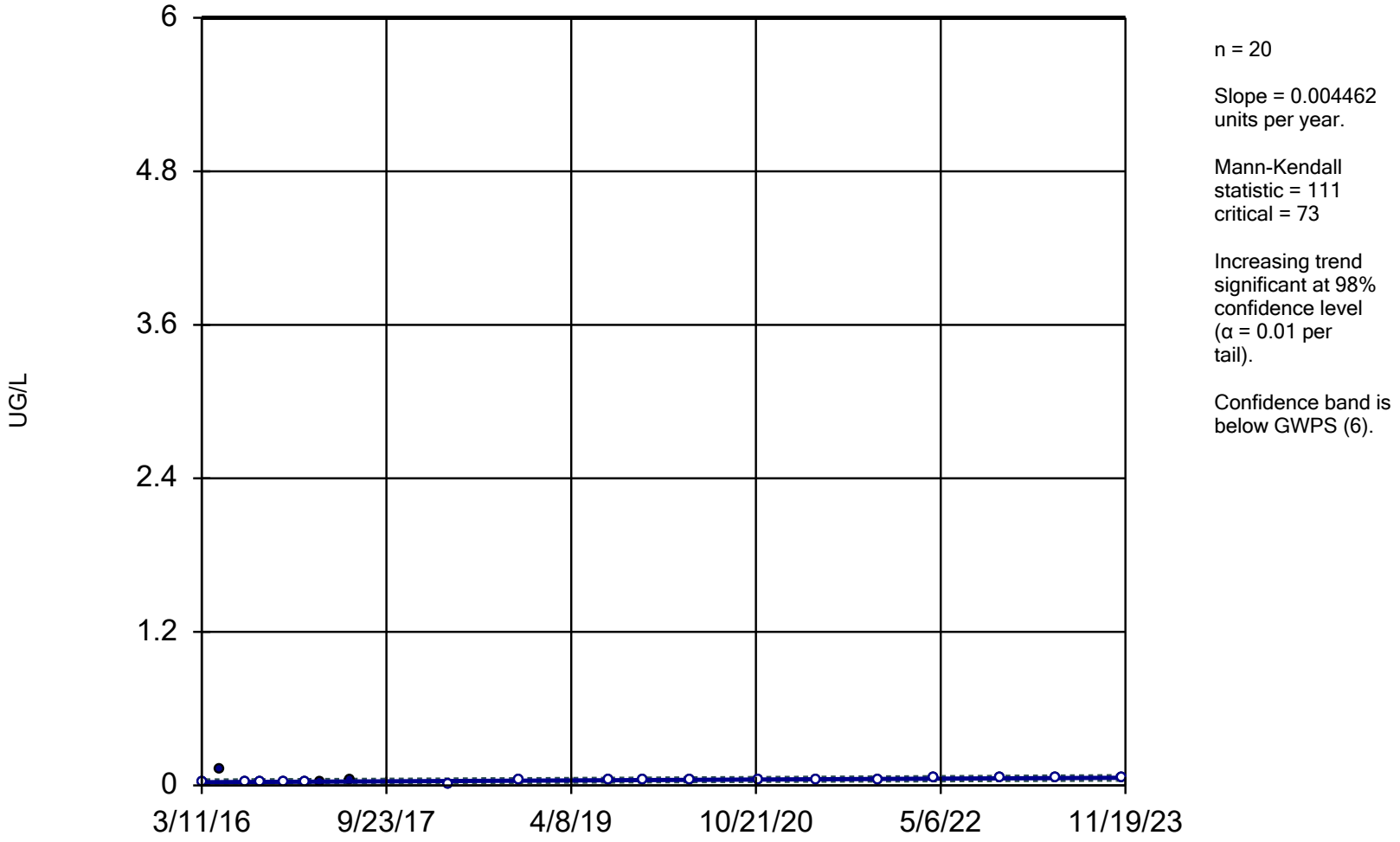
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-4



n = 20

Slope = 0.004462 units per year.

Mann-Kendall statistic = 111
critical = 73

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

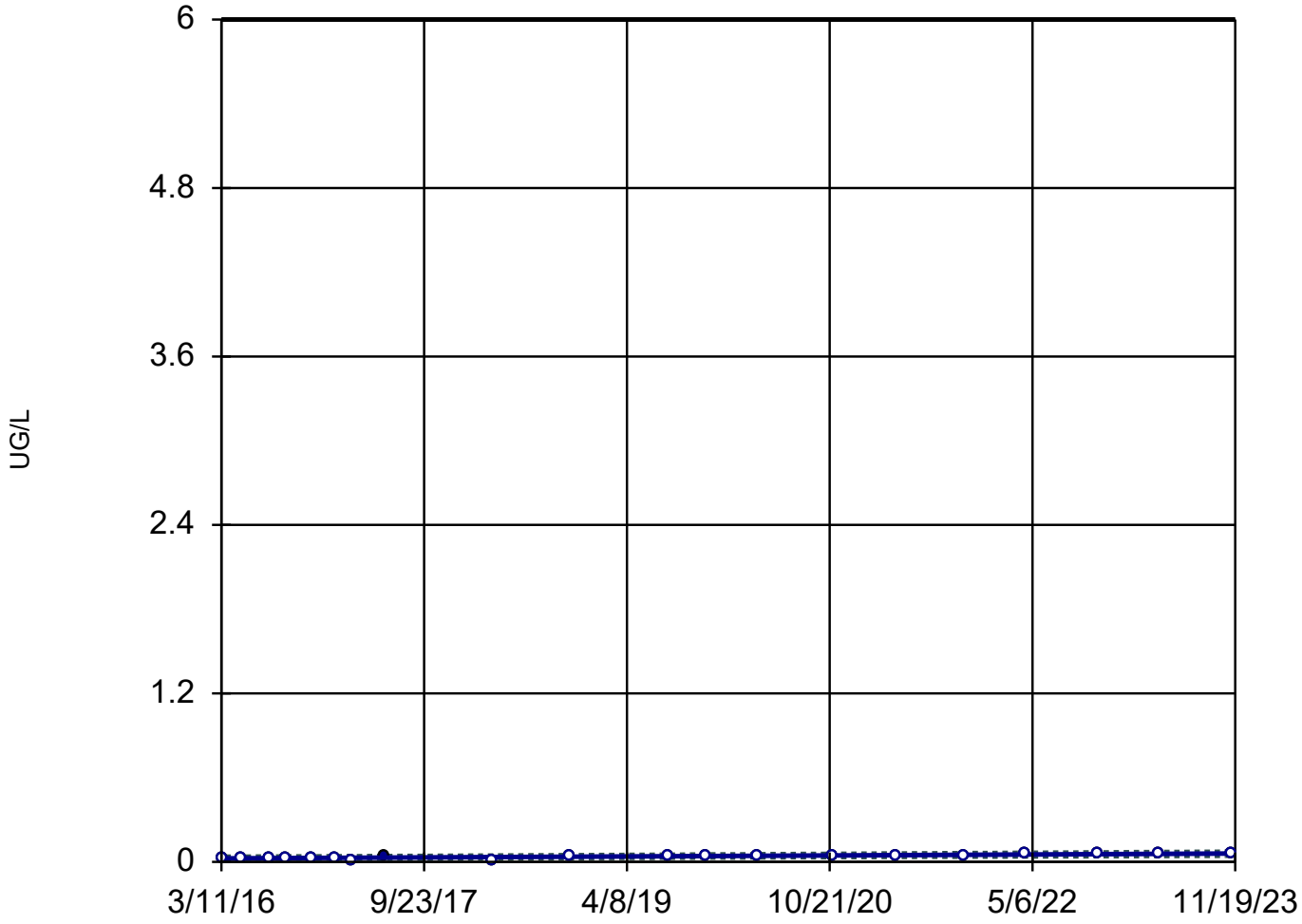
Constituent: ANTIMONY, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-5



n = 20

Slope = 0.004542 units per year.

Mann-Kendall statistic = 126
critical = 73

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

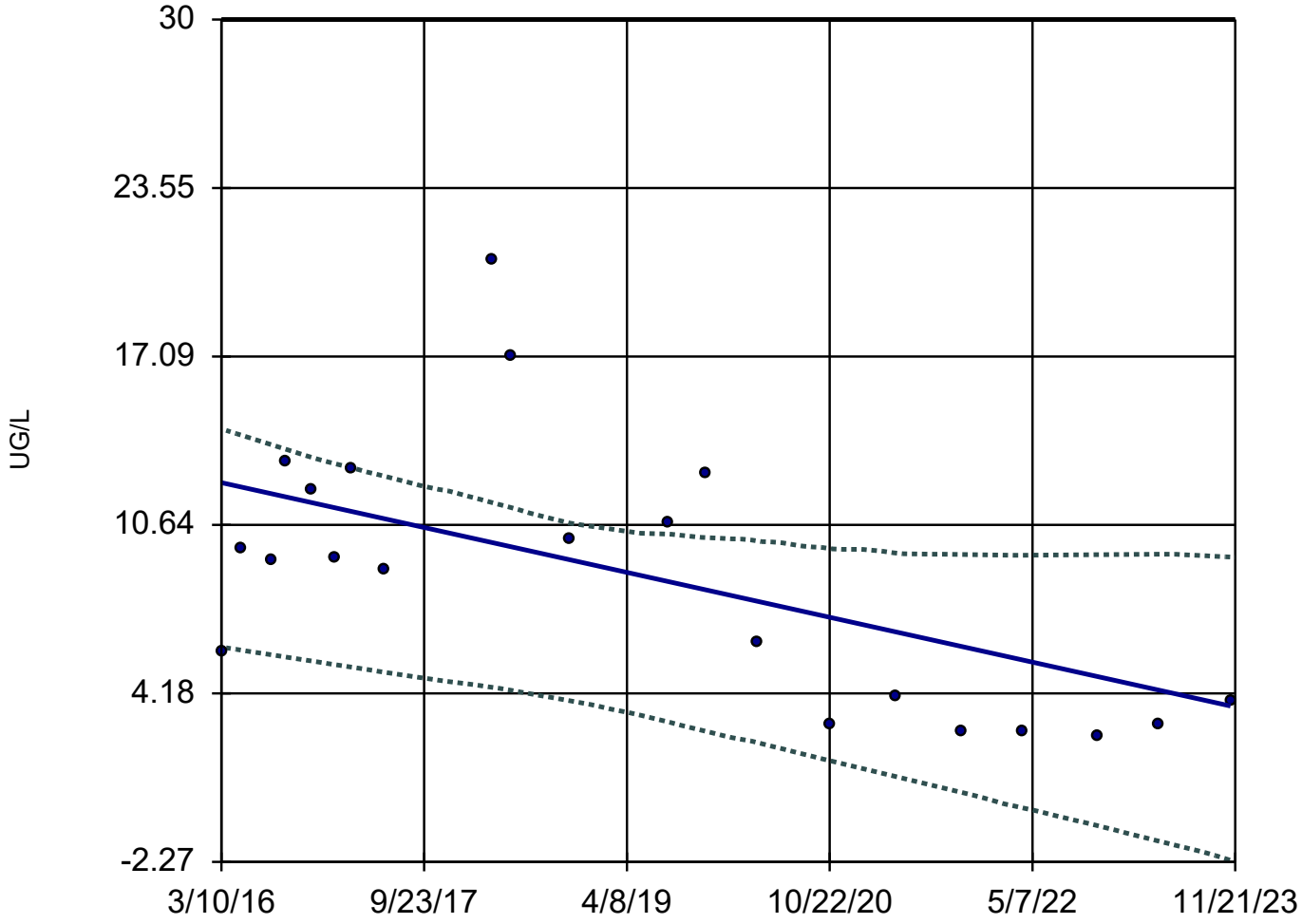
Constituent: ANTIMONY, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-1



n = 21

Slope = -1.116 units per year.

Mann-Kendall statistic = -86
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (30).

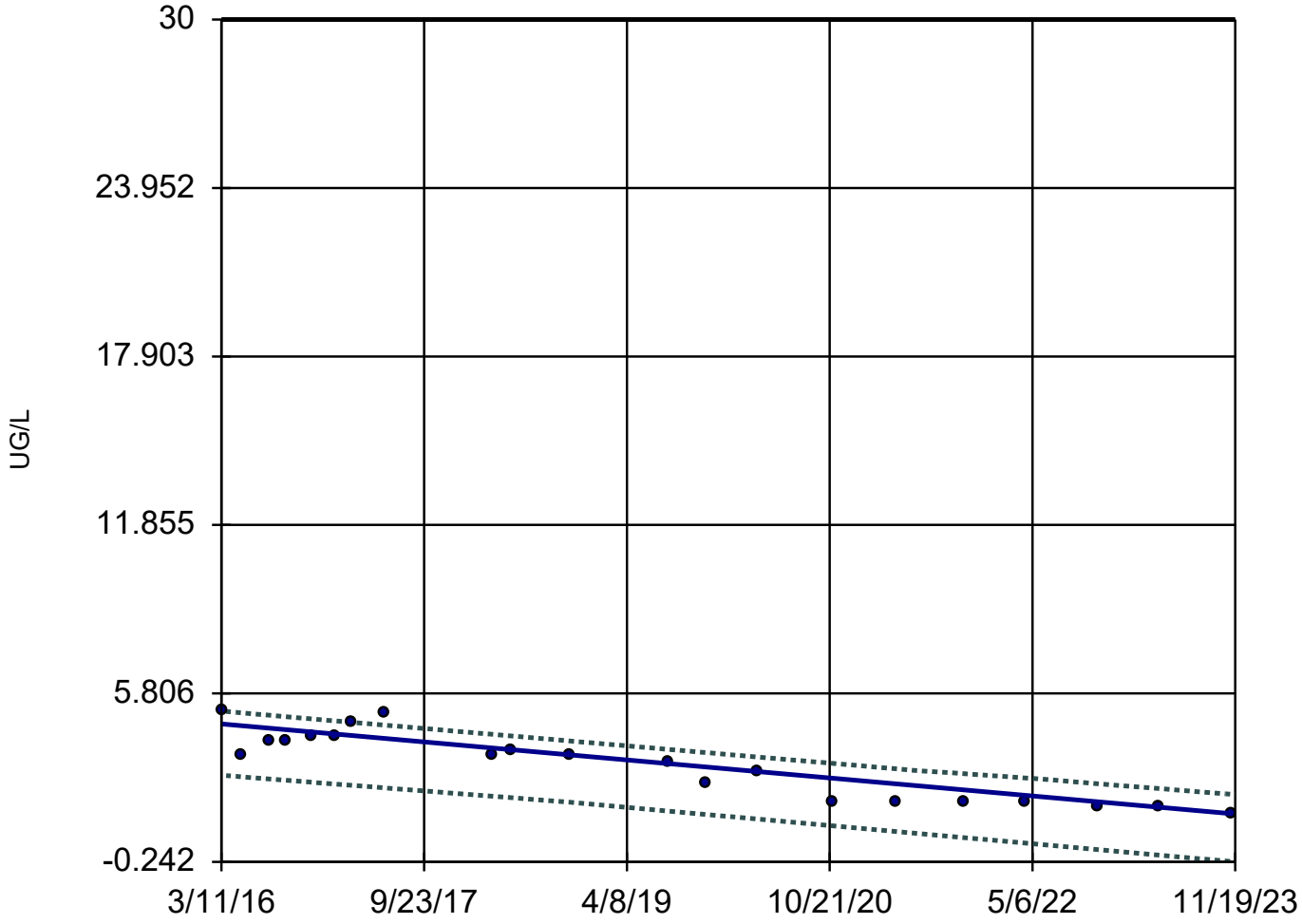
Constituent: ARSENIC, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-5



n = 21

Slope = -0.4199 units per year.

Mann-Kendall statistic = -154
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (30).

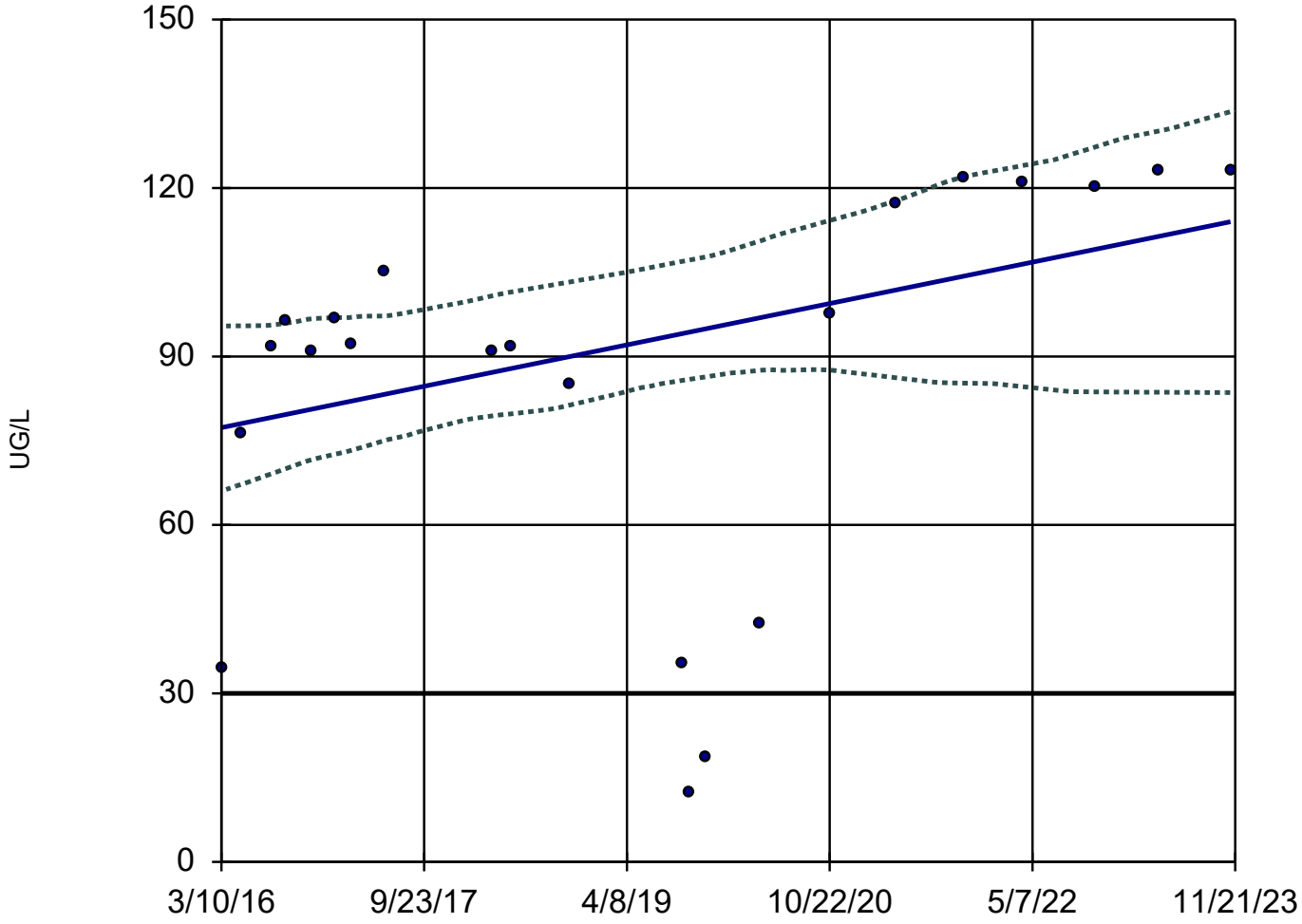
Constituent: ARSENIC, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-7



n = 22

Slope = 4.779 units per year.

Mann-Kendall statistic = 90
critical = 84

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is above GWPS (30).

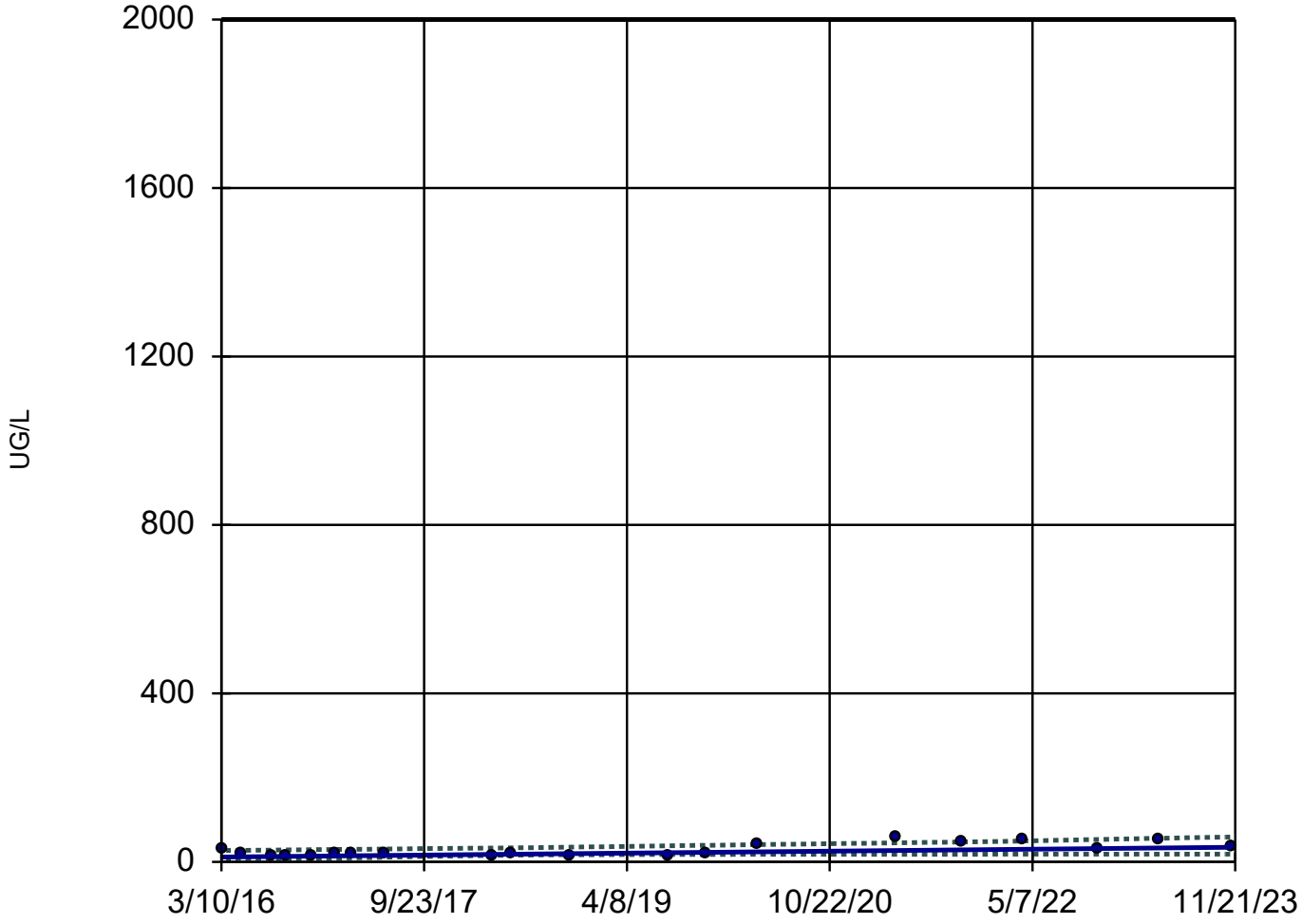
Constituent: ARSENIC, TOTAL Analysis Run 3/4/2024 12:53 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-1



n = 20

Slope = 3.013 units per year.

Mann-Kendall statistic = 81 critical = 73

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

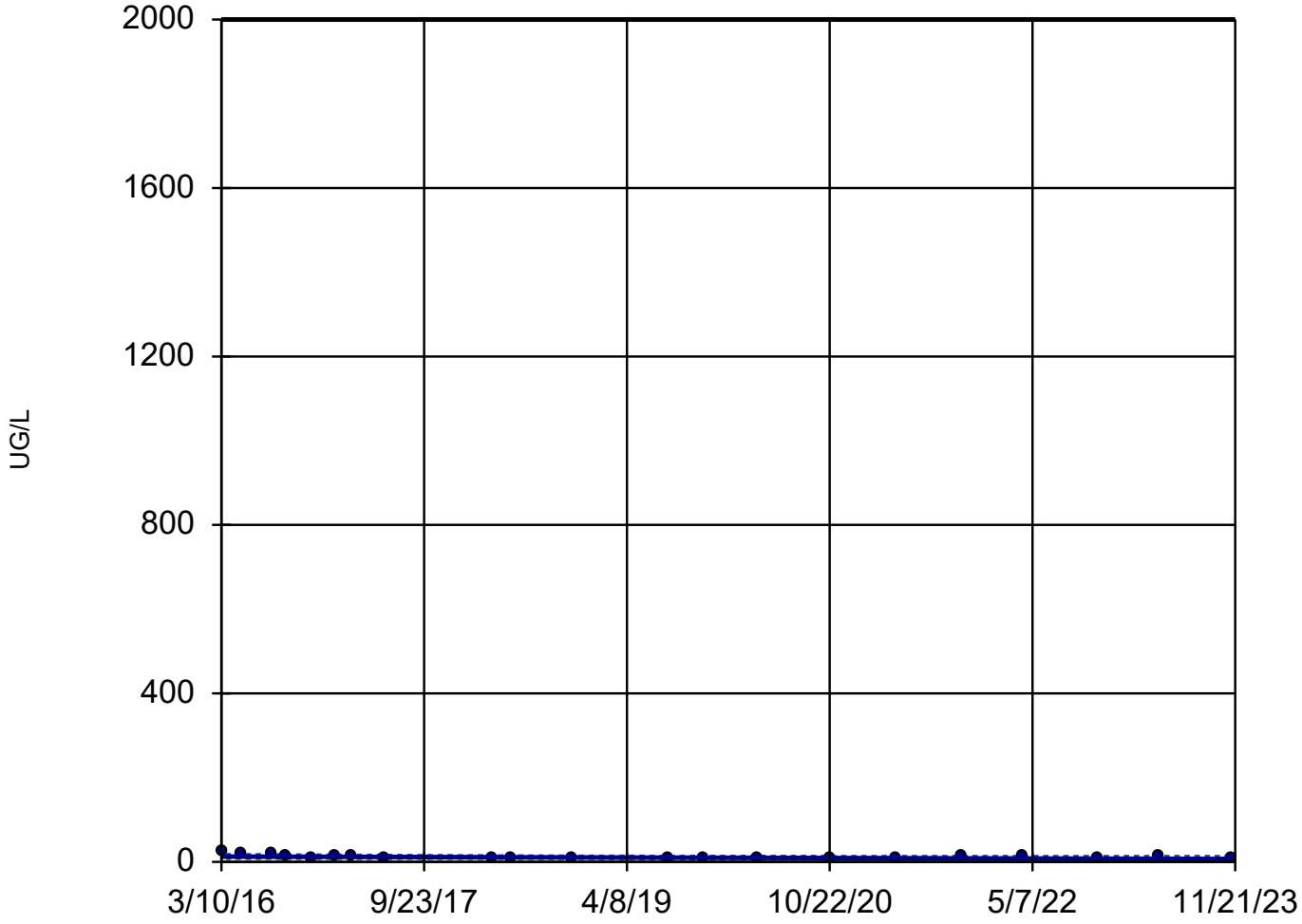
Constituent: BARIUM, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-2



n = 21

Slope = -0.7576 units per year.

Mann-Kendall statistic = -79
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

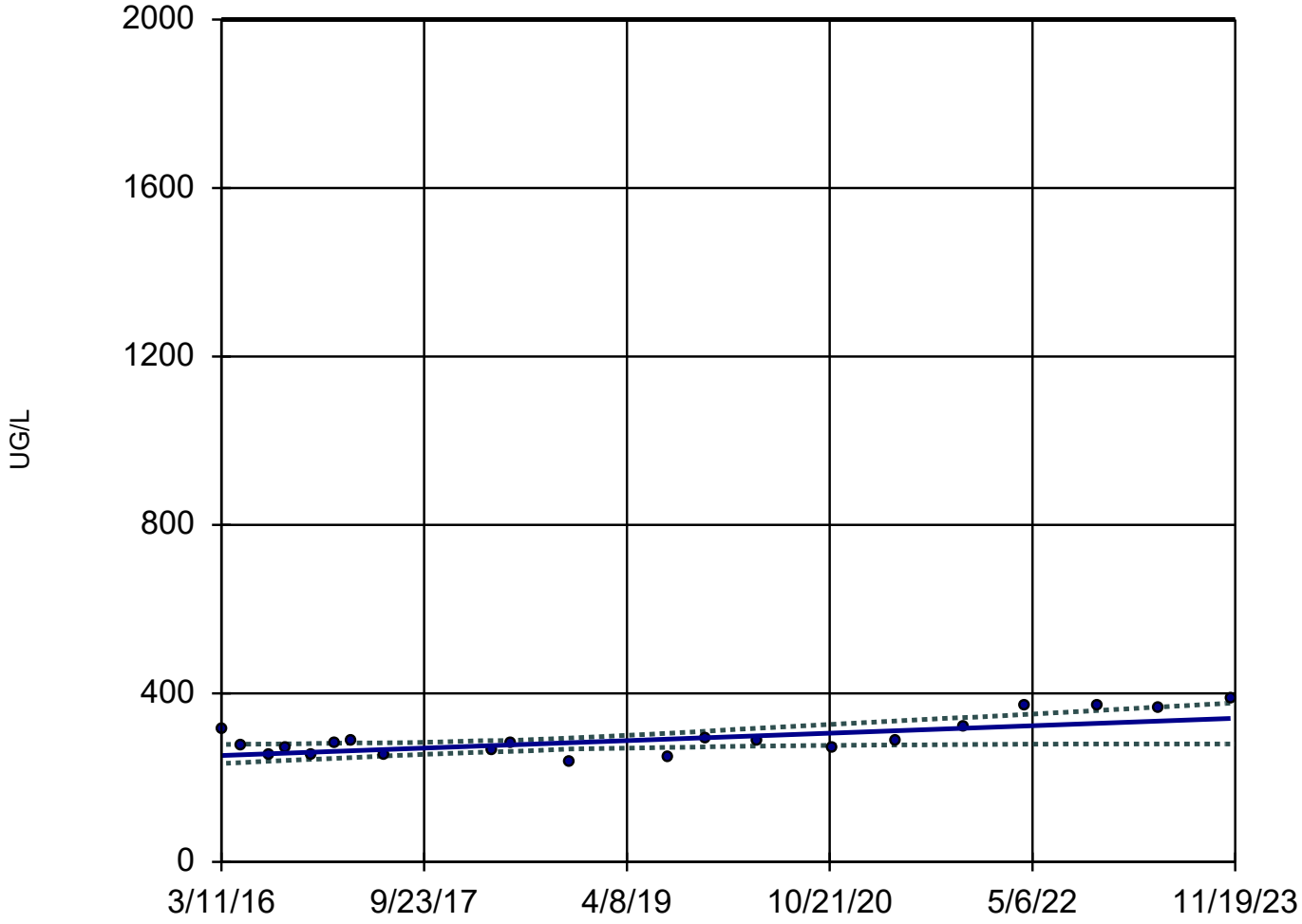
Constituent: BARIUM, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-4



n = 21

Slope = 11.44 units per year.

Mann-Kendall statistic = 91
critical = 78

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

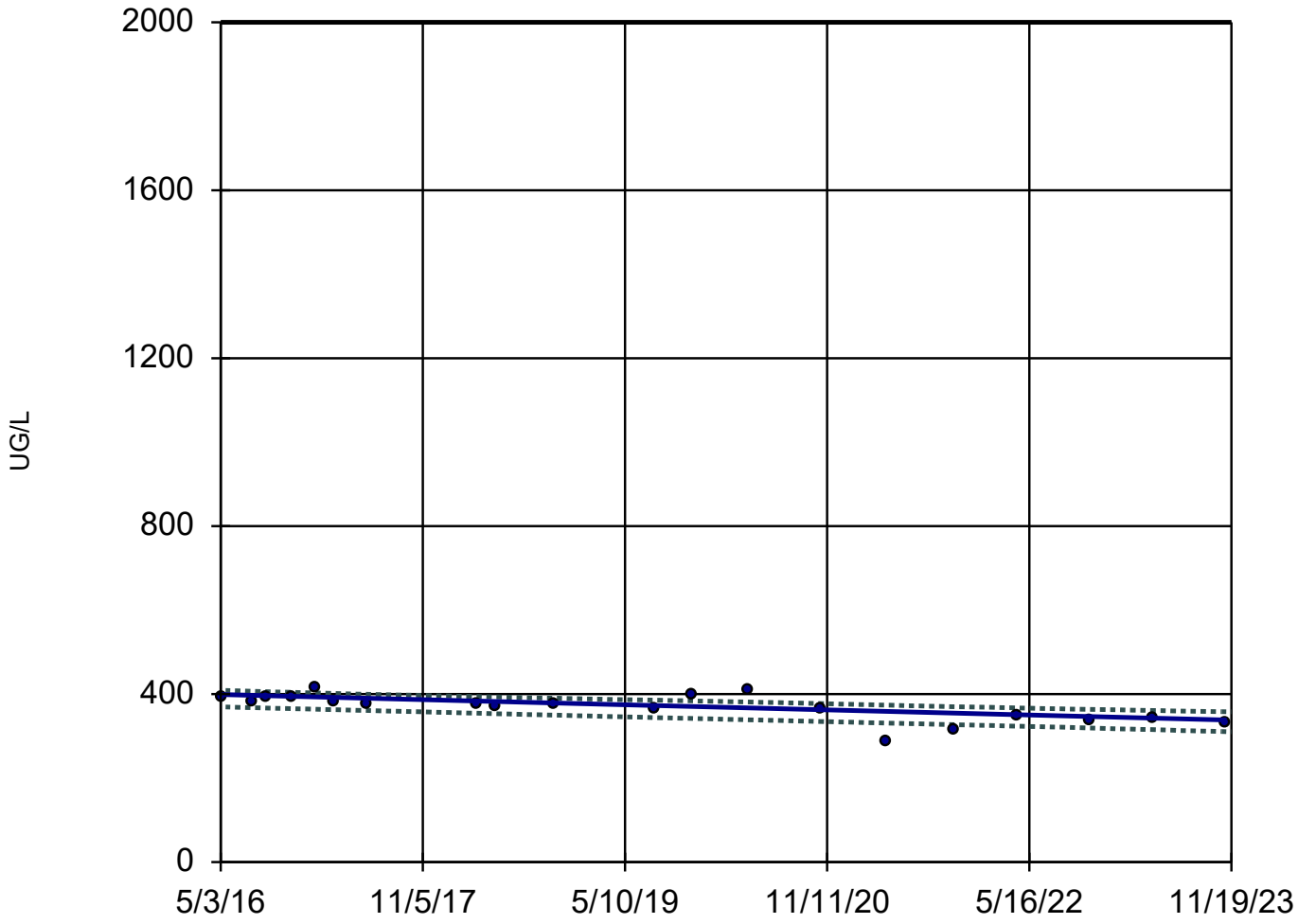
Constituent: BARIUM, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-5



n = 20

Slope = -8.077 units per year.

Mann-Kendall statistic = -105 critical = -73

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

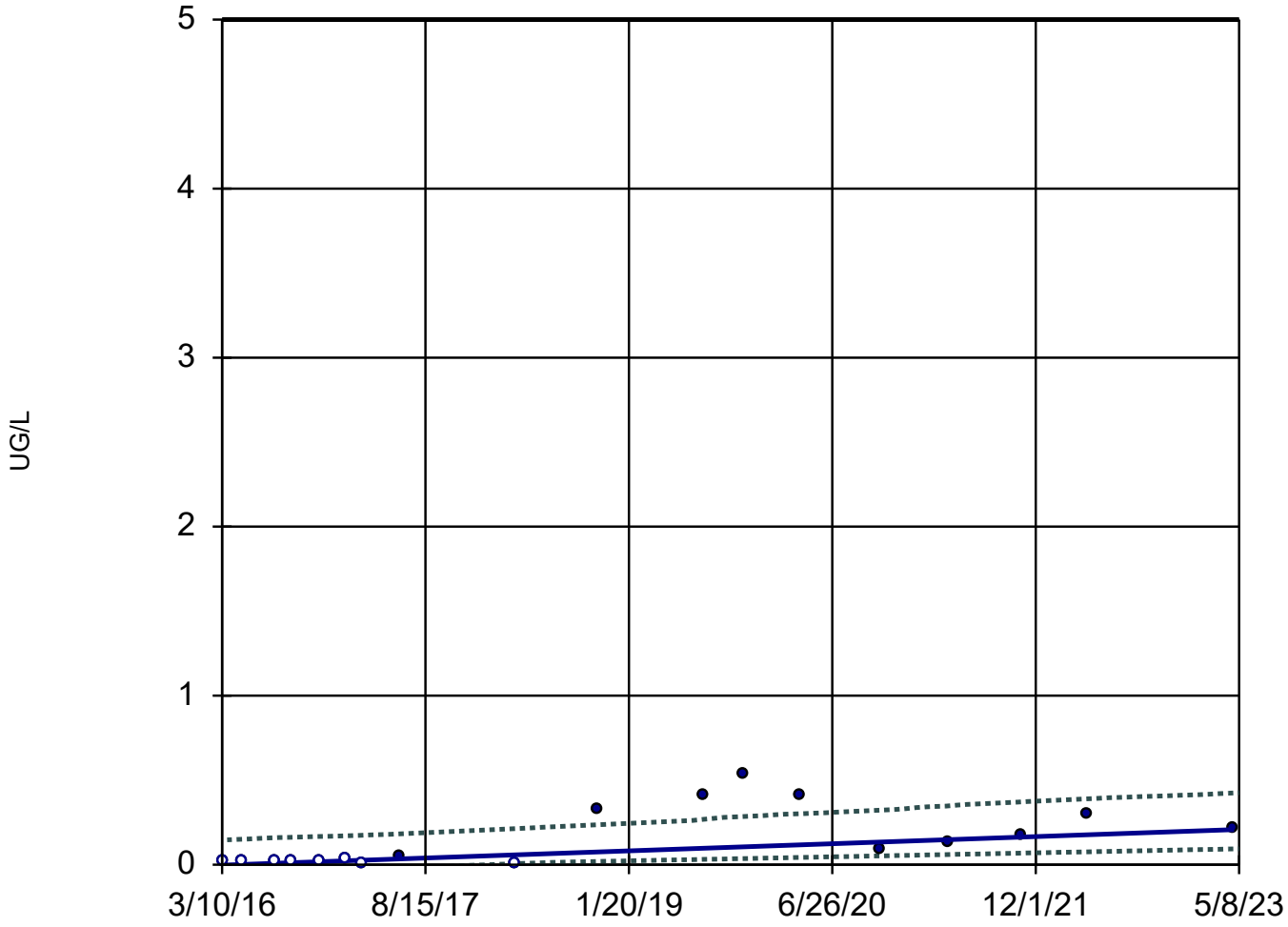
Constituent: BARIUM, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 18

Slope = 0.02954 units per year.

Mann-Kendall statistic = 71
critical = 63

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

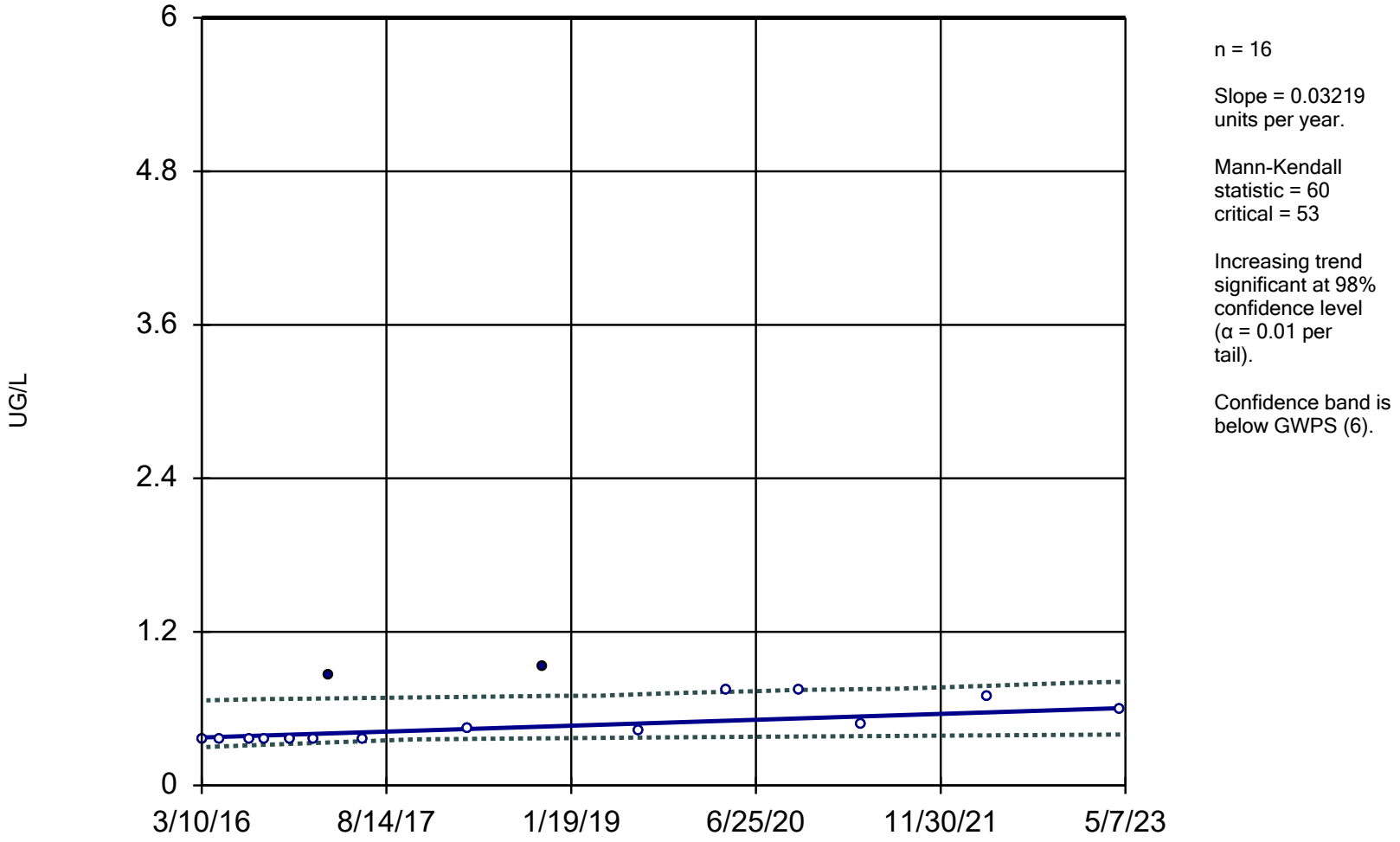
Constituent: CADMIUM, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 16

Slope = 0.03219 units per year.

Mann-Kendall statistic = 60
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

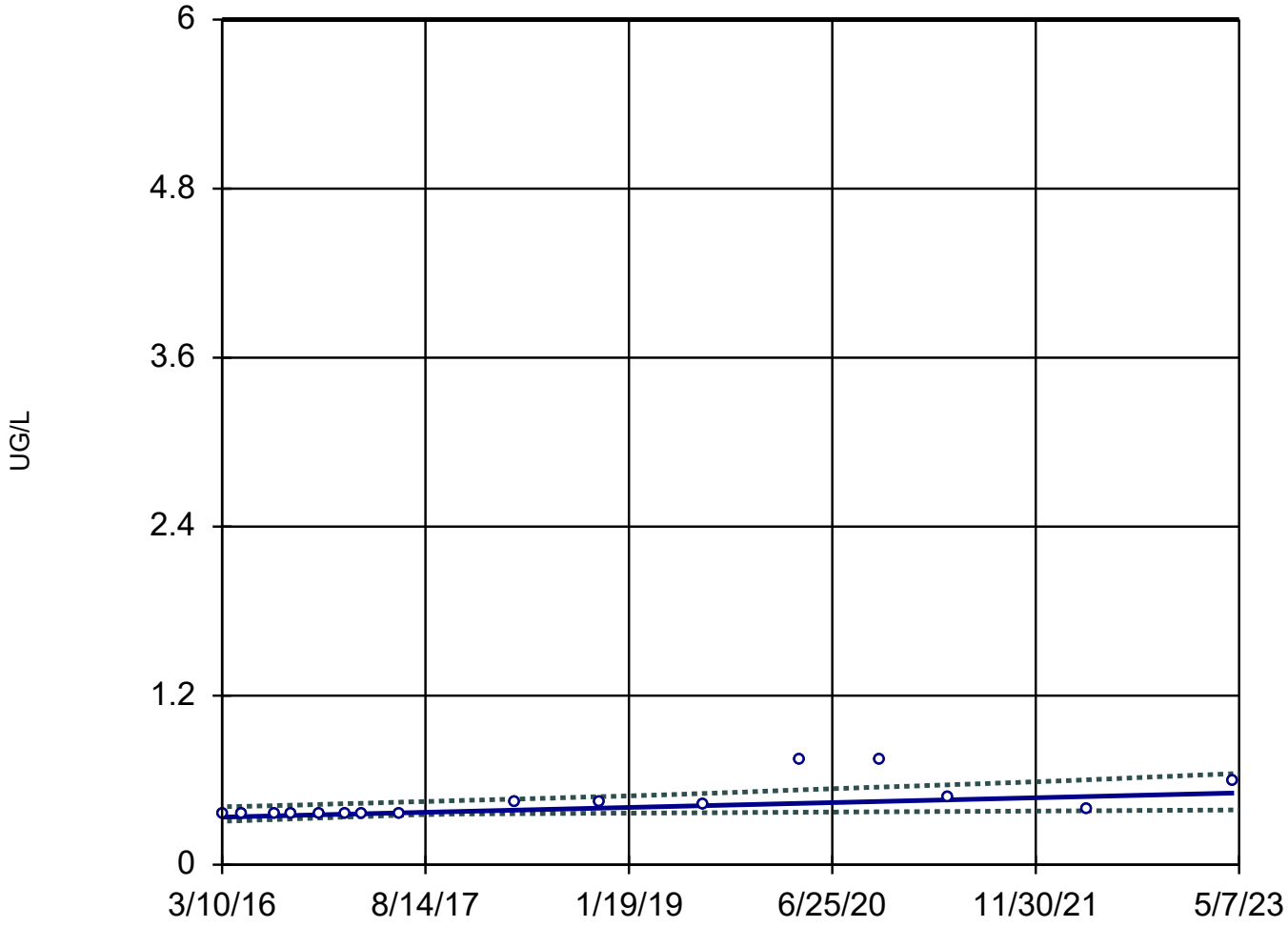
Constituent: COBALT, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-2



n = 16

Slope = 0.024 units per year.

Mann-Kendall statistic = 78
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

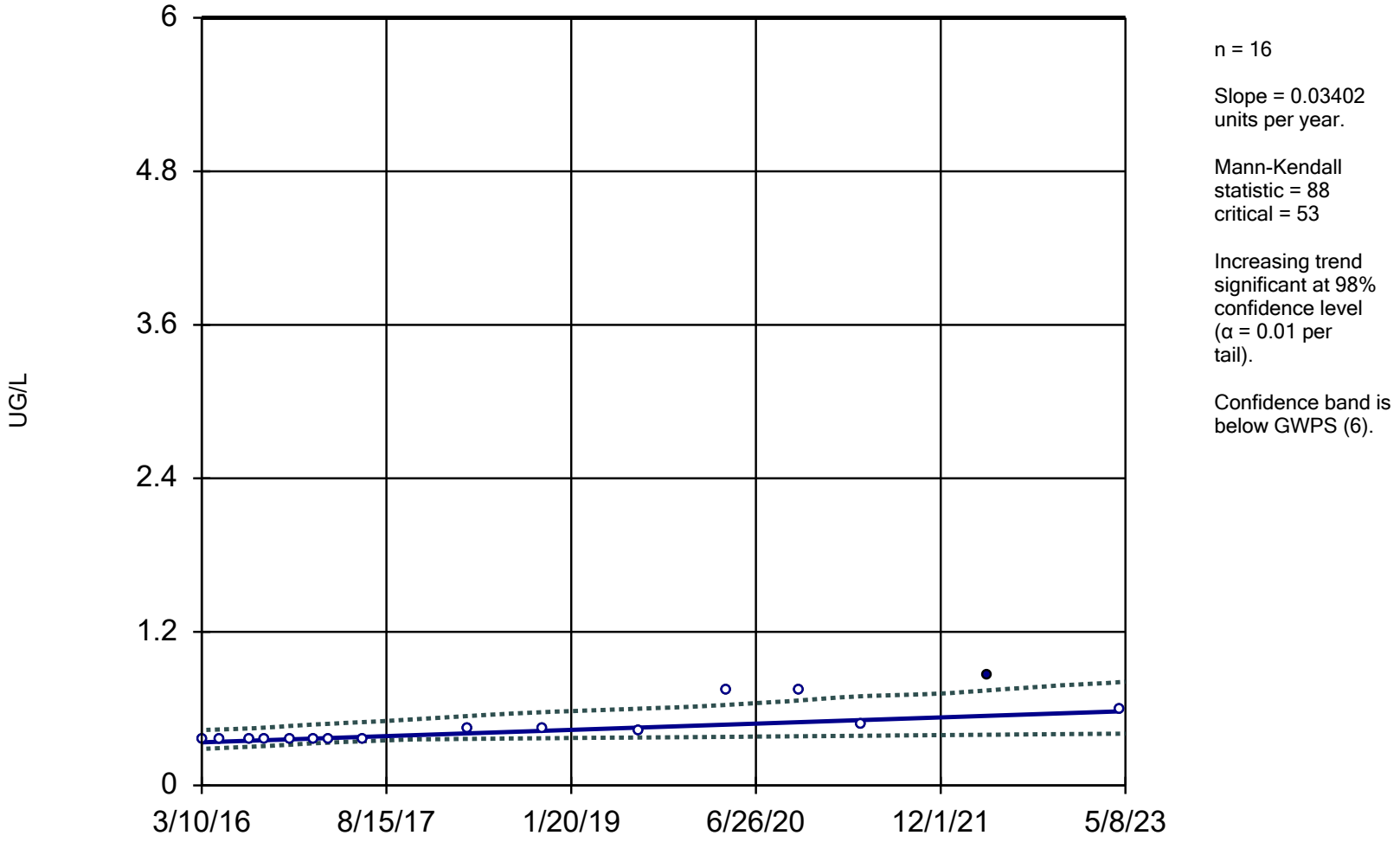
Constituent: COBALT, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 16

Slope = 0.03402 units per year.

Mann-Kendall statistic = 88
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

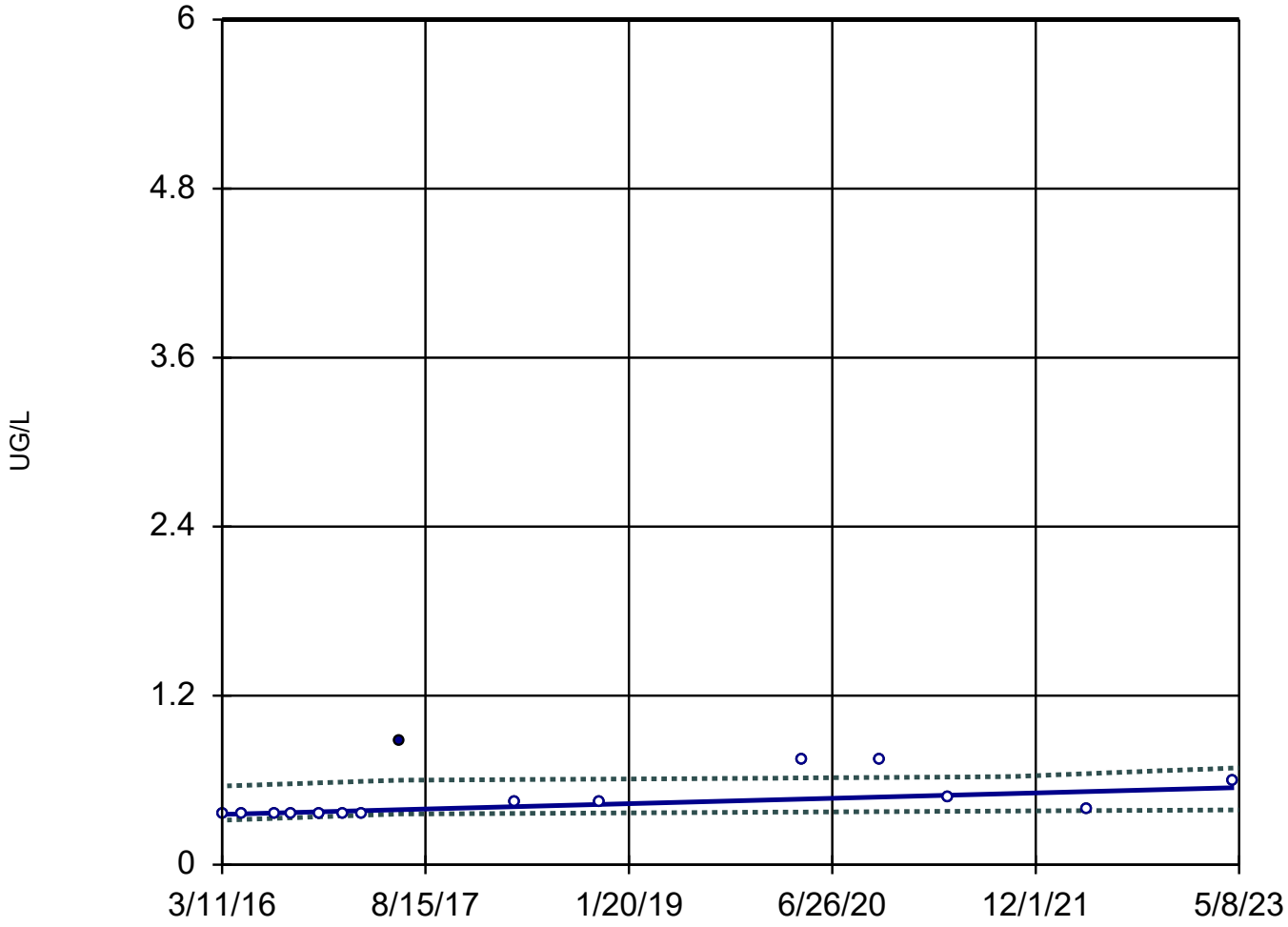
Constituent: COBALT, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-6



n = 15

Slope = 0.02662 units per year.

Mann-Kendall statistic = 56
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

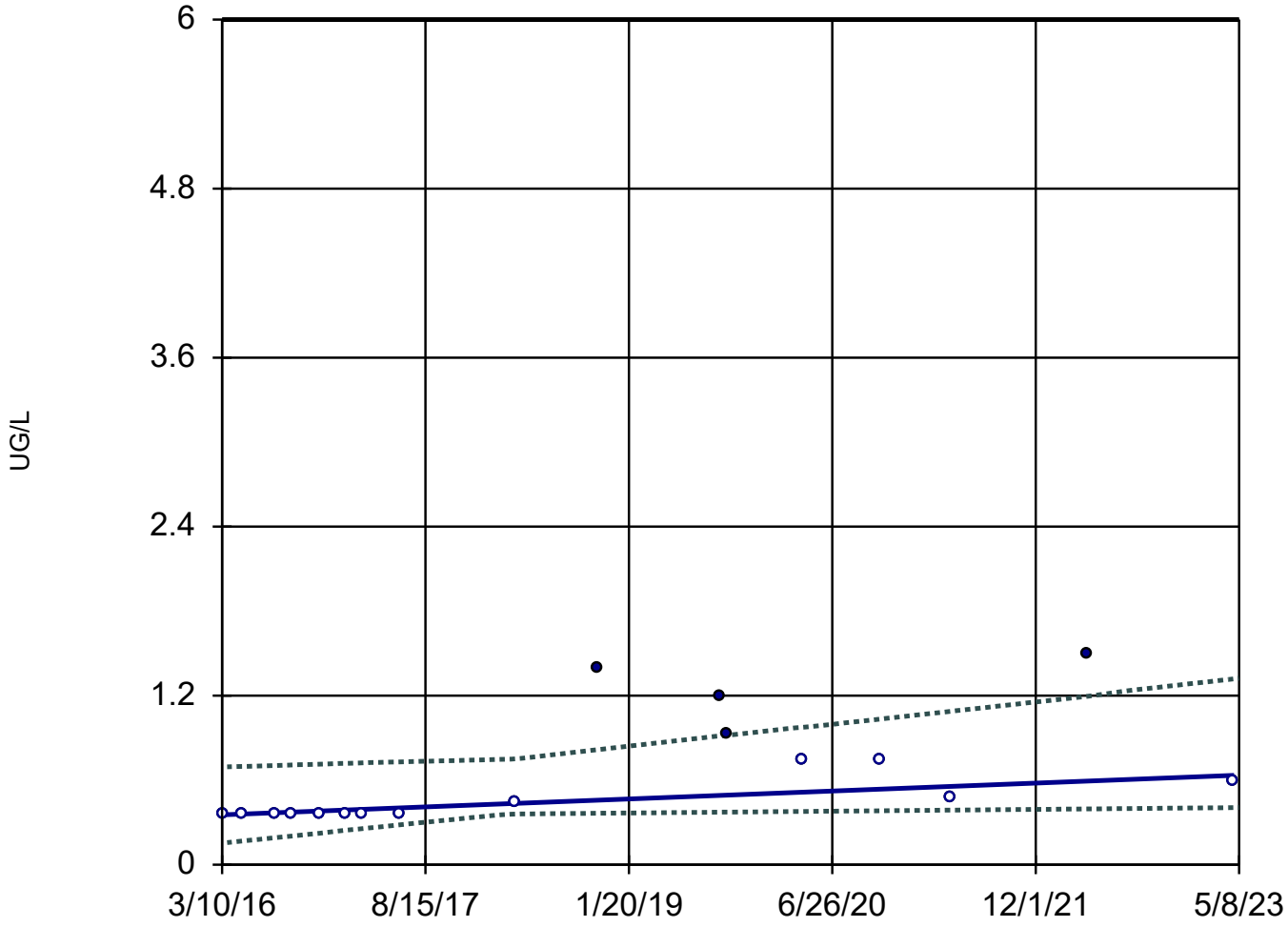
Constituent: COBALT, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-7



n = 17

Slope = 0.03942 units per year.

Mann-Kendall statistic = 79
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

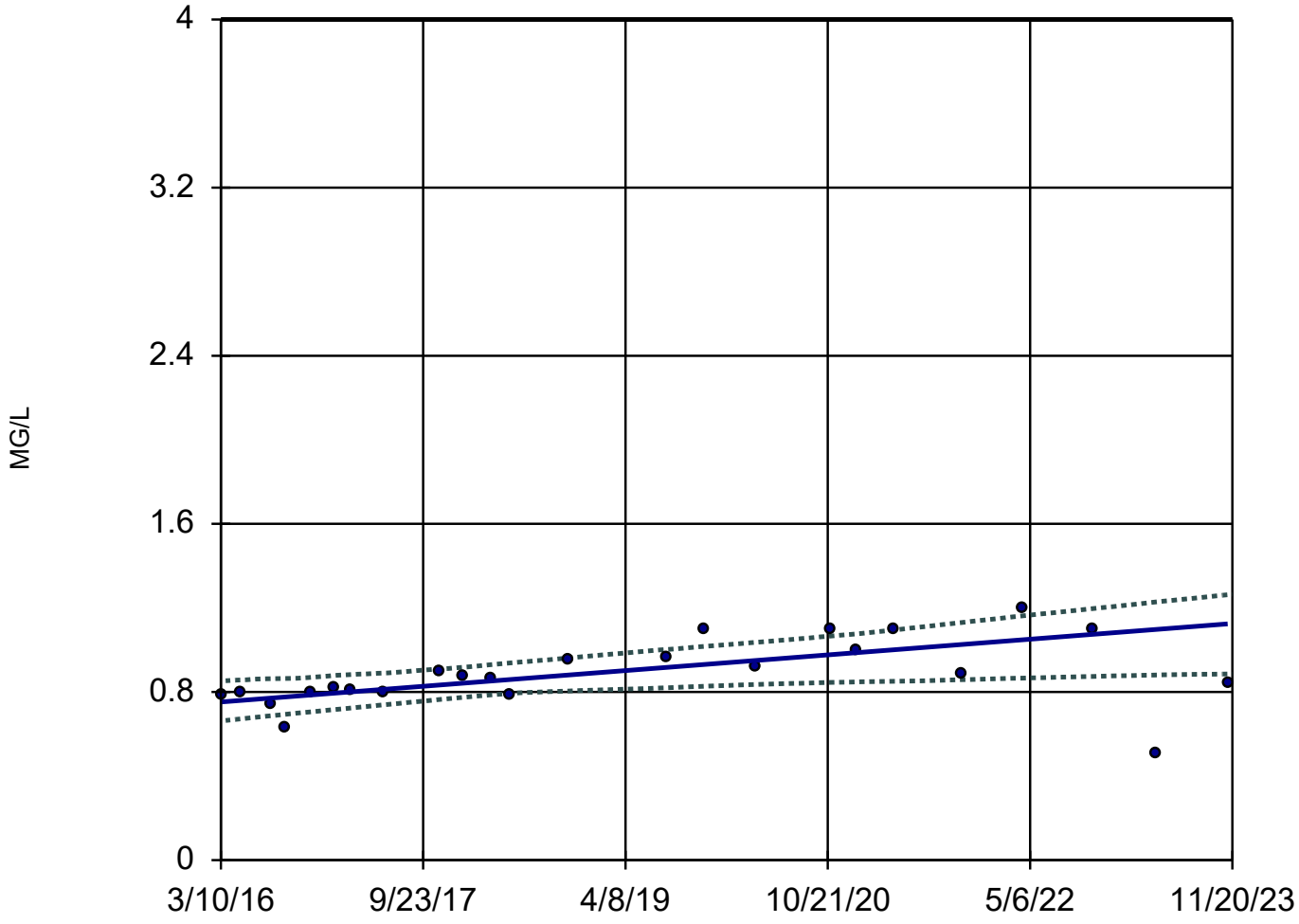
Constituent: COBALT, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Sen's Slope and 95% Confidence Band

R-MW-3



n = 24

Slope = 0.04849 units per year.

Mann-Kendall statistic = 130
critical = 95

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

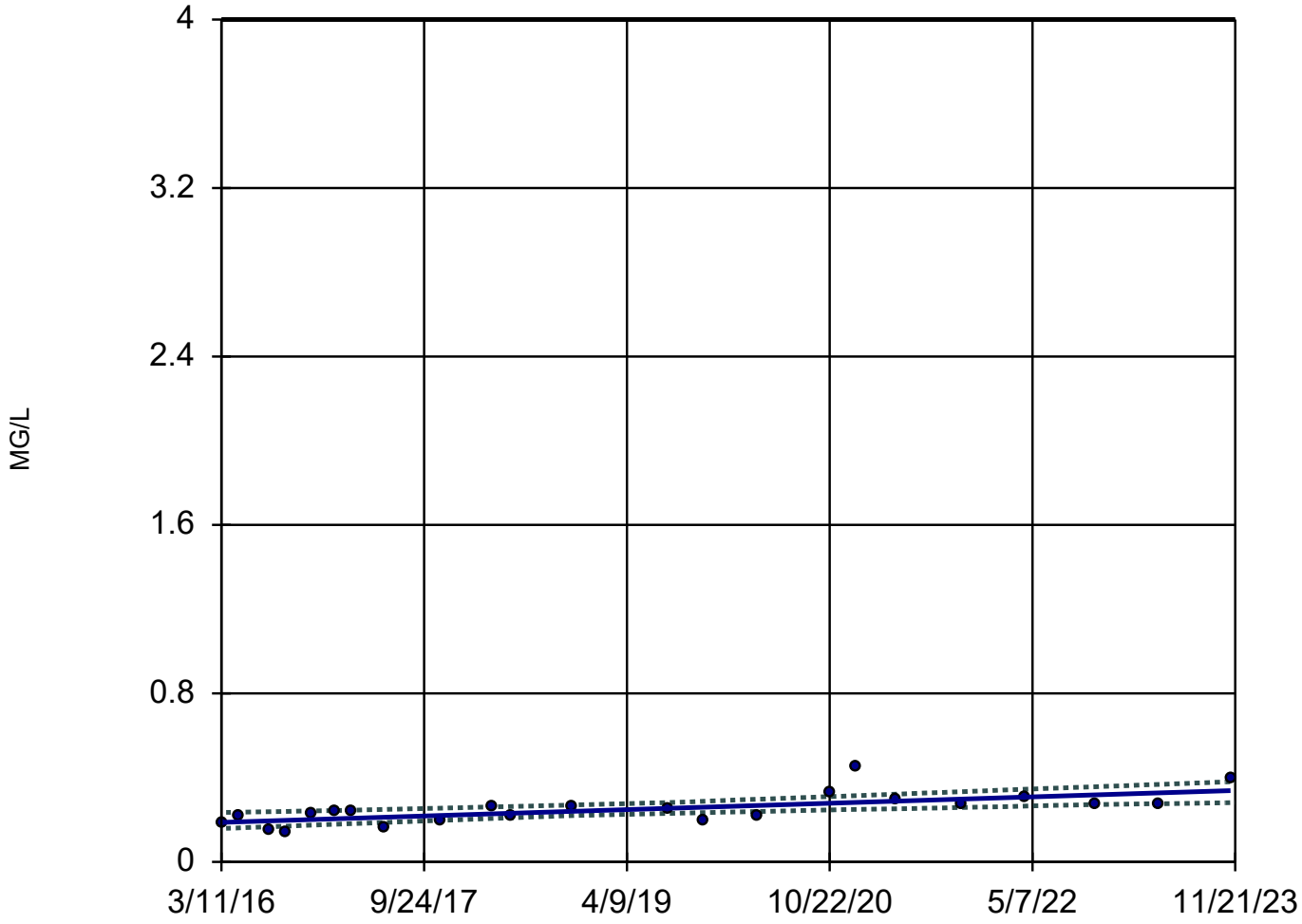
Constituent: FLUORIDE, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-6



n = 23

Slope = 0.0196 units per year.

Mann-Kendall statistic = 145 critical = 89

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

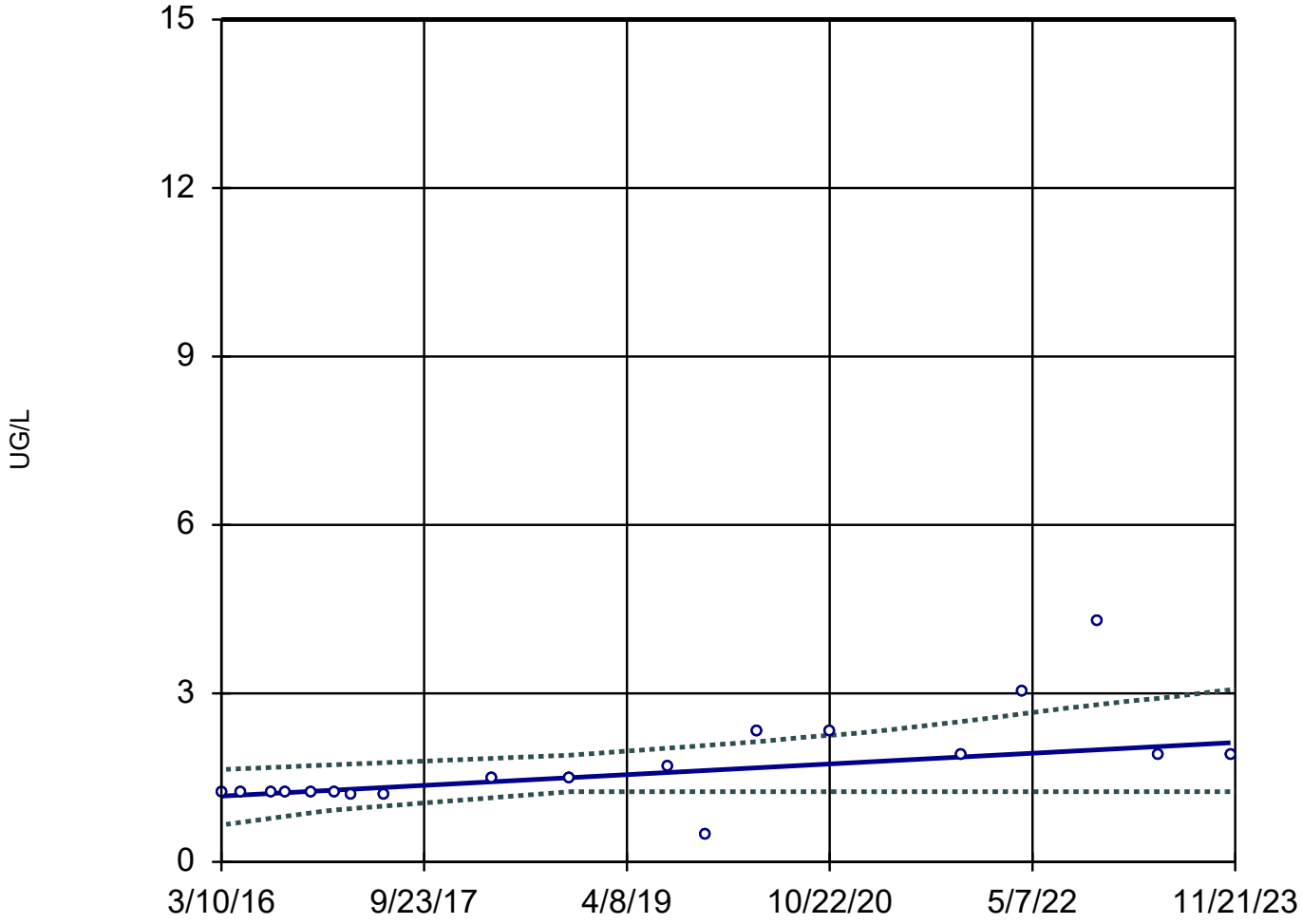
Constituent: FLUORIDE, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 19

Slope = 0.1236 units per year.

Mann-Kendall statistic = 84
critical = 68

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

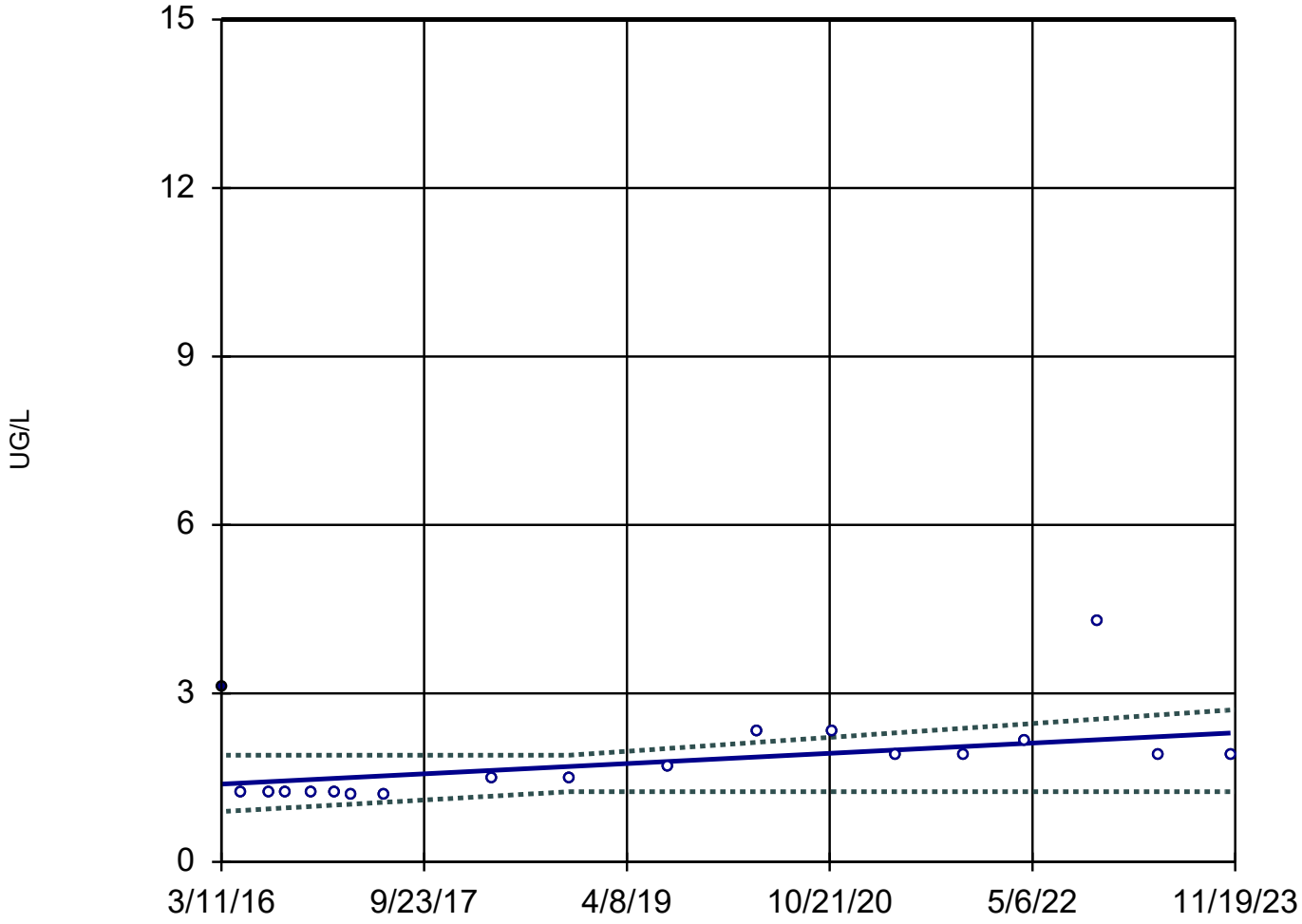
Constituent: LEAD, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-4



n = 19

Slope = 0.1184 units per year.

Mann-Kendall statistic = 70
critical = 68

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

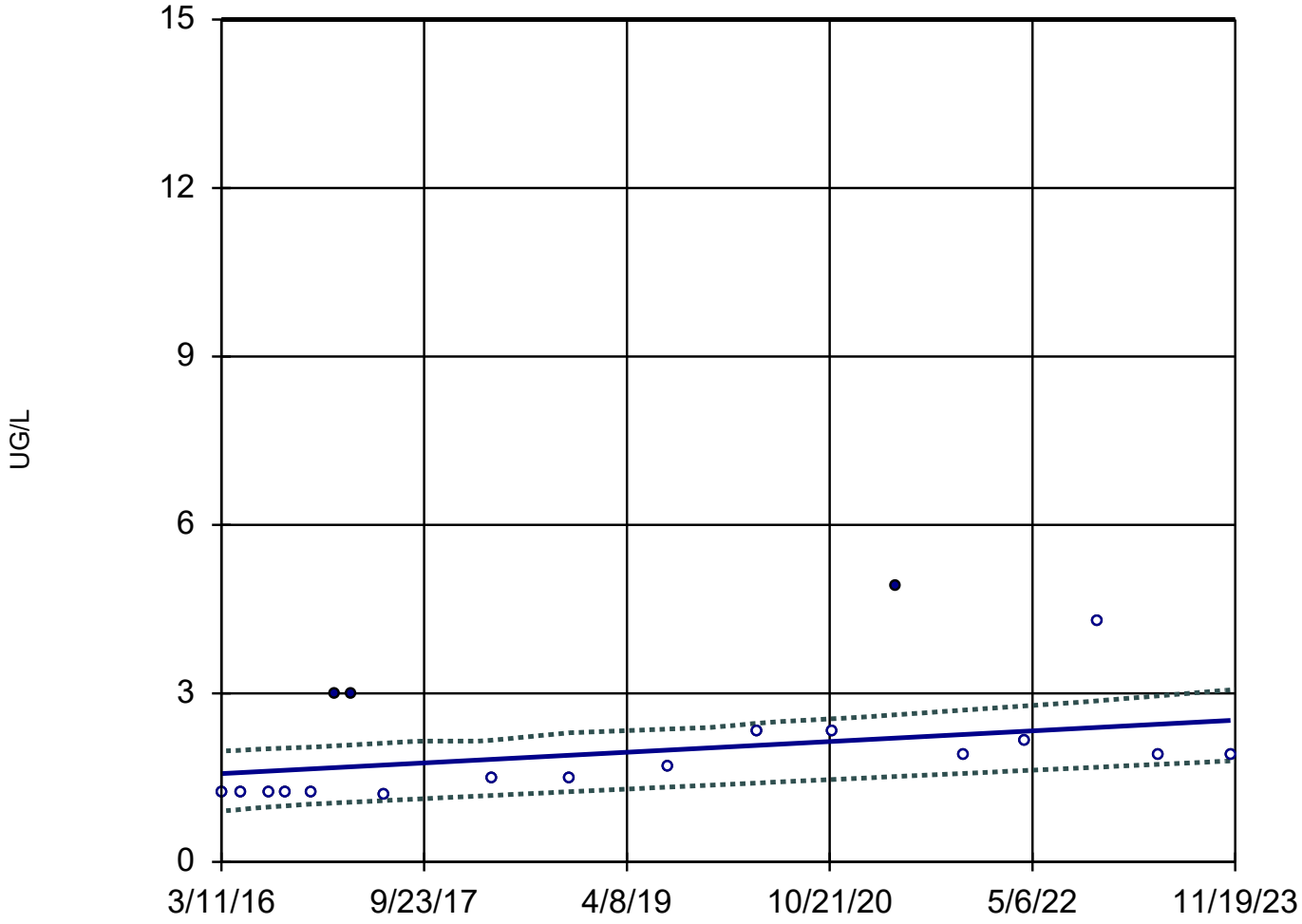
Constituent: LEAD, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-5



n = 19

Slope = 0.1236 units per year.

Mann-Kendall statistic = 71
critical = 68

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

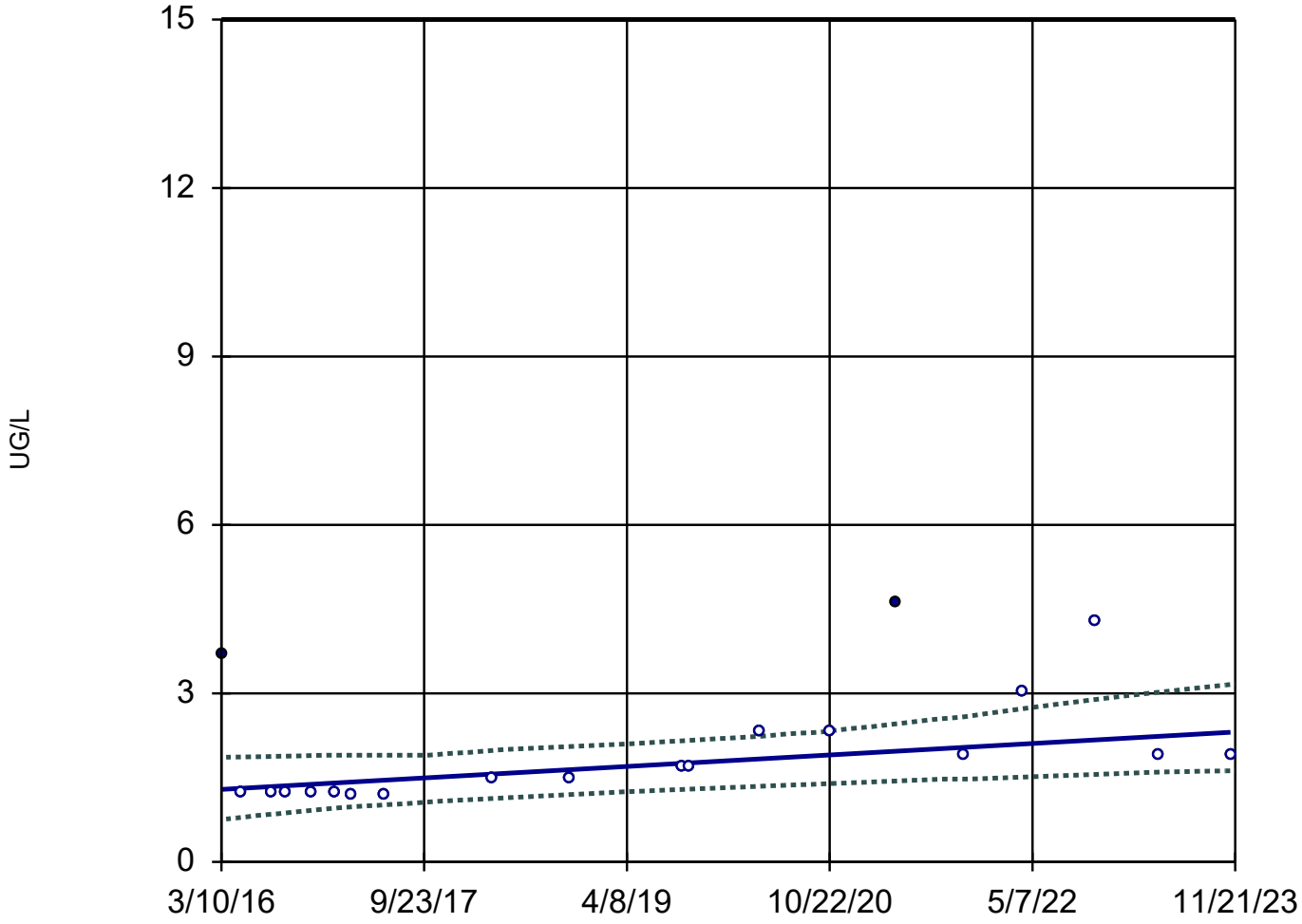
Constituent: LEAD, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-7



n = 20

Slope = 0.1328 units per year.

Mann-Kendall statistic = 89
critical = 73

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

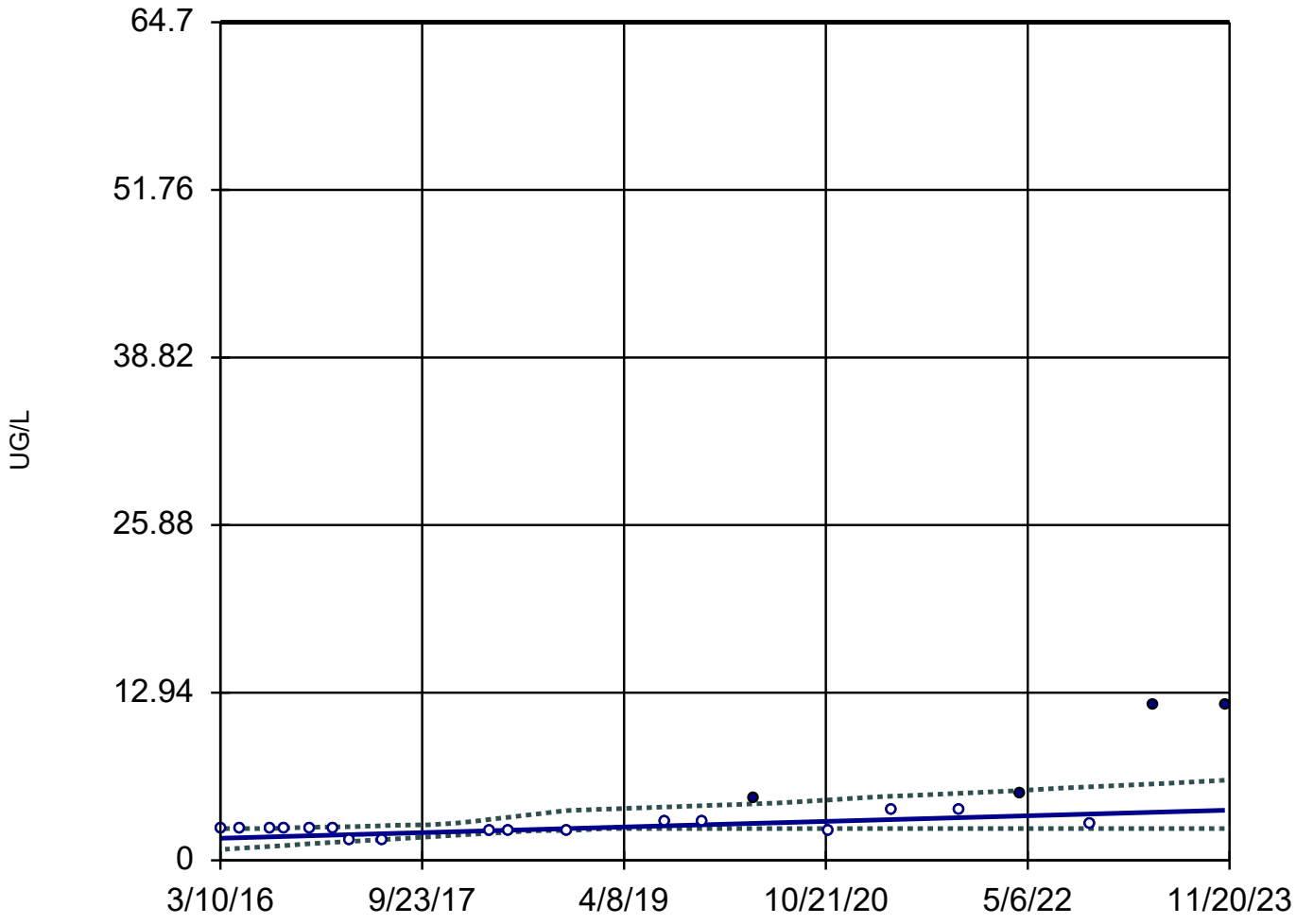
Constituent: LEAD, TOTAL Analysis Run 3/4/2024 12:45 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 21

Slope = 0.2821 units per year.

Mann-Kendall statistic = 92
critical = 78

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

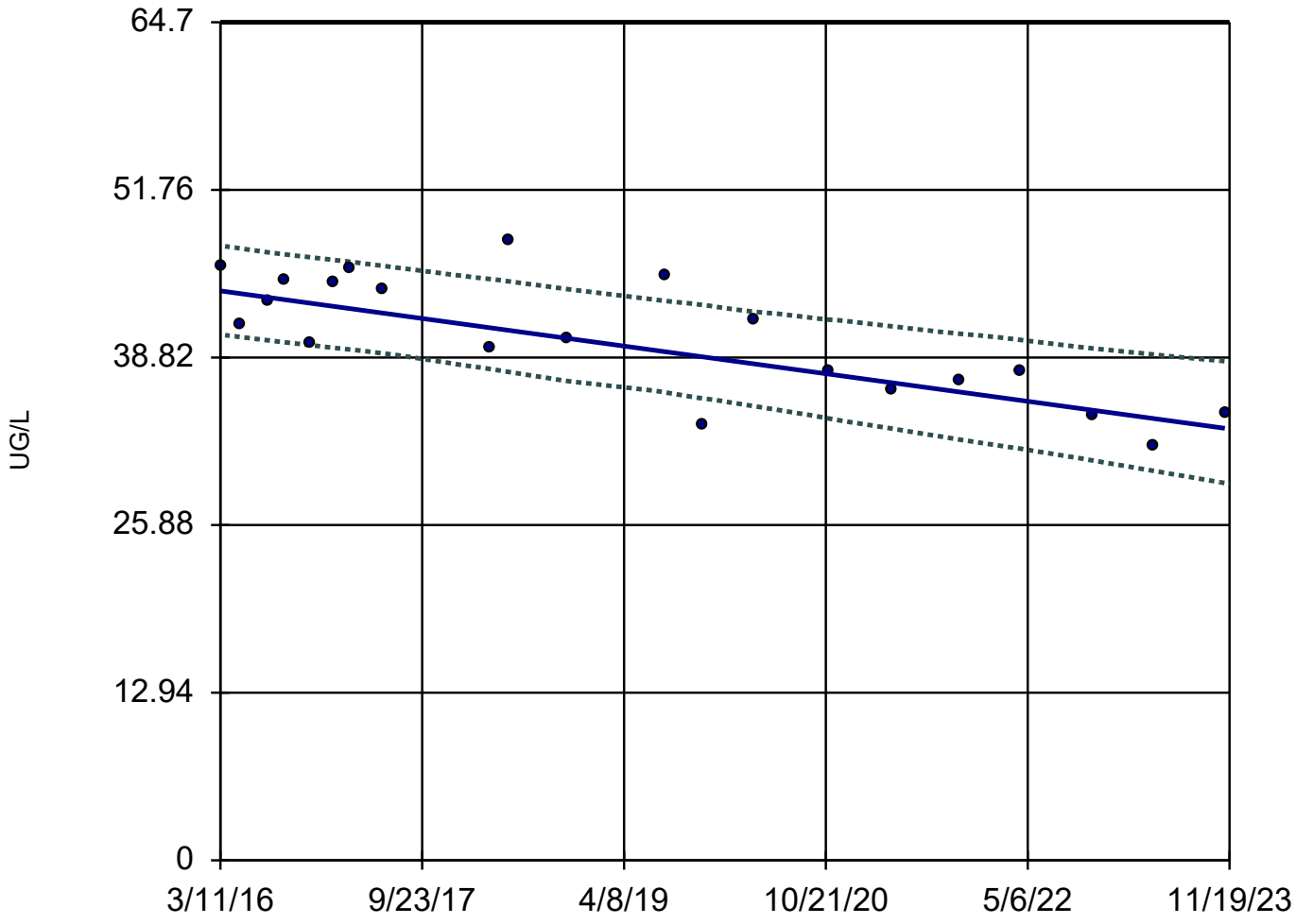
Constituent: LITHIUM, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-4



n = 21

Slope = -1.386 units per year.

Mann-Kendall statistic = -112 critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

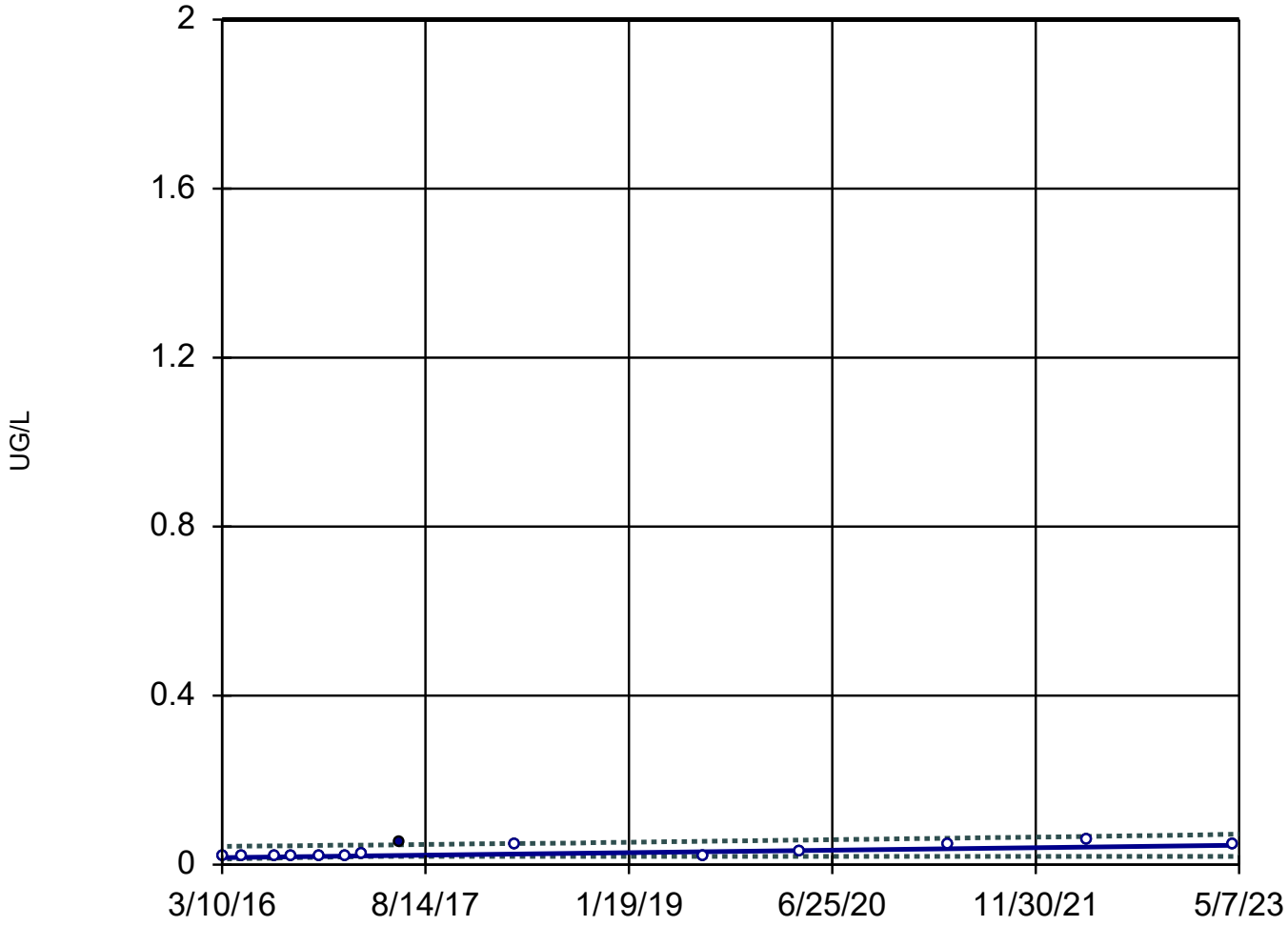
Constituent: LITHIUM, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 14

Slope = 0.004083 units per year.

Mann-Kendall statistic = 45
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

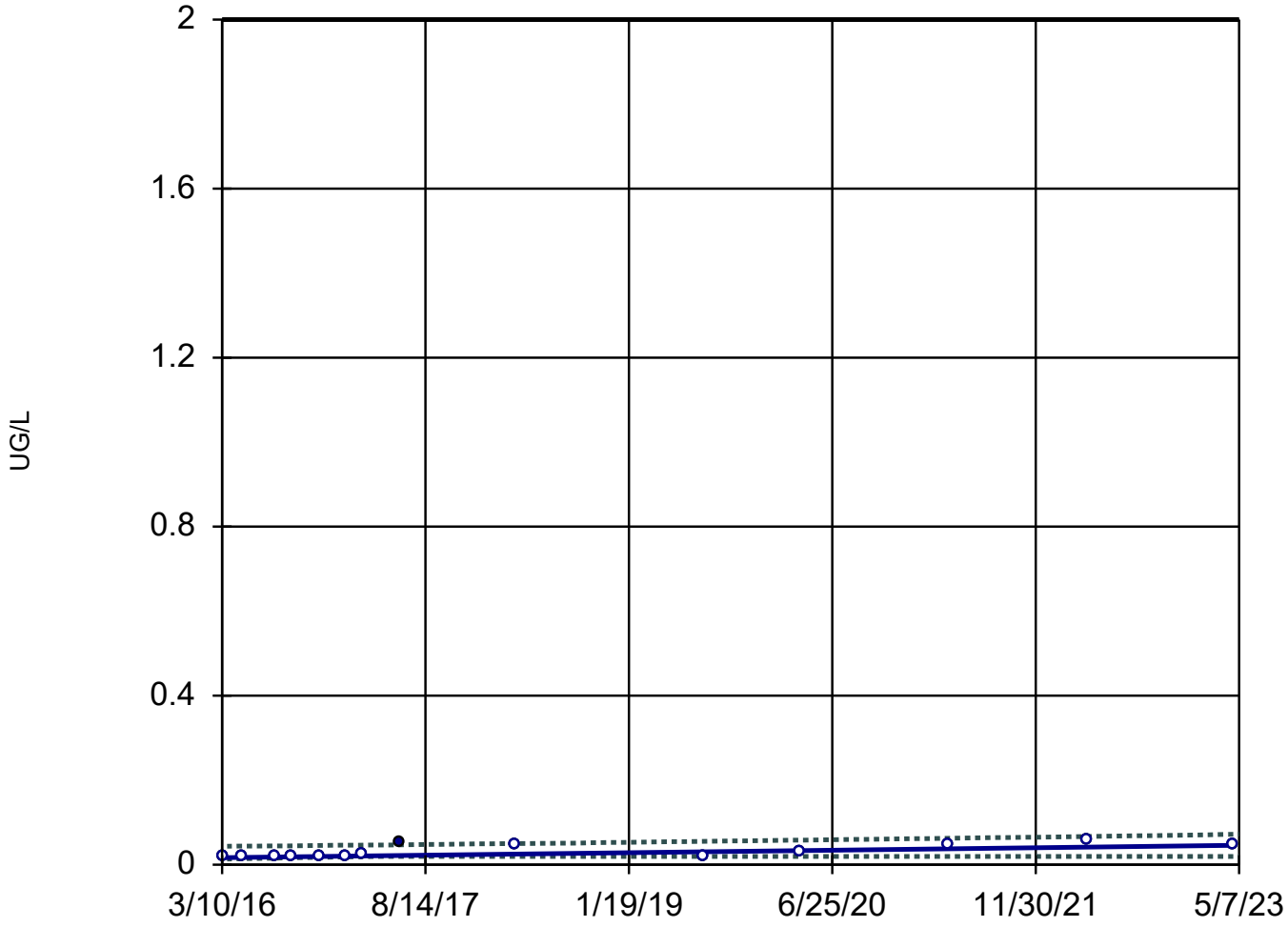
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-2



n = 14

Slope = 0.004083 units per year.

Mann-Kendall statistic = 45
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

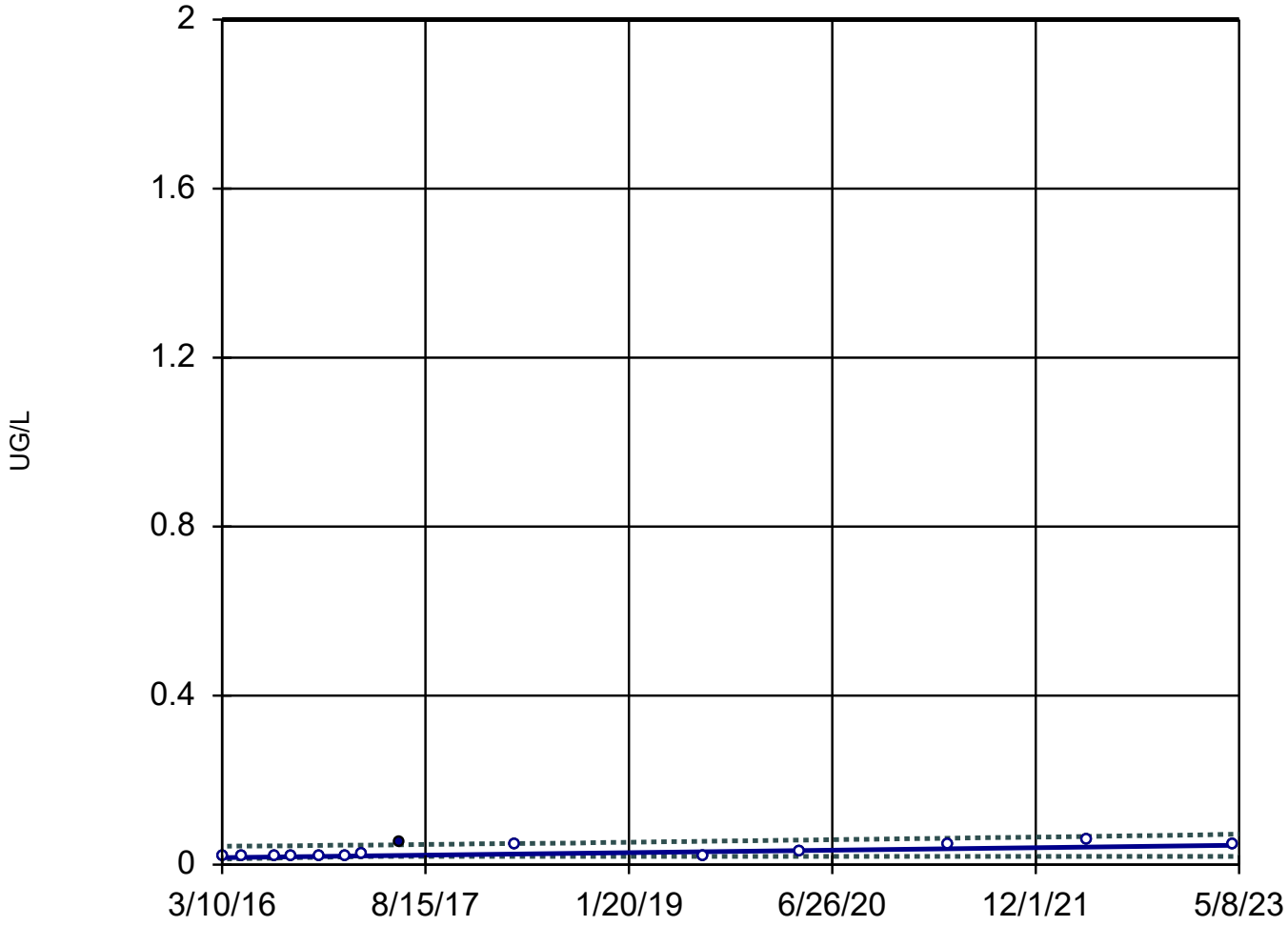
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 14

Slope = 0.004081 units per year.

Mann-Kendall statistic = 45
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

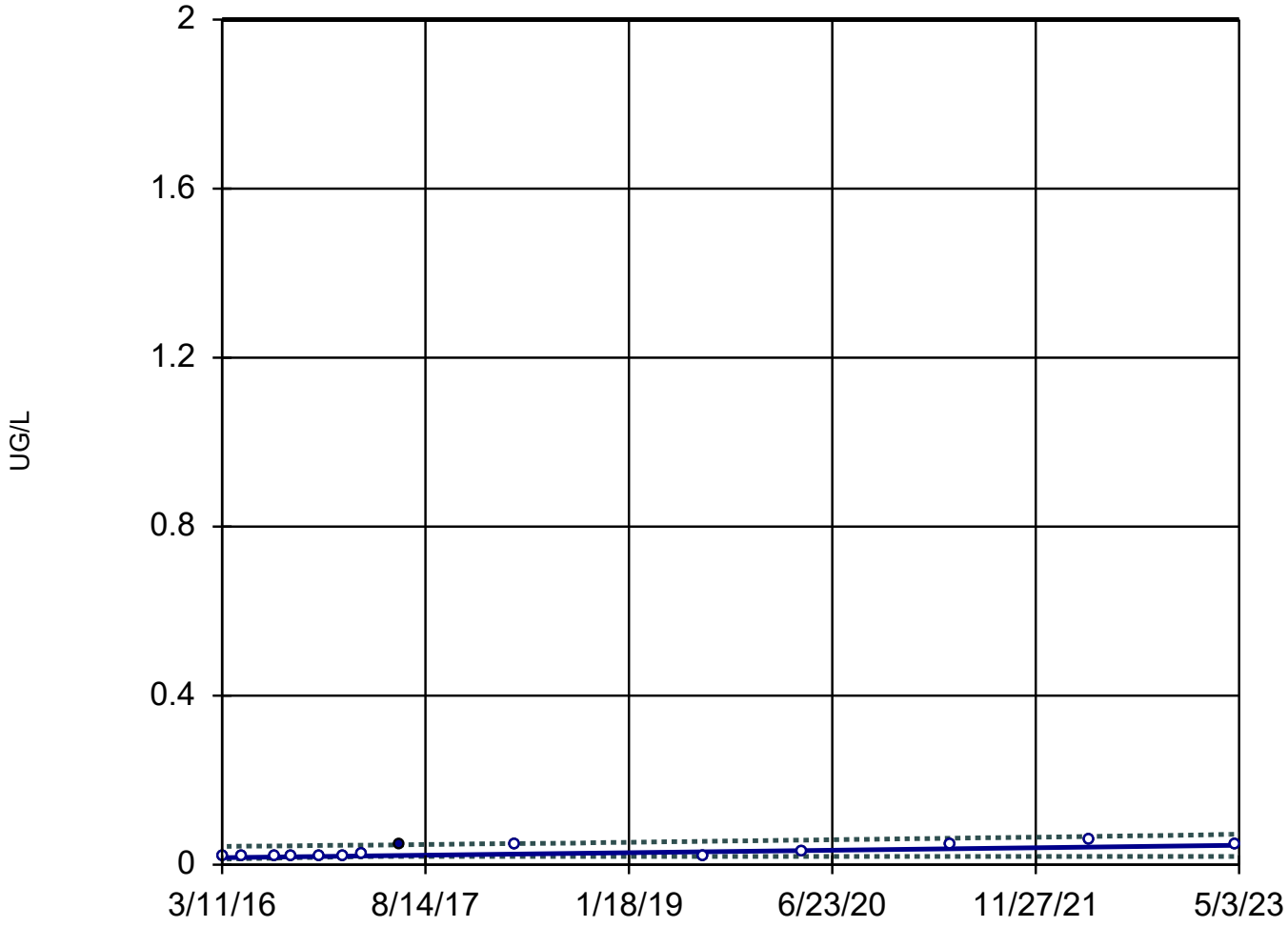
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-4



n = 14

Slope = 0.004089 units per year.

Mann-Kendall statistic = 45
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

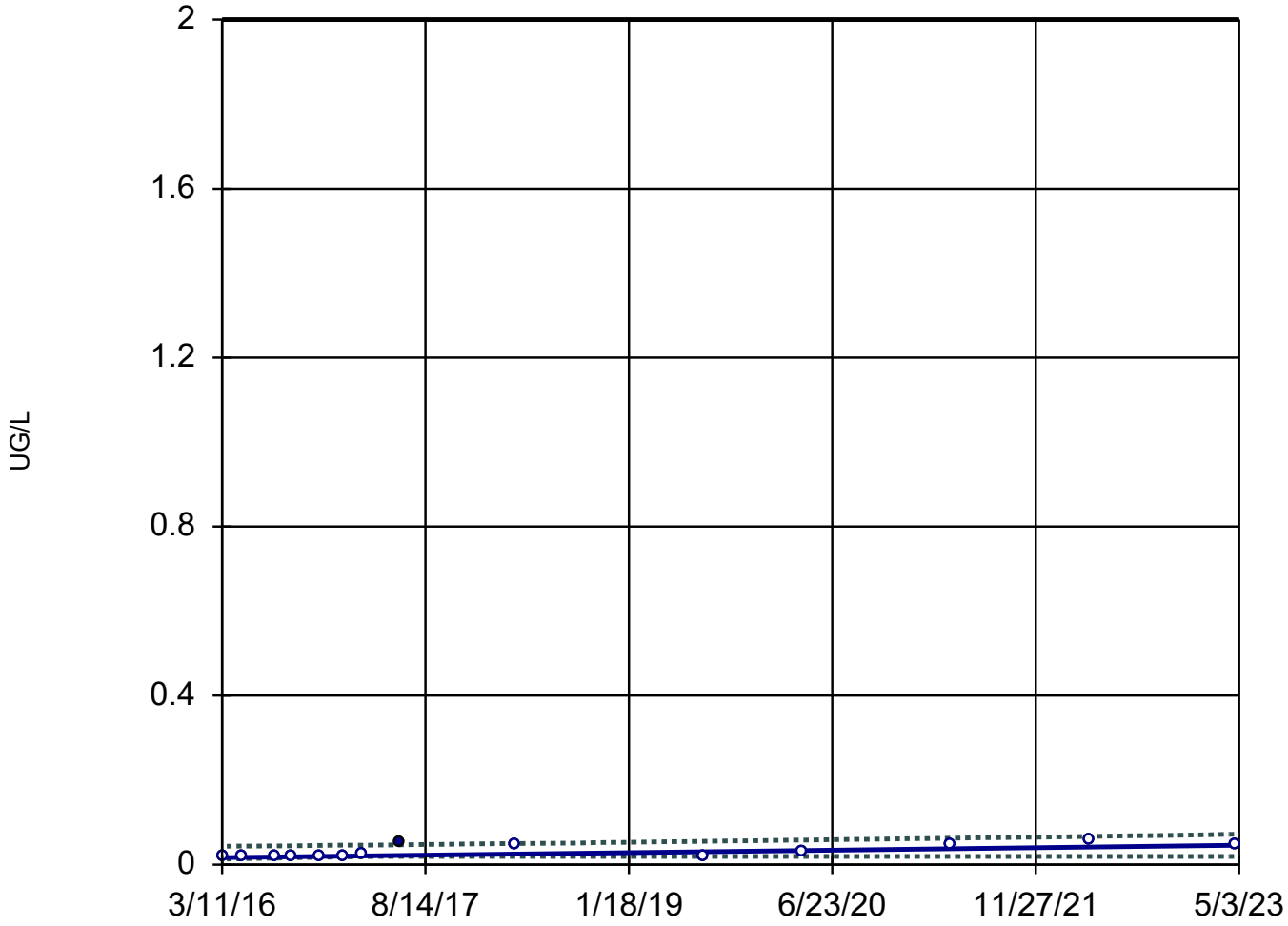
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-5



n = 14

Slope = 0.004089 units per year.

Mann-Kendall statistic = 45
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

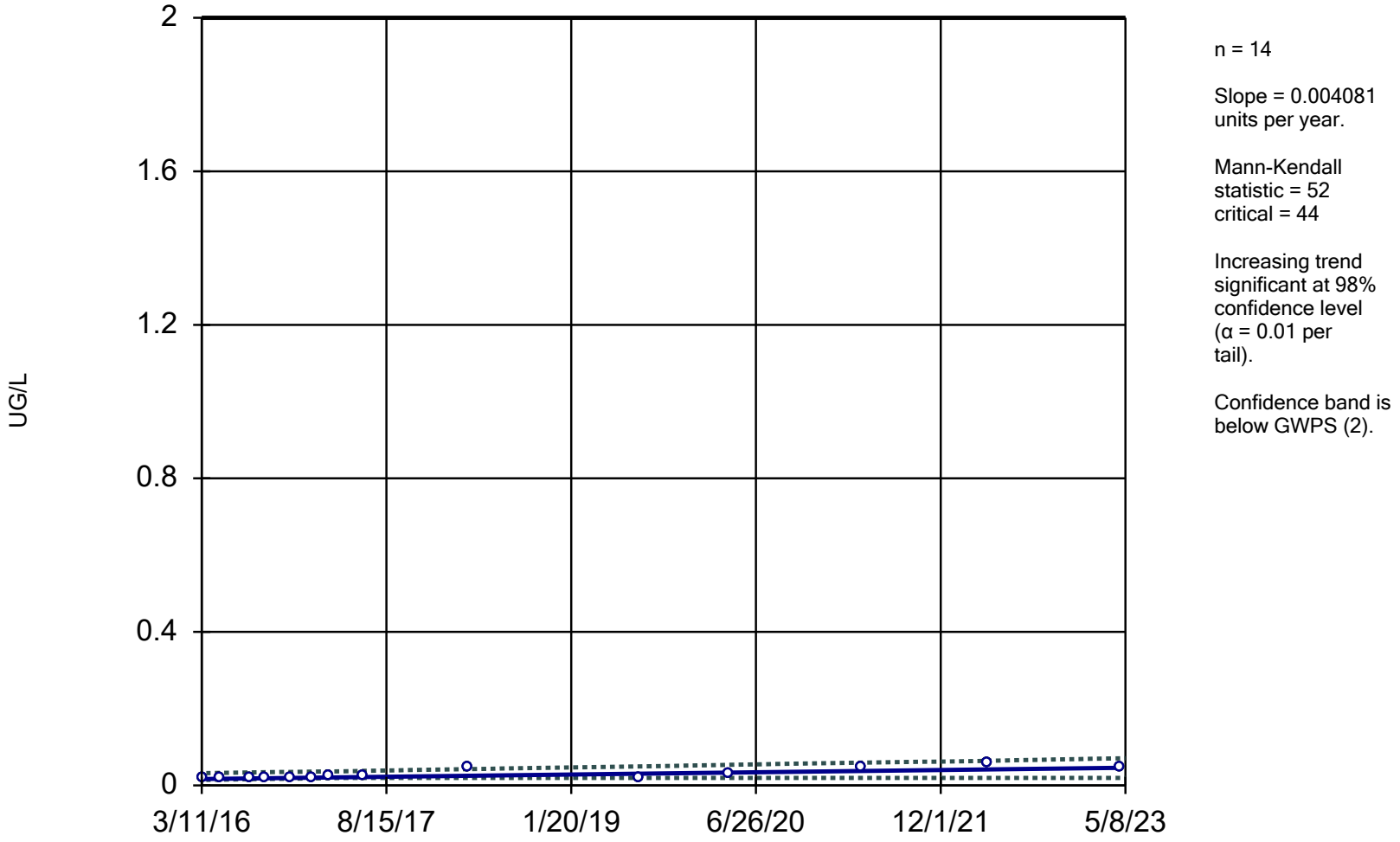
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-6



n = 14

Slope = 0.004081 units per year.

Mann-Kendall statistic = 52
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

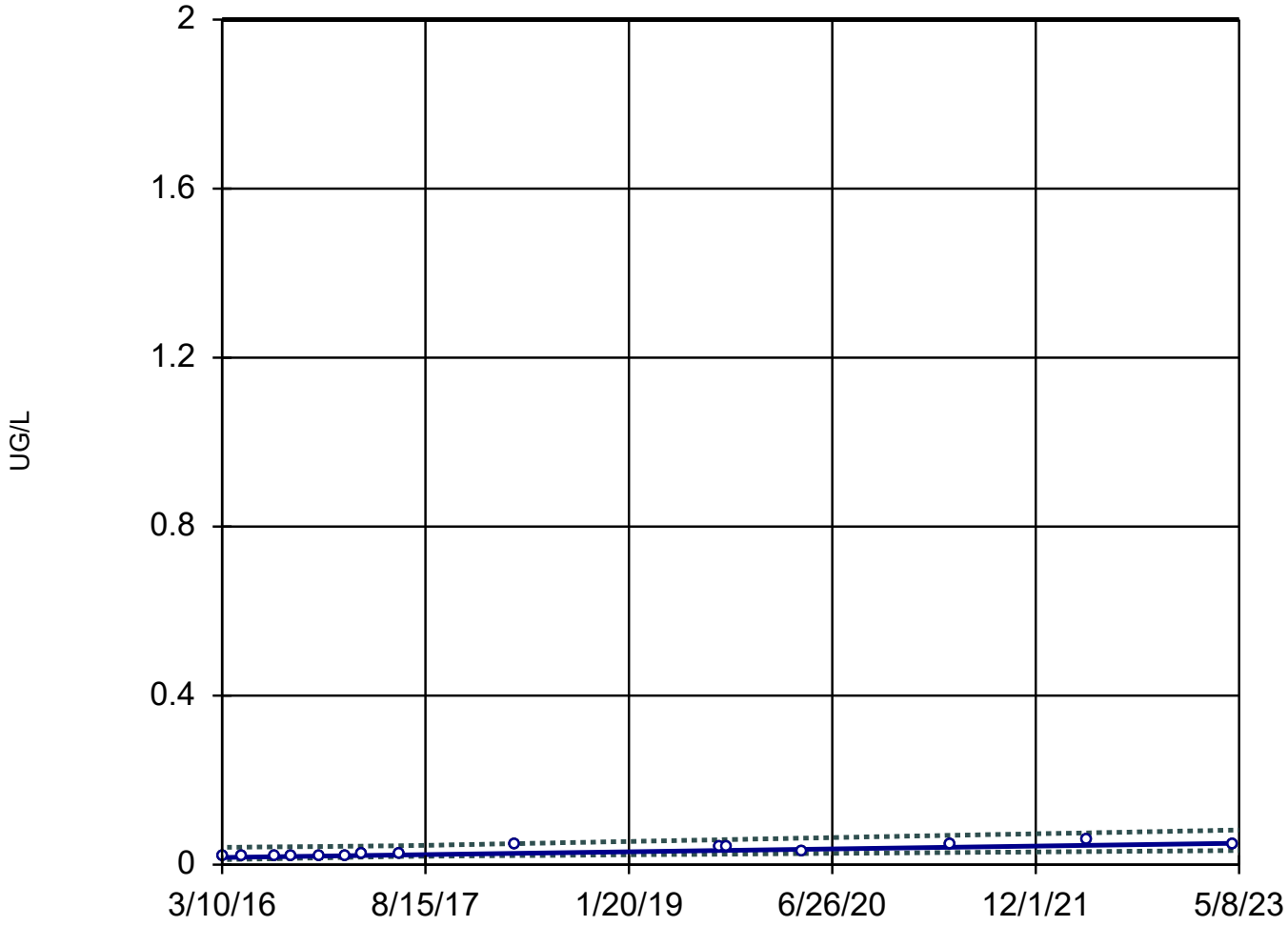
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-7



n = 15

Slope = 0.004662 units per year.

Mann-Kendall statistic = 75
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

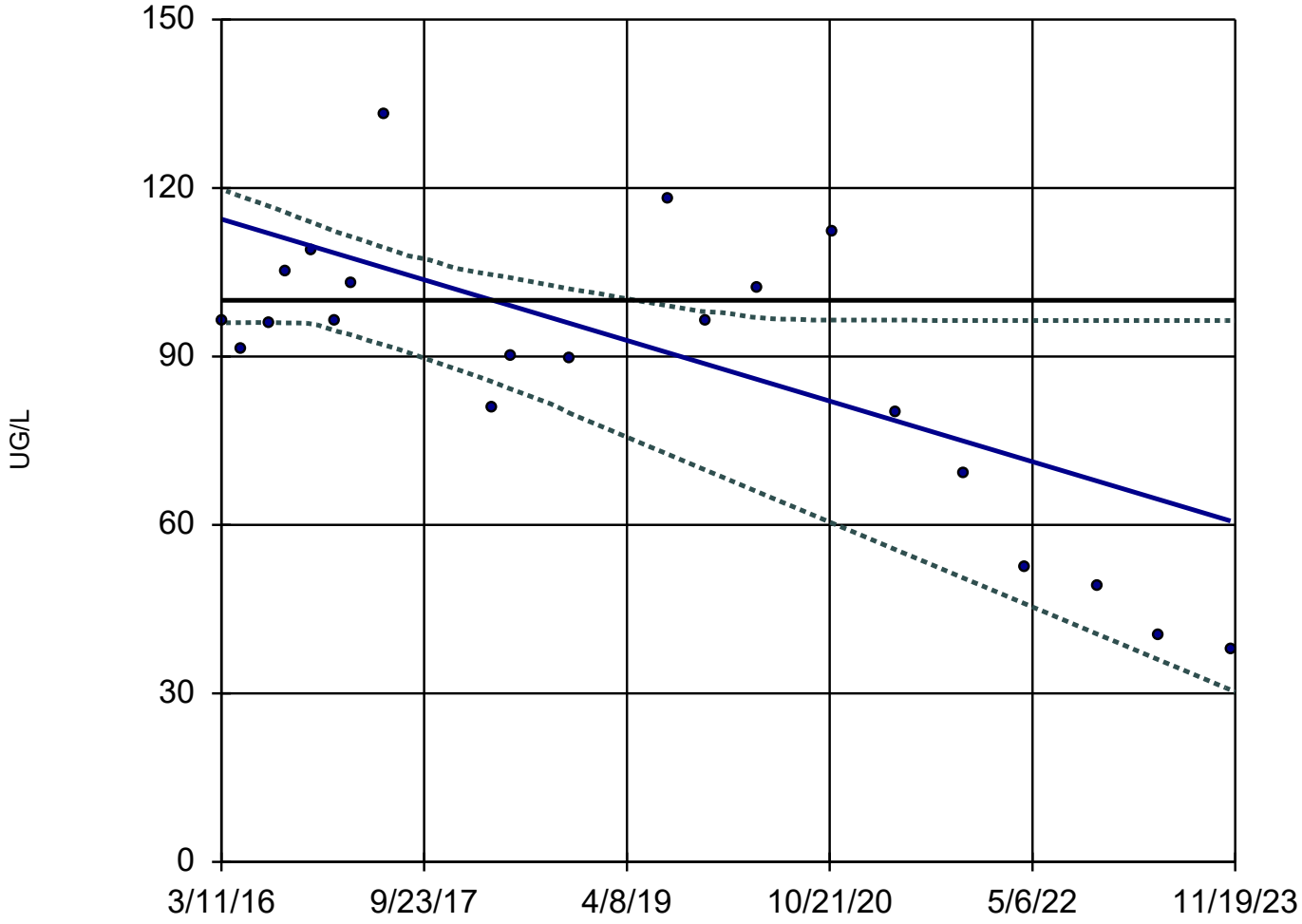
Constituent: MERCURY, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-4



n = 21

Slope = -7.012 units per year.

Mann-Kendall statistic = -90
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

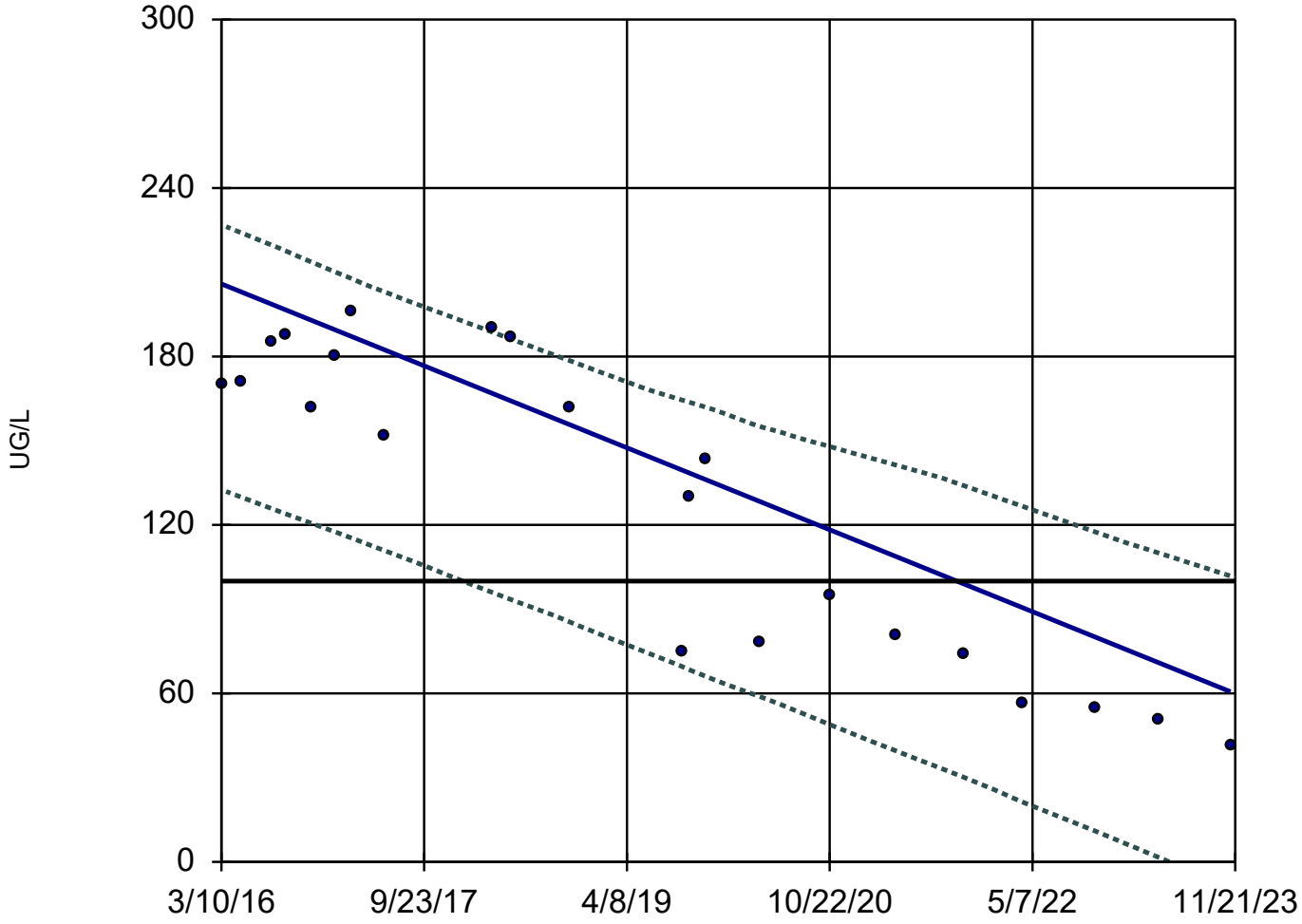
Confidence band intersects GWPS (100) on 05/15/19.

Constituent: MOLYBDENUM, TOTAL Analysis Run 3/4/2024 12:54 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sen's Slope and 95% Confidence Band

R-MW-7



n = 22

Slope = -18.94 units per year.

Mann-Kendall statistic = -156 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (100) on 01/24/18.

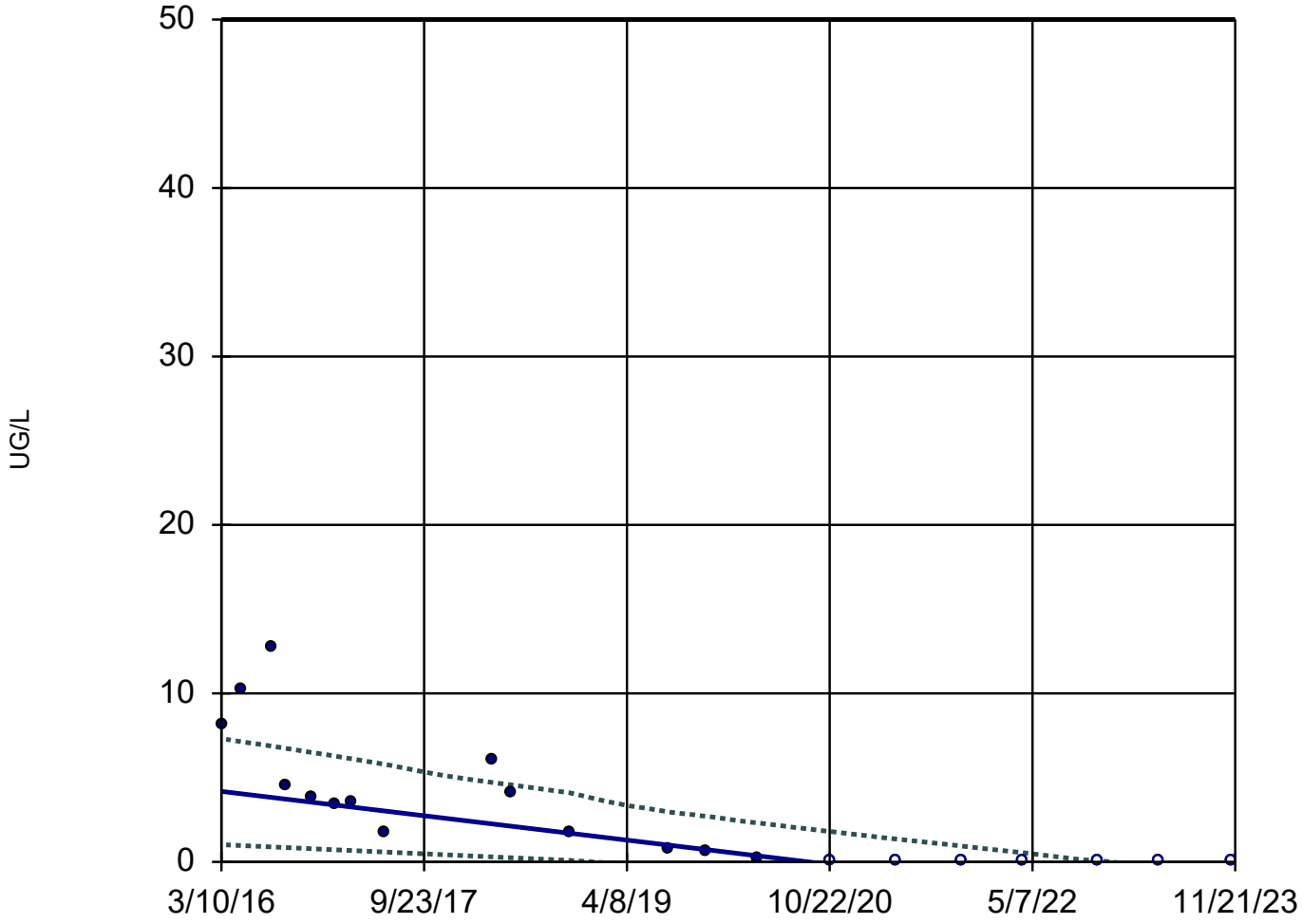
Constituent: MOLYBDENUM, TOTAL Analysis Run 3/4/2024 12:56 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 21

Slope = -0.9381 units per year.

Mann-Kendall statistic = -161
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (50).

Constituent: SELENIUM, TOTAL Analysis Run 3/4/2024 12:46 PM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/4/2024, 12:47 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	**R-MW-1**	**-0.1011**	**-85**	**-78**	**Yes**	**21**	**14.29**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-MW-2**	**-0.3541**	**-133**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-MW-3	-0.00...	-40	-78	No	21	52.38	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-MW-4**	**0.004462**	**111**	**73**	**Yes**	**20**	**85**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-MW-5**	**0.004542**	**126**	**73**	**Yes**	**20**	**95**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-MW-6	0.003556	29	78	No	21	66.67	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	R-MW-7	0.004322	63	84	No	22	81.82	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-MW-1**	**-1.116**	**-86**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-MW-2	1.974	31	78	No	21	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-MW-3	-4.391	-41	-78	No	21	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-MW-4	0.5632	72	78	No	21	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-MW-5**	**-0.4199**	**-154**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-MW-6	0.04715	27	63	No	18	16.67	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-MW-7**	**4.779**	**90**	**84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-MW-1**	**3.013**	**81**	**73**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-MW-2**	**-0.7576**	**-79**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-MW-3	1.476	36	78	No	21	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-MW-4**	**11.44**	**91**	**78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-MW-5**	**-8.077**	**-105**	**-73**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-MW-6	-1.038	-6	-73	No	20	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-MW-7	-9.476	-84	-84	No	22	0	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-1	-0.00...	-24	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-2	0	-10	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-3	0	-4	-48	No	15	93.33	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-4	0	-10	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-5	0	-10	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-6	0	-4	-48	No	15	93.33	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-7	0	4	48	No	15	93.33	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-1	0.002058	30	58	No	17	82.35	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-2	0.03479	58	63	No	18	16.67	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	**R-MW-3**	**0.02954**	**71**	**63**	**Yes**	**18**	**44.44**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	R-MW-4	0.00214	43	63	No	18	77.78	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-5	0.001968	63	63	No	18	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-6	0.001569	53	58	No	17	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-7	0.00222	56	68	No	19	78.95	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-1	-0.00...	-9	-68	No	19	57.89	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-2	-0.02435	-21	-68	No	19	26.32	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-3	-0.06608	-42	-68	No	19	26.32	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-4	-0.03462	-32	-63	No	18	38.89	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-5	-0.0351	-47	-68	No	19	31.58	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-6	-0.00...	-7	-58	No	17	58.82	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-7	0.001399	4	73	No	20	45	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	**R-MW-1**	**0.03219**	**60**	**53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**R-MW-2**	**0.024**	**78**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**R-MW-3**	**0.03402**	**88**	**53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	R-MW-4	0.02279	46	53	No	16	81.25	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	R-MW-5	0.01305	33	53	No	16	87.5	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	**R-MW-6**	**0.02662**	**56**	**48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**R-MW-7**	**0.03942**	**79**	**58**	**Yes**	**17**	**76.47**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-MW-1	-0.01597	-65	-112	No	27	18.52	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/4/2024, 12:47 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
FLUORIDE, TOTAL (MG/L)	R-MW-2	0.02117	42	95	No	24	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-MW-3**	**0.04849**	**130**	**95**	**Yes**	**24**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-MW-4	-0.02278	-89	-95	No	24	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-MW-5	0.006751	57	89	No	23	8.696	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-MW-6**	**0.0196**	**145**	**89**	**Yes**	**23**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-MW-7	-0.01985	-74	-106	No	26	15.38	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-MW-1**	**0.1236**	**84**	**68**	**Yes**	**19**	**100**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-MW-2	0.2287	22	73	No	20	5	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-MW-3	-0.2965	-60	-73	No	20	40	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-MW-4**	**0.1184**	**70**	**68**	**Yes**	**19**	**94.74**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	**R-MW-5**	**0.1236**	**71**	**68**	**Yes**	**19**	**84.21**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-MW-6	0.1481	59	68	No	19	78.95	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-MW-7**	**0.1328**	**89**	**73**	**Yes**	**20**	**90**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-MW-1	0	7	78	No	21	95.24	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-MW-2	0.06082	40	78	No	21	80.95	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-MW-3**	**0.2821**	**92**	**78**	**Yes**	**21**	**80.95**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	**R-MW-4**	**-1.386**	**-112**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-MW-5	0.06288	14	78	No	21	47.62	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-MW-6	0.0548	22	73	No	20	70	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-MW-7	-0.5997	-58	-68	No	19	0	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	**R-MW-1**	**0.004083**	**45**	**44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-2**	**0.004083**	**45**	**44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-3**	**0.004081**	**45**	**44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-4**	**0.004089**	**45**	**44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-5**	**0.004089**	**45**	**44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-6**	**0.004081**	**52**	**44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-7**	**0.004662**	**75**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	R-MW-1	4.17	46	78	No	21	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-MW-2	-3.483	-20	-78	No	21	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-MW-3	-3.015	-4	-78	No	21	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**R-MW-4**	**-7.012**	**-90**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	R-MW-5	0.004464	13	78	No	21	80.95	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-MW-6	0.06225	16	78	No	21	38.1	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**R-MW-7**	**-18.94**	**-156**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
RADIUM [226 + 228] (PCI/L)	R-MW-1	0.01108	13	78	No	21	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-2	0.04904	54	73	No	20	95	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-3	0.007826	10	78	No	21	95.24	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-4	0.01726	33	78	No	21	80.95	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-5	0.001233	4	78	No	21	80.95	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-6	0.005842	4	78	No	21	76.19	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-7	0.01823	51	84	No	22	90.91	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	**R-MW-1**	**-0.9381**	**-161**	**-78**	**Yes**	**21**	**33.33**	**n/a**	**n/a**	**0.02**	**NP**
SELENIUM, TOTAL (UG/L)	R-MW-2	0.0416	25	78	No	21	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-3	-0.01306	-34	-73	No	20	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-4	0	-29	-78	No	21	66.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-5	0	4	78	No	21	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-6	-0.00...	-4	-73	No	20	15	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-7	0	4	84	No	22	81.82	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-1	-0.02666	-37	-48	No	15	93.33	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-2	-0.00...	-26	-53	No	16	100	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/4/2024, 12:47 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
THALLIUM, TOTAL (UG/L)	R-MW-3	-0.00...	-25	-48	No	15	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-4	-0.00...	-25	-48	No	15	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-5	-0.00...	-25	-48	No	15	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-6	-0.02526	-37	-48	No	15	93.33	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-7	-0.00...	-36	-53	No	16	93.75	n/a	n/a	0.02	NP

Appendix C

June 2024 Assessment Monitoring Statistical Evaluation

Memorandum

October 9, 2024

To:	Ameren Missouri – Lisa Meyer	**Project Number:**	23008-24
CC:	Ameren Missouri - Susan Knowles, Craig Giesmann, Charlie Henderson, Bill Kutosky		
From:	Rocksmith Geoengineering - Mark Haddock, P.E., Jeff Ingram, R.G., Grant Morey	**Email:**	jeff.ingram@rocksmithgeo.com
RE:	**Assessment Monitoring Statistical Evaluation, RCPA Surface Impoundment Rush Island Energy Center, Jefferson County, Missouri**		

This Technical Memorandum provides the results of the Assessment Monitoring Statistical Evaluation for the June 2024 sampling event at the RCPA Surface Impoundment at the Rush Island Energy Center located in Jefferson County, Missouri. Included in the memorandum is a summary of constituents that are present at a Statistically Significant Level (SSL), a list of site-specific Groundwater Protection Standards (**Table 1**), and the Sanitas Technologies™ (Sanitas) statistical software output for each of the Appendix IV parameters (**Appendix A** and **Appendix B**).

The Appendix IV constituents were evaluated for SSLs using the methods and procedures outlined in the Statistical Analysis Plan (SAP). As with previous statistical evaluations, an analysis was conducted to identify new outliers in the dataset with the inclusion of data collected in June 2024. There were no new outliers identified and removed from the dataset for this statistical evaluation.

An analysis of the outliers removed from the dataset to-date was completed. The following previously identified outliers were added back into the dataset prior to the calculation of confidence intervals in **Appendix A** and trending confidence bands in **Appendix B**:

- Beryllium
    - R-MW-7/R-MW-7(R) at 1.2 J micrograms per liter (µg/L) on 11/2/2018: removed during the statistical evaluation for the July 2019 sampling event because the result was statistically higher than other beryllium results at the same monitoring well. Based on subsequent sampling results, the high result was confirmed, and the result is no longer an outlier.
- Fluoride
    - R-MW-6 at non-detect [<0.19 milligrams per liter (mg/L)] on 1/4/2019: removed during the statistical evaluation for the November 2023 sampling event because the result was statistically lower than other fluoride results at the same monitoring well. Based on subsequent sampling results, the low result was confirmed, and the result is no longer an outlier.

Based on the results from the confidence interval and trend analysis, no new SSLs were noted. SSLs at the RCPA Surface Impoundment as of June 2024 continue to be:

- Arsenic at R-MW-2, R-MW-3, and R-MW-7/R-MW-7(R)
- Molybdenum at R-MW-2 and R-MW-3

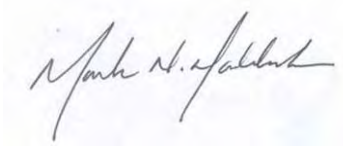
Rocksmith appreciates this opportunity to provide hydrogeological and engineering support services to Ameren. If you have any questions or comments regarding the information provided, please contact the undersigned.

Sincerely,

Rocksmith Geoengineering, LLC



Jeff Ingram, R.G.
Senior Geologist, Partner



Mark Haddock, P.E., R.G.
Principal Engineer, Senior Partner

Attachments

Tables

Table 1 – RCPA Groundwater Protection Standards

Appendices

Appendix A – Sanitas Confidence Interval Statistical Output

Appendix B – Sanitas Trending Confidence Bands Statistical Output

Tables

Table 1 - RCPA Groundwater Protection Standards
RCPA Surface Impoundment
Rush Island Energy Center

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring[6]
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	30	30
Barium	µg/L	2000	2000	548.6
Beryllium	µg/L	4	4	DQR
Cadmium	µg/L	5	5	DQR
Chromium	µg/L	100	100	2.363
Cobalt	µg/L	6	6	DQR
Fluoride	mg/L	4	4	0.2896
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	64.7	64.7
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	2.297
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter
2. mg/L - milligrams per liter
3. pCi/L - picocuries per liter
4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Updated January 9, 2023 at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.
5. Health Based Groundwater Protection Standards (GWPS) were adoped for Appendix IV parameters without an MCL (i.e. cobalt, lithium, molybdenum, and lead). Information available at https://www.epa.gov/coalash/coal-ash-rule.
6. Values were calculated using statistical methods outlined for Detection Monitoring and are used for returning to Detection Monitoring based on available data to date.
7. DQR - Double Quantification Rule. If all baseline data are less than the Practical Quantitation Limit (PQL), then the DQR will be used. More information on the DQR is provided in the Statistical Analysis Plan.
8. Site GWPS is either the MCL/Health Based GWPS or based on background levels (calculated as described in the Statistical Analysis Plan for Assessment Monitoring), whichever is higher.
9. GWPS and background values calculated using results up through April 2023 from monitoring wells MW-B1 and MW-B2.

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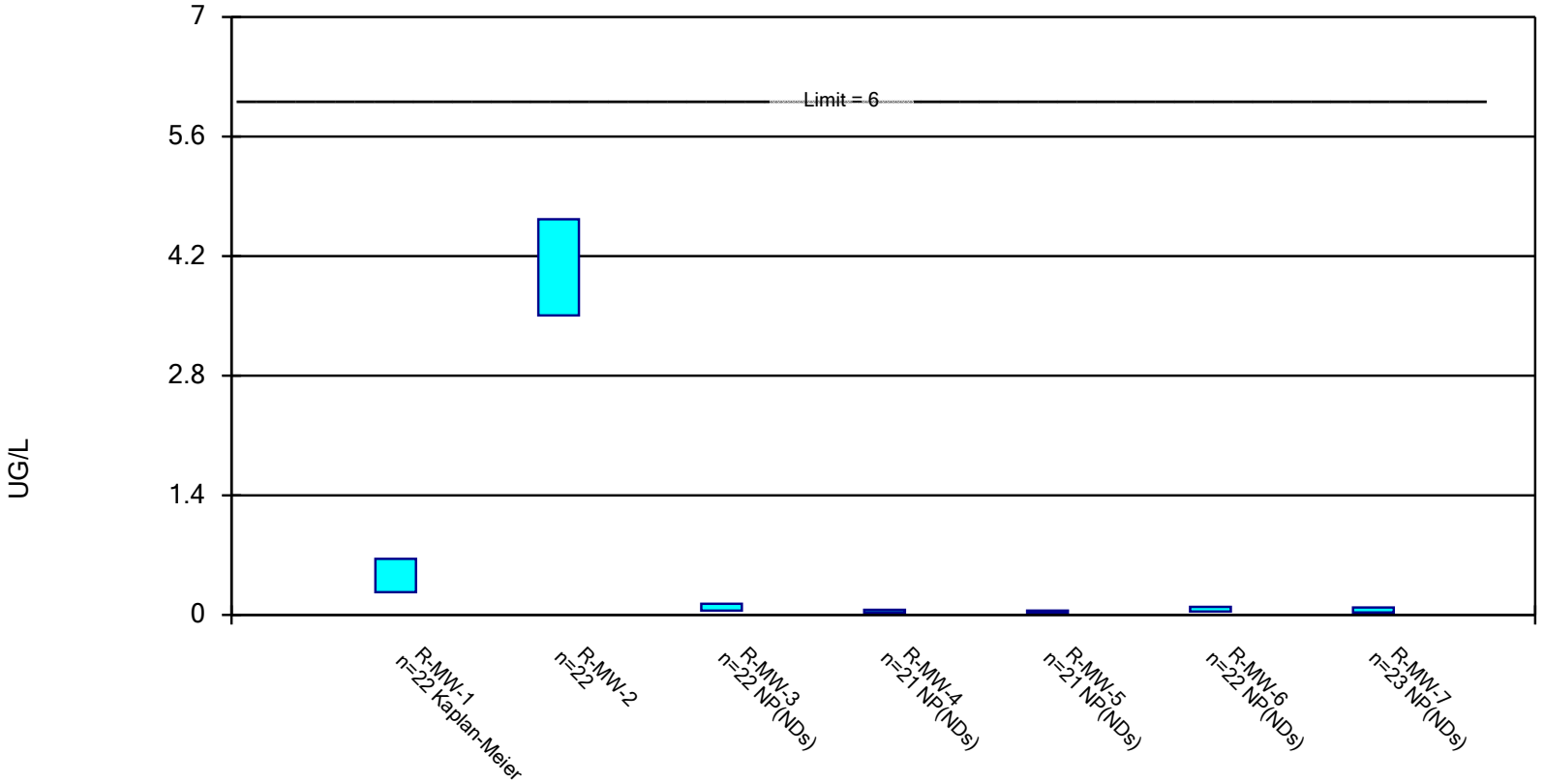
Prepared by: GTM
Checked by: JSI
Reviewed by: MNH

Appendix A
Sanitas Confidence Interval Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



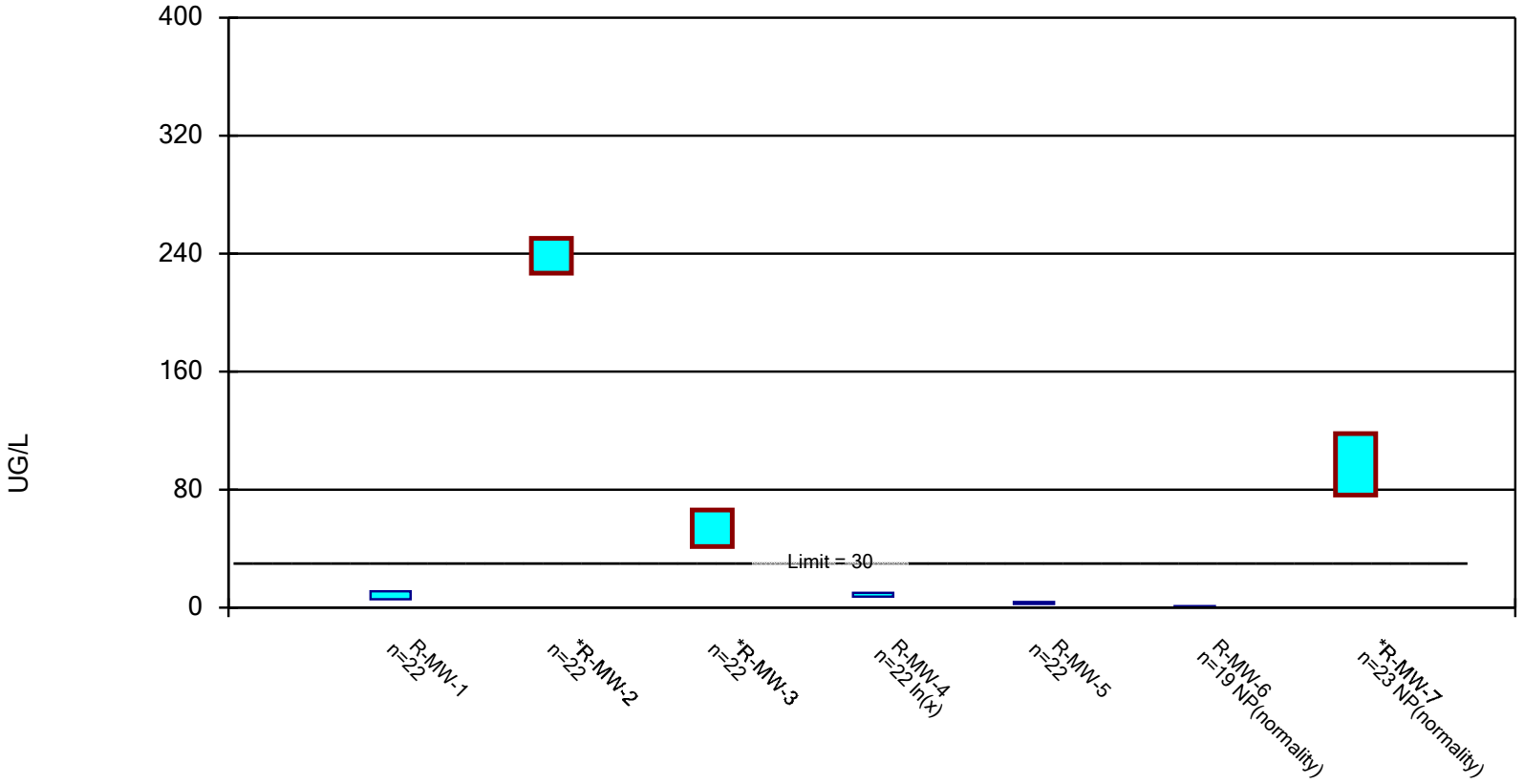
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

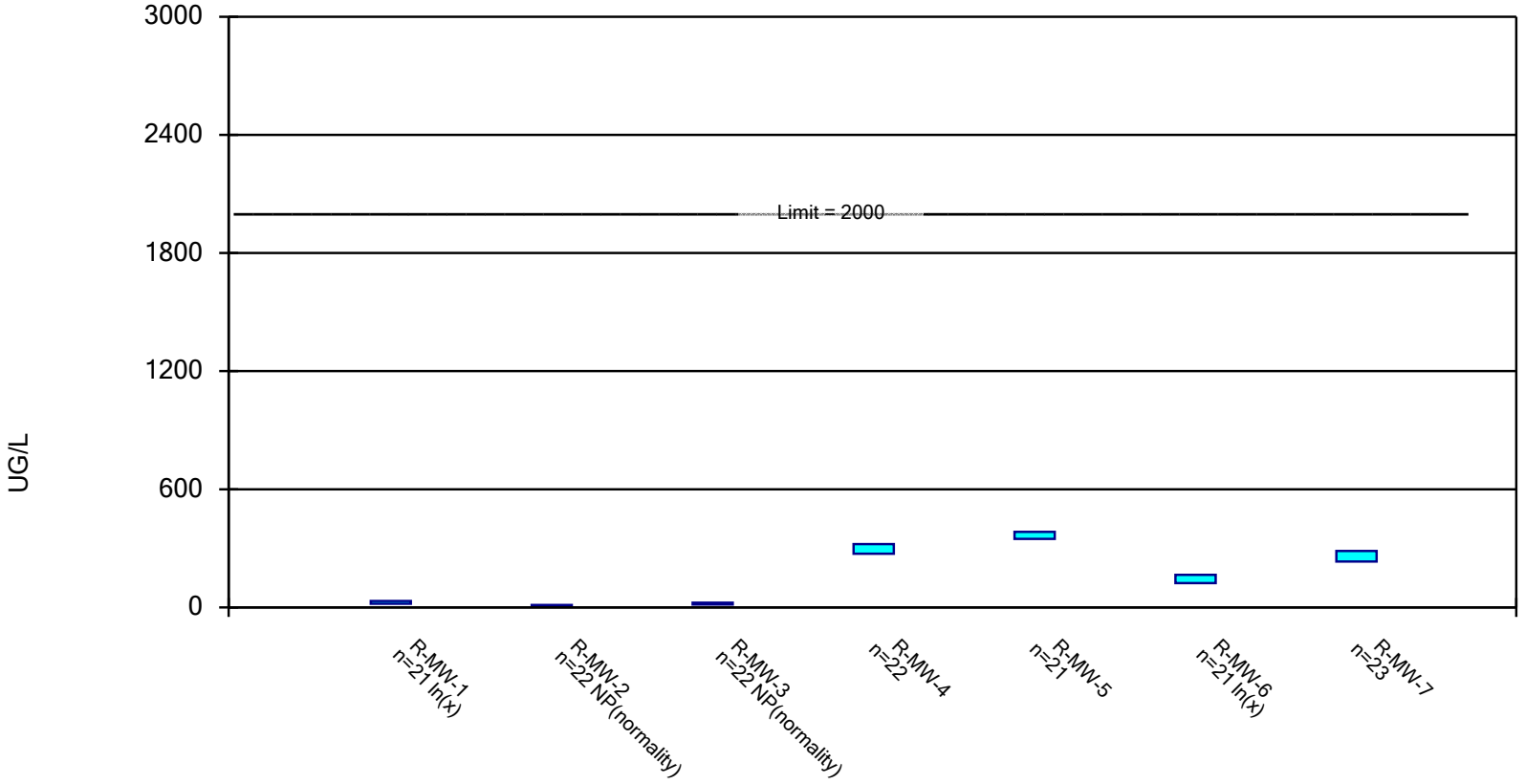


Constituent: ARSENIC, TOTAL Analysis Run 9/4/2024 9:51 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

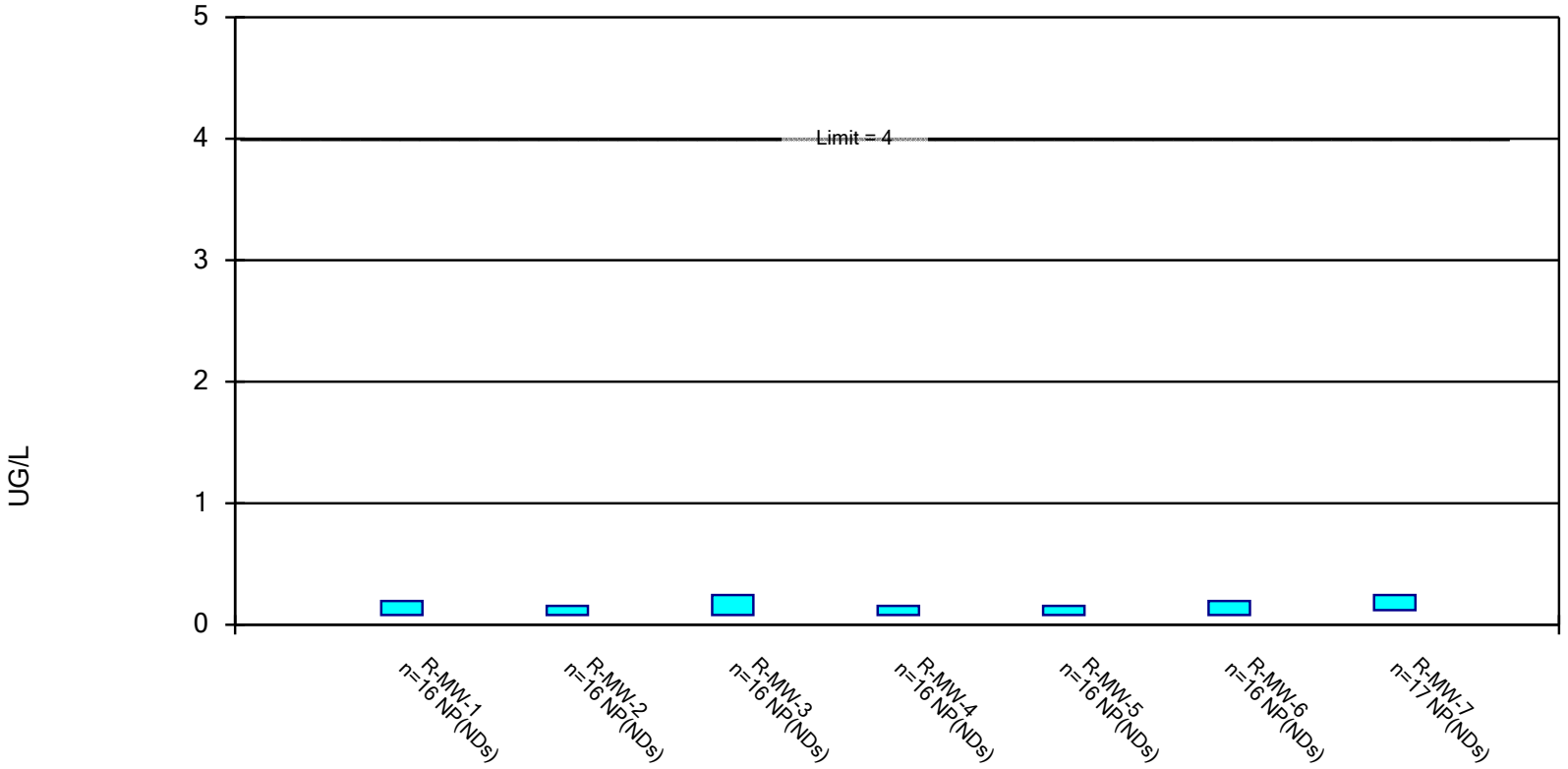


Constituent: BARIUM, TOTAL Analysis Run 9/4/2024 9:51 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



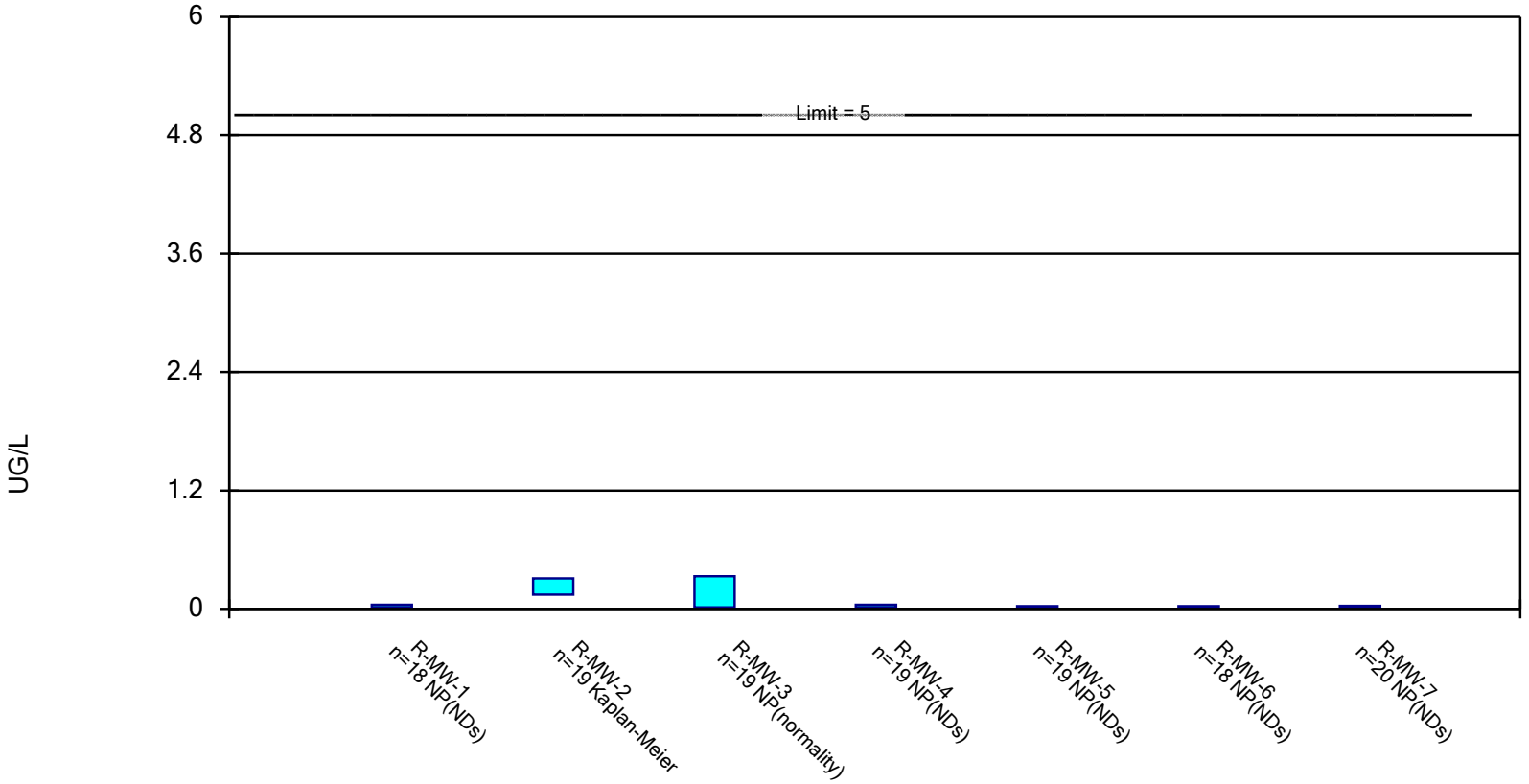
Constituent: BERYLLIUM, TOTAL Analysis Run 9/4/2024 9:51 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

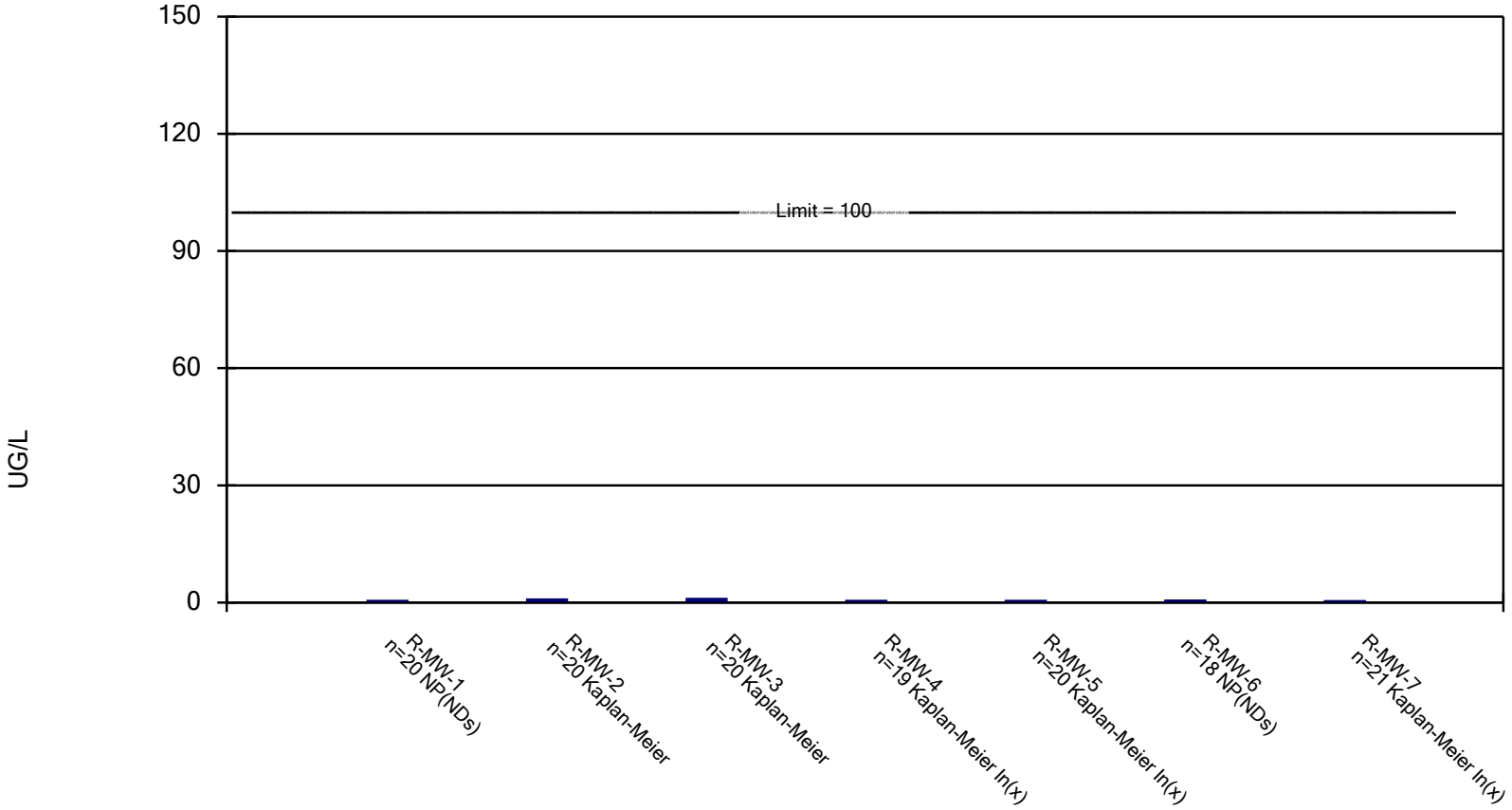


Constituent: CADMIUM, TOTAL Analysis Run 9/4/2024 9:51 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



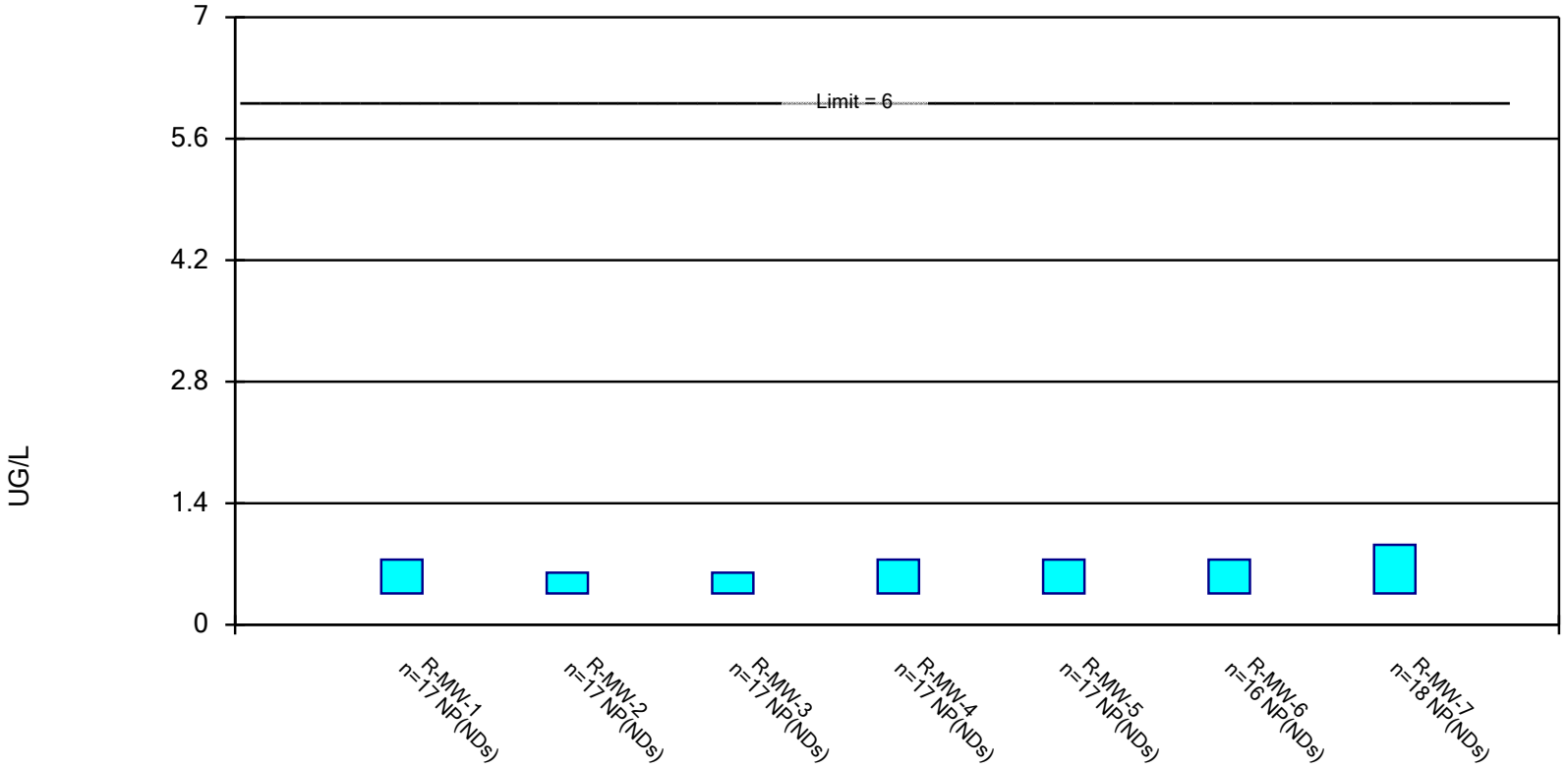
Constituent: CHROMIUM, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



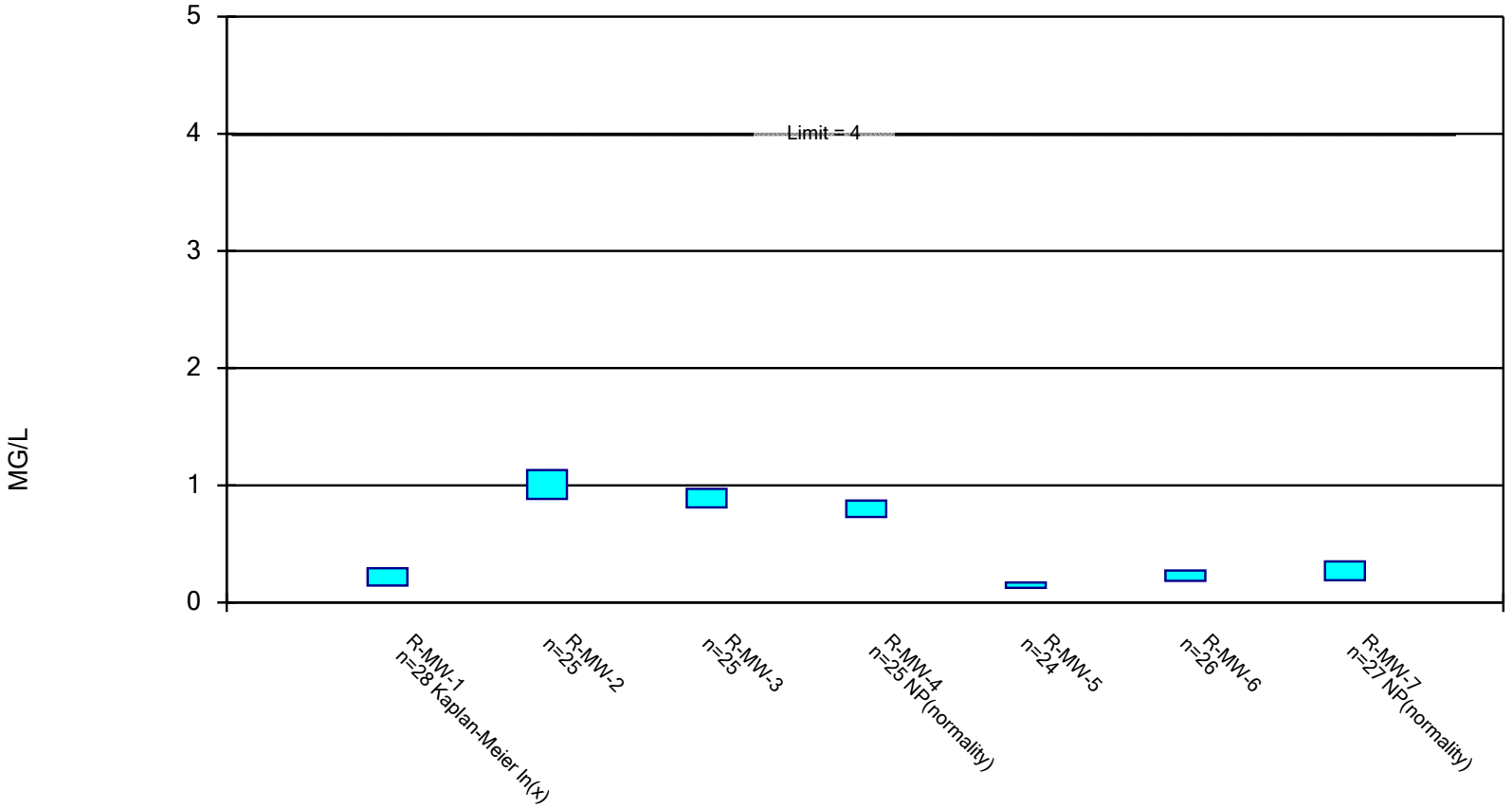
Constituent: COBALT, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



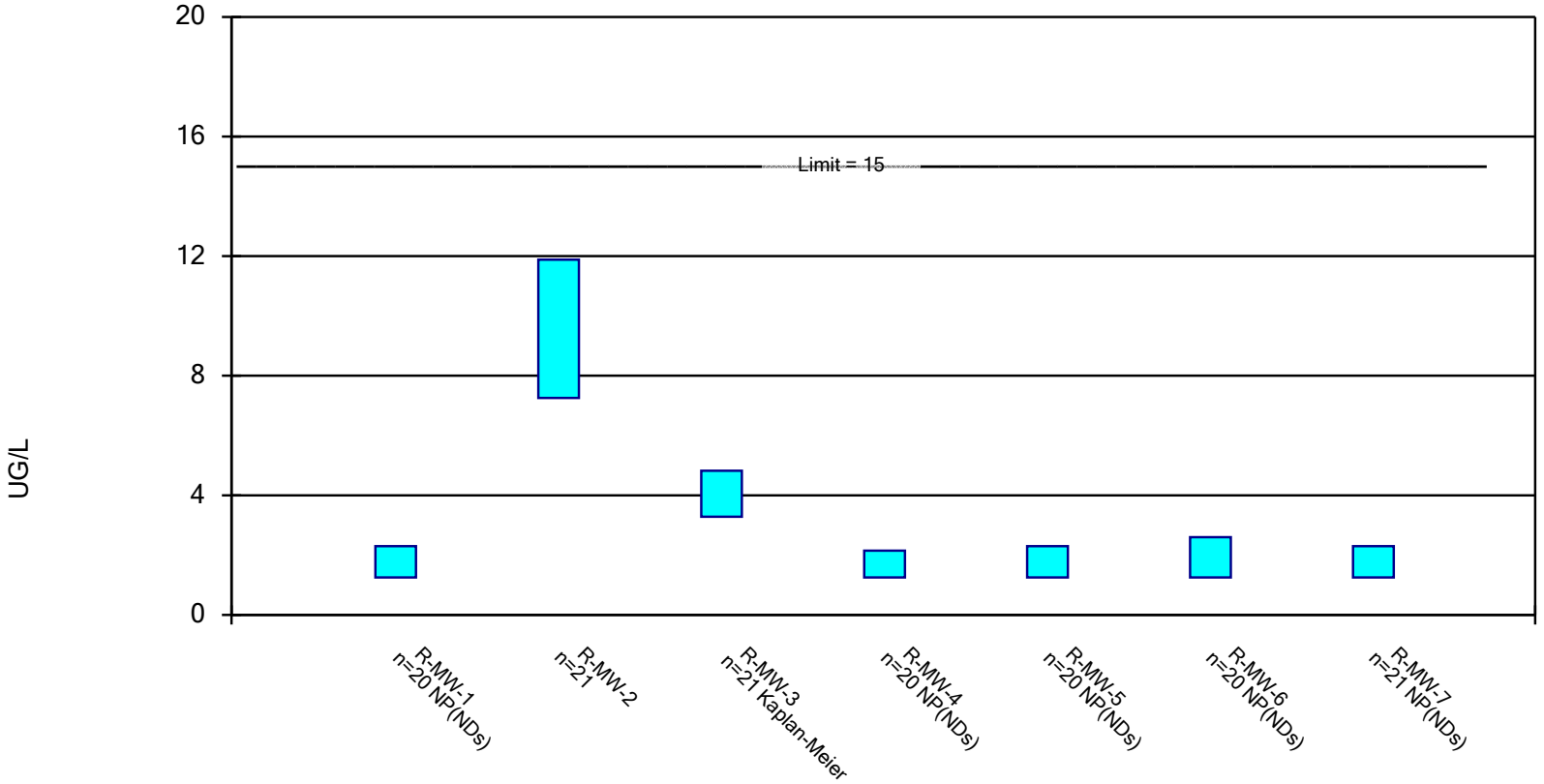
Constituent: FLUORIDE, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



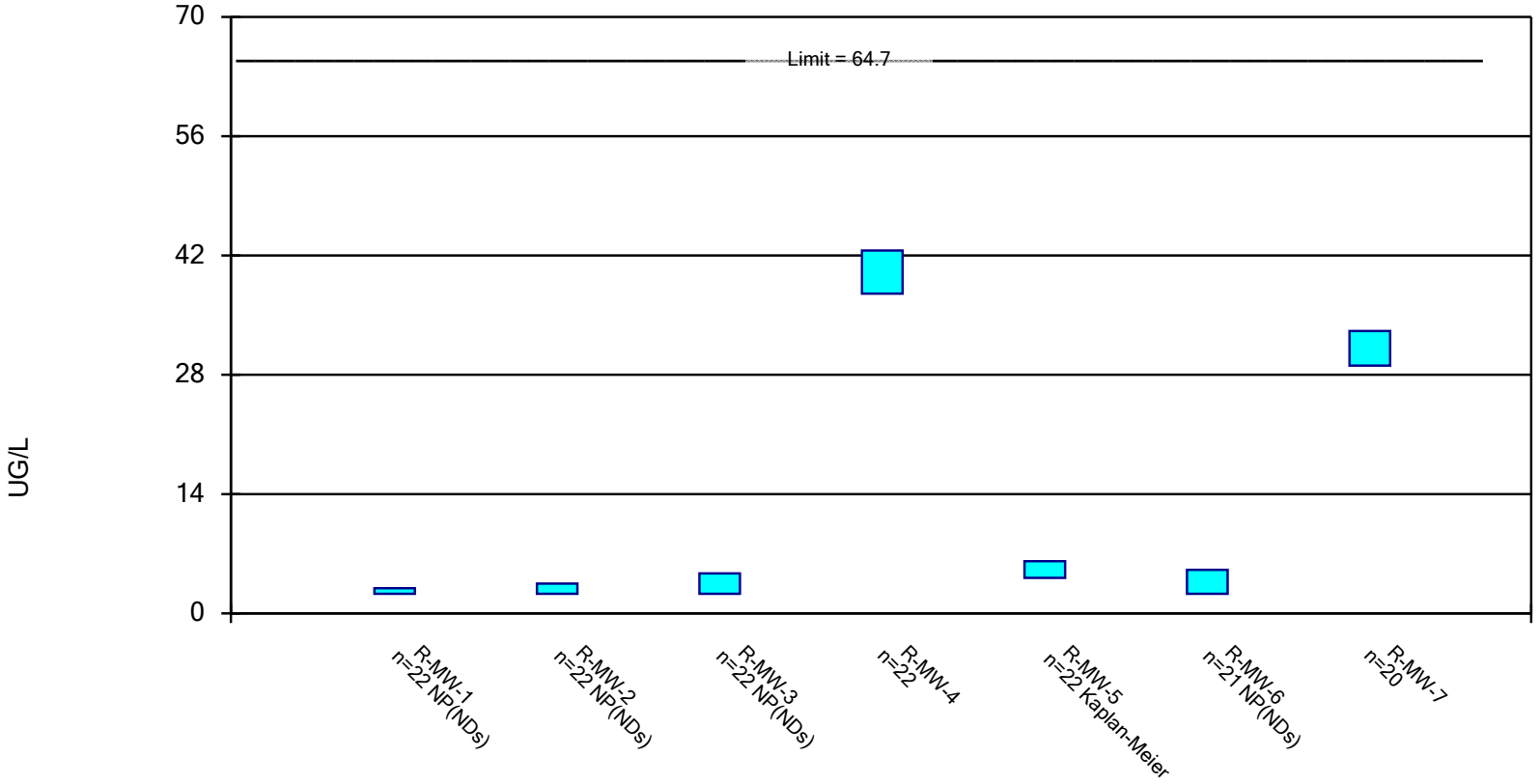
Constituent: LEAD, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



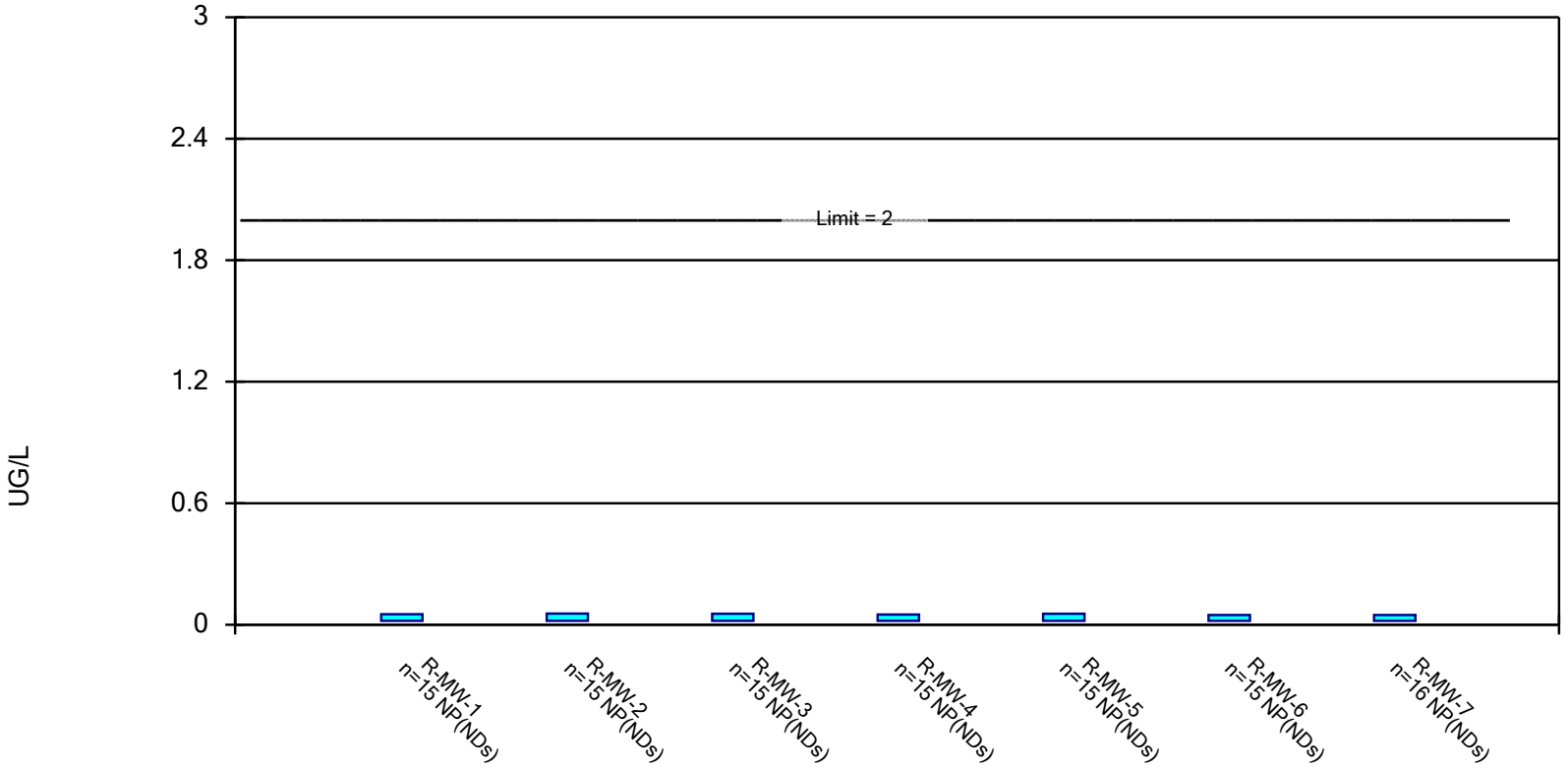
Constituent: LITHIUM, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



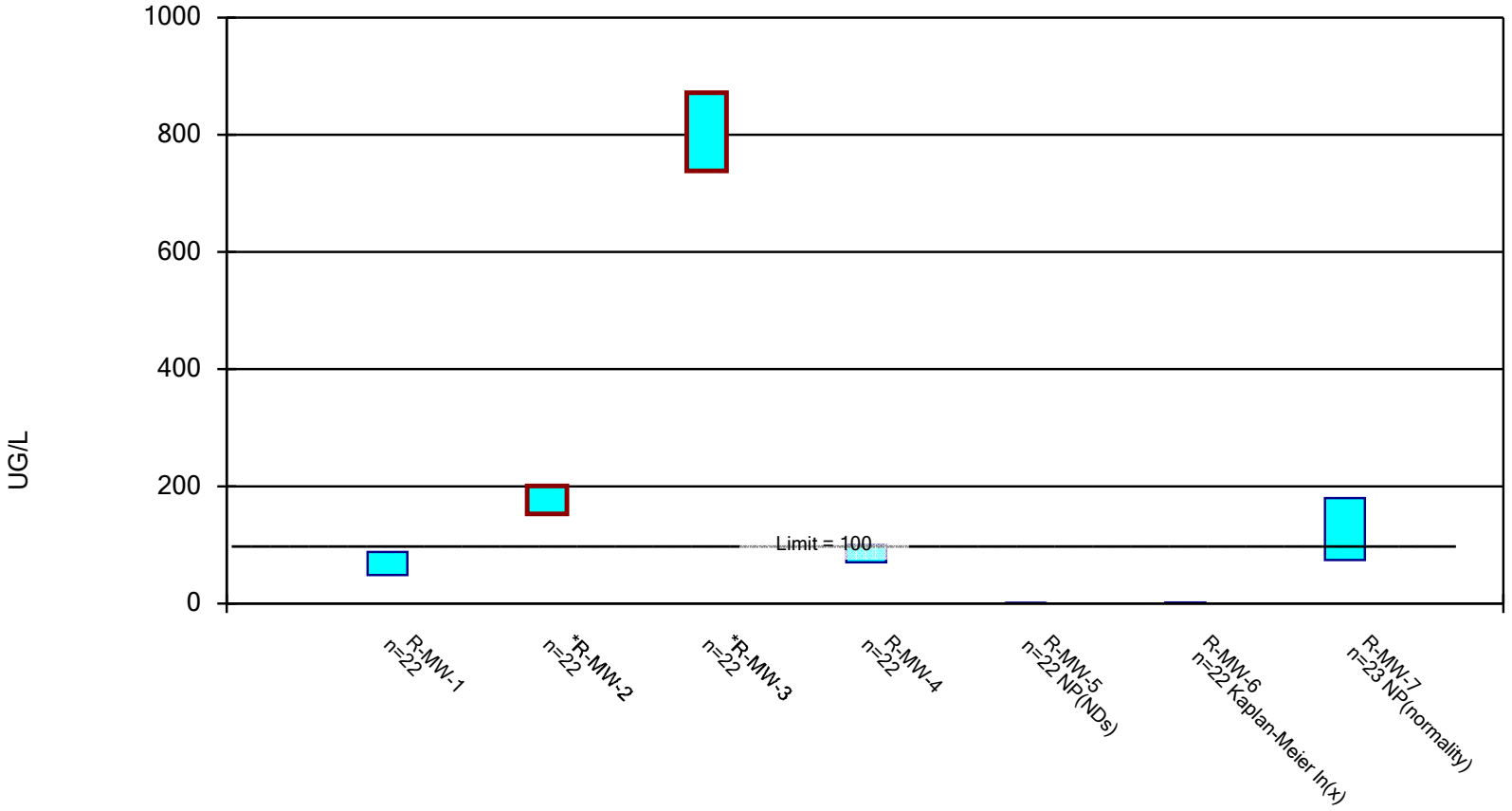
Constituent: MERCURY, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



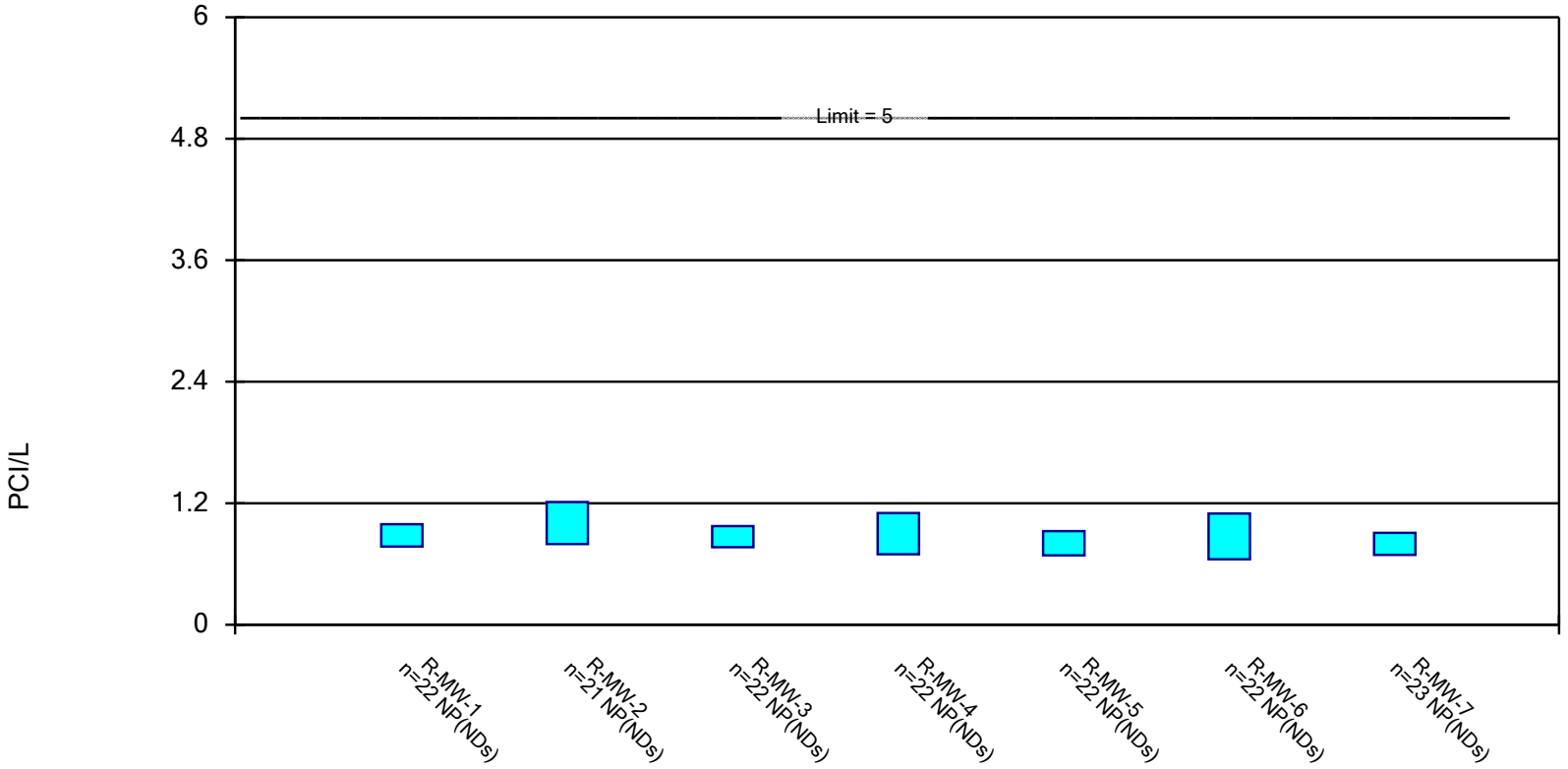
Constituent: MOLYBDENUM, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



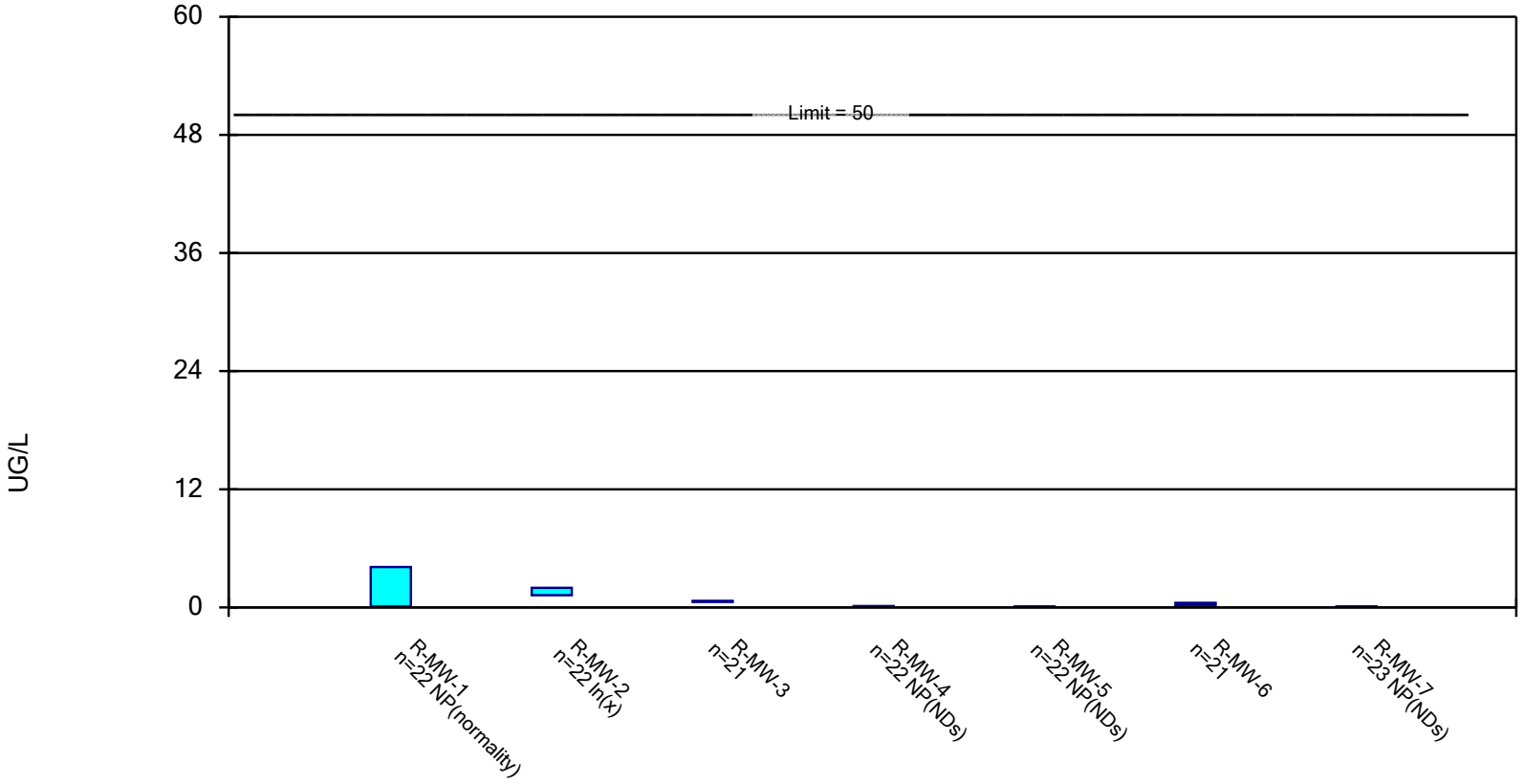
Constituent: RADIUM [226 + 228] Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



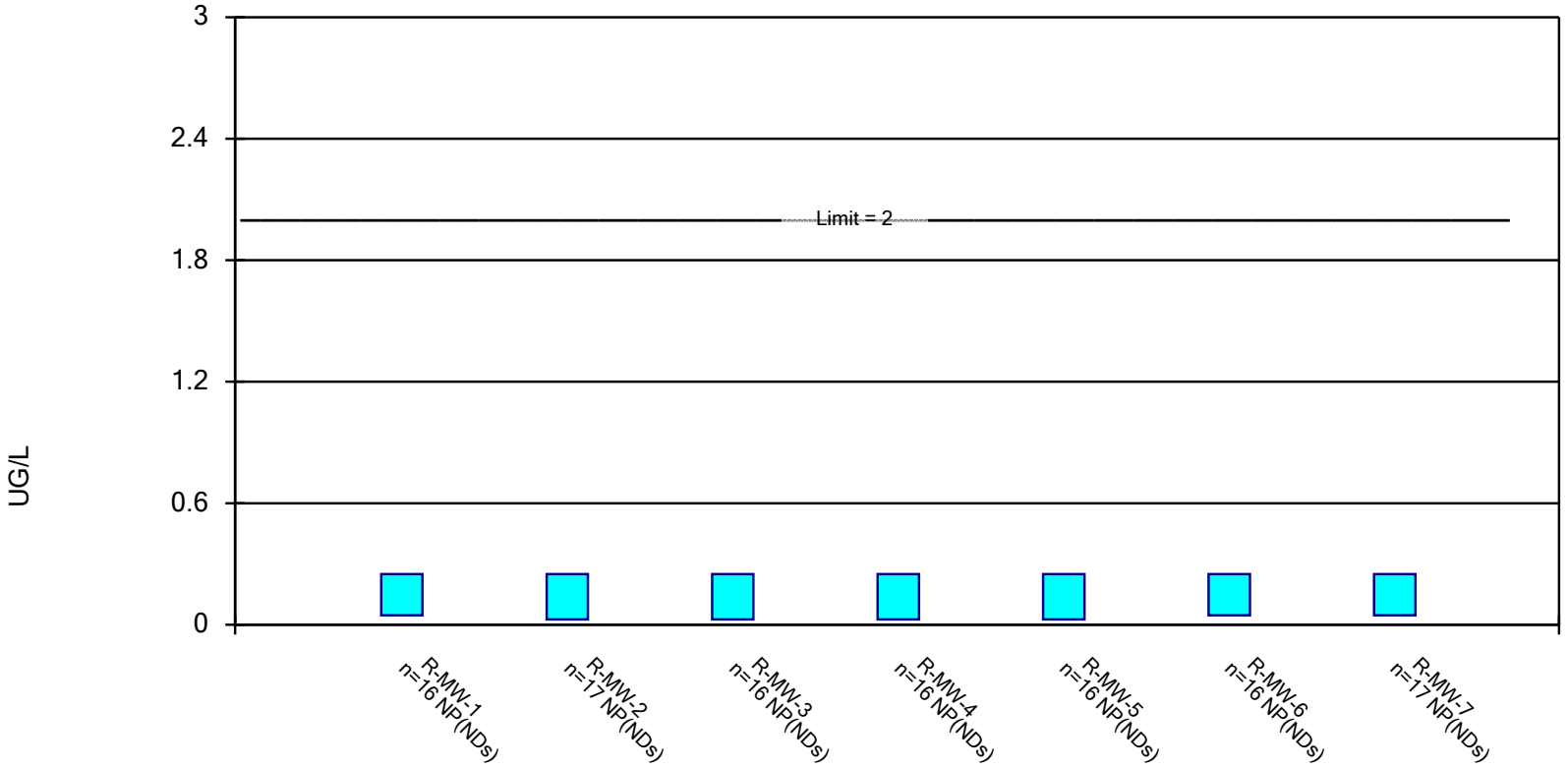
Constituent: SELENIUM, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: THALLIUM, TOTAL Analysis Run 9/4/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/4/2024, 9:52 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	R-MW-1	0.6554	0.2657	6	No	22	18.18	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-MW-2	4.631	3.505	6	No	22	0	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-MW-3	0.13	0.05	6	No	22	54.55	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-4	0.06	0.029	6	No	21	85.71	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-5	0.05	0.029	6	No	21	95.24	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-6	0.094	0.039	6	No	22	68.18	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-MW-7	0.086	0.029	6	No	23	82.61	No	0.01	NP (NDs)
ARSENIC, TOTAL (UG/L)	R-MW-1	11.11	5.671	30	No	22	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	**R-MW-2**	**250.4**	**226.7**	**30**	**Yes**	**22**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	**R-MW-3**	**66.23**	**41.39**	**30**	**Yes**	**22**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-MW-4	10.02	7.439	30	No	22	0	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-MW-5	3.822	2.487	30	No	22	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-MW-6	0.97	0.25	30	No	19	15.79	No	0.01	NP (normality)
ARSENIC, TOTAL (UG/L)	**R-MW-7**	**118**	**76.3**	**30**	**Yes**	**23**	**0**	**No**	**0.01**	**NP (normality)**
BARIUM, TOTAL (UG/L)	R-MW-1	32.45	18.74	2000	No	21	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-2	12.2	10	2000	No	22	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	R-MW-3	23.8	14.2	2000	No	22	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	R-MW-4	321.1	272.8	2000	No	22	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-5	383.9	347.5	2000	No	21	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-6	165.6	123.3	2000	No	21	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-MW-7	286.4	233.2	2000	No	23	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	R-MW-1	0.195	0.08	4	No	16	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-2	0.155	0.08	4	No	16	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-3	0.245	0.08	4	No	16	87.5	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-4	0.155	0.08	4	No	16	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-5	0.155	0.08	4	No	16	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-6	0.195	0.08	4	No	16	93.75	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-MW-7	0.245	0.12	4	No	17	82.35	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-1	0.041	0.0145	5	No	18	77.78	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-2	0.3086	0.1447	5	No	19	15.79	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-MW-3	0.33	0.0145	5	No	19	42.11	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	R-MW-4	0.041	0.0145	5	No	19	78.95	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-5	0.028	0.0145	5	No	19	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-6	0.028	0.0145	5	No	18	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-MW-7	0.031	0.0145	5	No	20	80	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-MW-1	0.42	0.086	100	No	20	55	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-MW-2	0.7749	0.3904	100	No	20	25	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-3	0.9402	0.3909	100	No	20	25	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-4	0.4089	0.1547	100	No	19	42.11	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-5	0.411	0.1446	100	No	20	30	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-MW-6	0.5	0.08	100	No	18	55.56	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-MW-7	0.3226	0.1224	100	No	21	47.62	ln(x)	0.01	Param.
COBALT, TOTAL (UG/L)	R-MW-1	0.75	0.36	6	No	17	88.24	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-2	0.6	0.36	6	No	17	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-3	0.6	0.36	6	No	17	94.12	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-4	0.75	0.36	6	No	17	82.35	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-5	0.75	0.36	6	No	17	88.24	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-6	0.75	0.36	6	No	16	93.75	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	R-MW-7	0.92	0.36	6	No	18	77.78	No	0.01	NP (NDs)
FLUORIDE, TOTAL (MG/L)	R-MW-1	0.2918	0.1445	4	No	28	21.43	ln(x)	0.01	Param.

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/4/2024, 9:52 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
FLUORIDE, TOTAL (MG/L)	R-MW-2	1.13	0.8844	4	No	25	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-3	0.9699	0.8117	4	No	25	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-4	0.87	0.73	4	No	25	0	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-MW-5	0.1702	0.1252	4	No	24	12.5	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-6	0.2728	0.1852	4	No	26	11.54	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-MW-7	0.35	0.19	4	No	27	18.52	No	0.01	NP (normality)
LEAD, TOTAL (UG/L)	R-MW-1	2.3	1.25	15	No	20	100	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-2	11.88	7.258	15	No	21	4.762	No	0.01	Param.
LEAD, TOTAL (UG/L)	R-MW-3	4.822	3.281	15	No	21	42.86	No	0.01	Param.
LEAD, TOTAL (UG/L)	R-MW-4	2.15	1.25	15	No	20	95	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-5	2.3	1.25	15	No	20	85	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-6	2.6	1.25	15	No	20	80	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	R-MW-7	2.3	1.25	15	No	21	90.48	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-1	2.95	2.3	64.7	No	22	90.91	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-2	3.5	2.3	64.7	No	22	81.82	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-3	4.7	2.3	64.7	No	22	77.27	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-4	42.59	37.52	64.7	No	22	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-MW-5	6.123	4.168	64.7	No	22	45.45	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-MW-6	5.1	2.3	64.7	No	21	66.67	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-MW-7	33.14	29.07	64.7	No	20	0	No	0.01	Param.
MERCURY, TOTAL (UG/L)	R-MW-1	0.052	0.0195	2	No	15	93.33	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-2	0.055	0.0195	2	No	15	93.33	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-3	0.054	0.0195	2	No	15	93.33	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-4	0.05	0.0195	2	No	15	93.33	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-5	0.054	0.0195	2	No	15	93.33	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-6	0.048	0.0195	2	No	15	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	R-MW-7	0.048	0.0195	2	No	16	100	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-MW-1	87.99	48.64	100	No	22	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-MW-2**	**200.7**	**153**	**100**	**Yes**	**22**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-MW-3**	**871.7**	**738.3**	**100**	**Yes**	**22**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-MW-4	100.3	70.48	100	No	22	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	R-MW-5	1	0.45	100	No	22	81.82	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-MW-6	1.688	0.7618	100	No	22	40.91	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	R-MW-7	180	74.2	100	No	23	0	No	0.01	NP (normality)
RADIUM [226 + 228] (PCI/L)	R-MW-1	0.992	0.772	5	No	22	95.45	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-2	1.211	0.797	5	No	21	95.24	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-3	0.9735	0.765	5	No	22	95.45	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-4	1.103	0.696	5	No	22	81.82	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-5	0.925	0.6855	5	No	22	81.82	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-6	1.099	0.646	5	No	22	77.27	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-MW-7	0.9065	0.689	5	No	23	91.3	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-MW-1	4.1	0.09	50	No	22	36.36	No	0.01	NP (normality)
SELENIUM, TOTAL (UG/L)	R-MW-2	1.987	1.244	50	No	22	0	ln(x)	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-3	0.6599	0.5535	50	No	21	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-4	0.13	0.09	50	No	22	68.18	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-MW-5	0.09	0.043	50	No	22	100	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-MW-6	0.4561	0.2416	50	No	21	14.29	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-MW-7	0.097	0.06	50	No	23	82.61	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-1	0.25	0.0465	2	No	16	93.75	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-2	0.25	0.026	2	No	17	100	No	0.01	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/4/2024, 9:52 AM

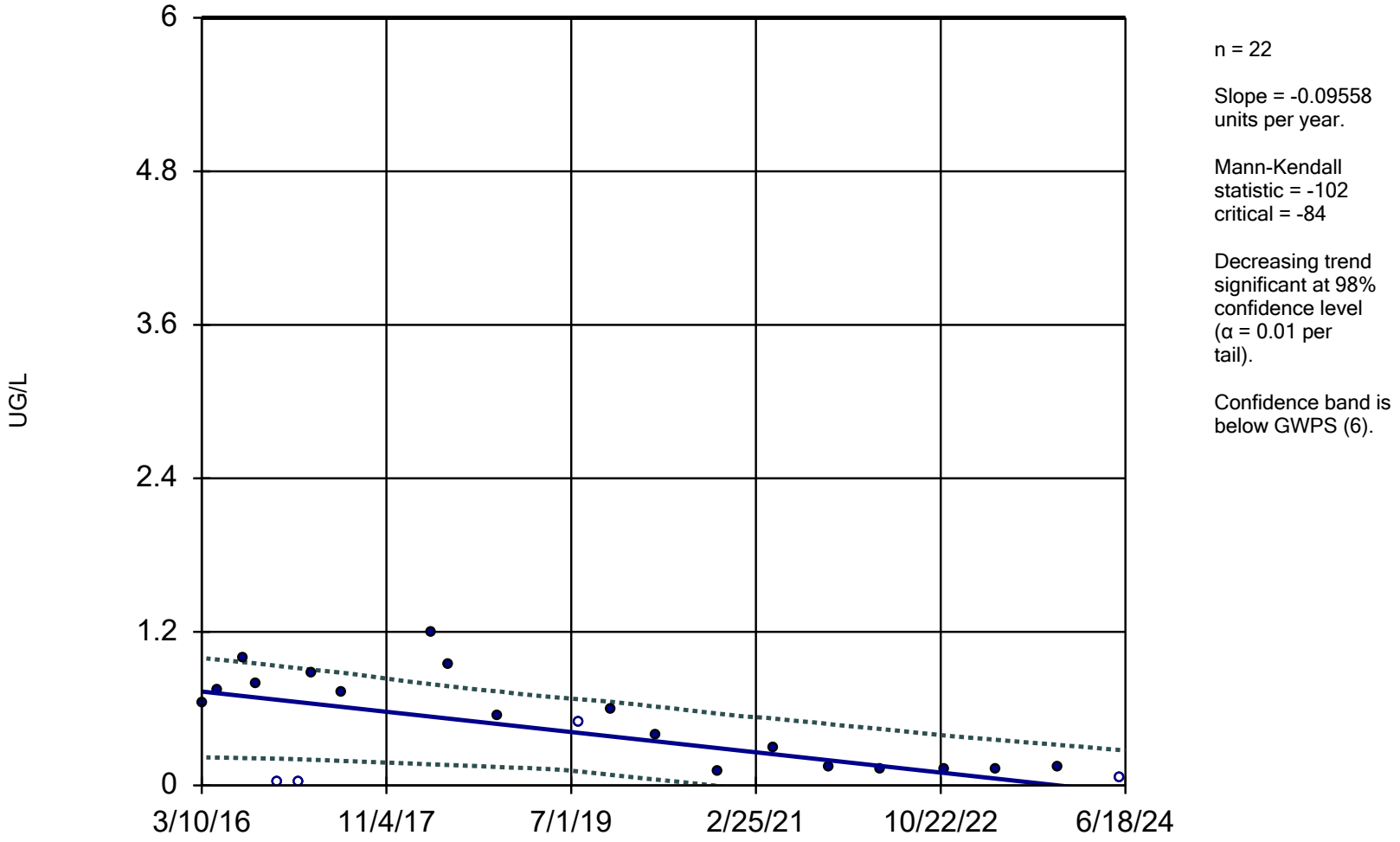
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
THALLIUM, TOTAL (UG/L)	R-MW-3	0.25	0.026	2	No	16	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-4	0.25	0.026	2	No	16	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-5	0.25	0.026	2	No	16	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-6	0.25	0.0465	2	No	16	93.75	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-MW-7	0.25	0.0465	2	No	17	94.12	No	0.01	NP (NDs)

Appendix B
Sanitas Trending Confidence Bands Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 22

Slope = -0.09558 units per year.

Mann-Kendall statistic = -102
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

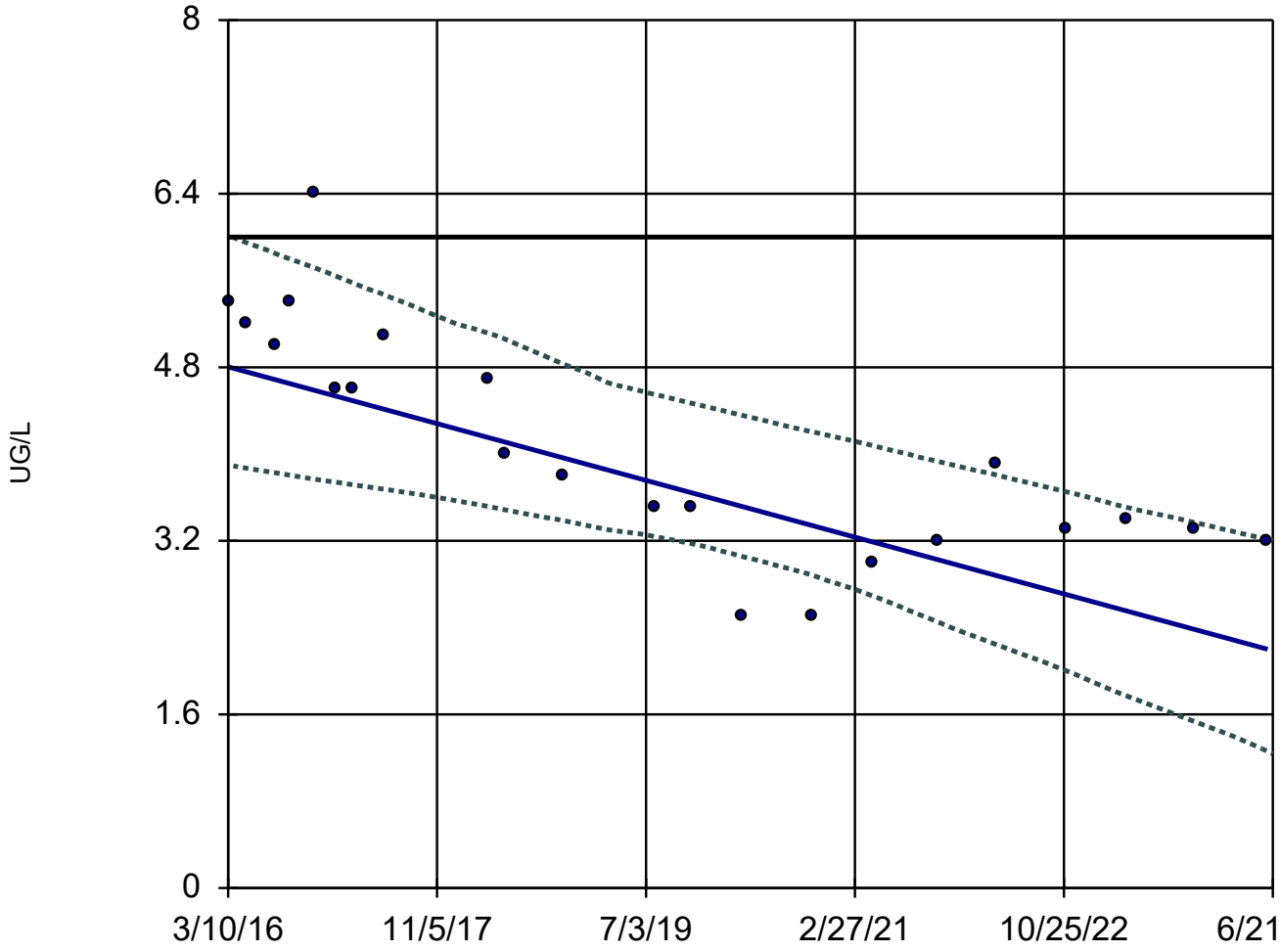
Constituent: ANTIMONY, TOTAL Analysis Run 8/30/2024 9:23 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-2



n = 22

Slope = -0.3157 units per year.

Mann-Kendall statistic = -147
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

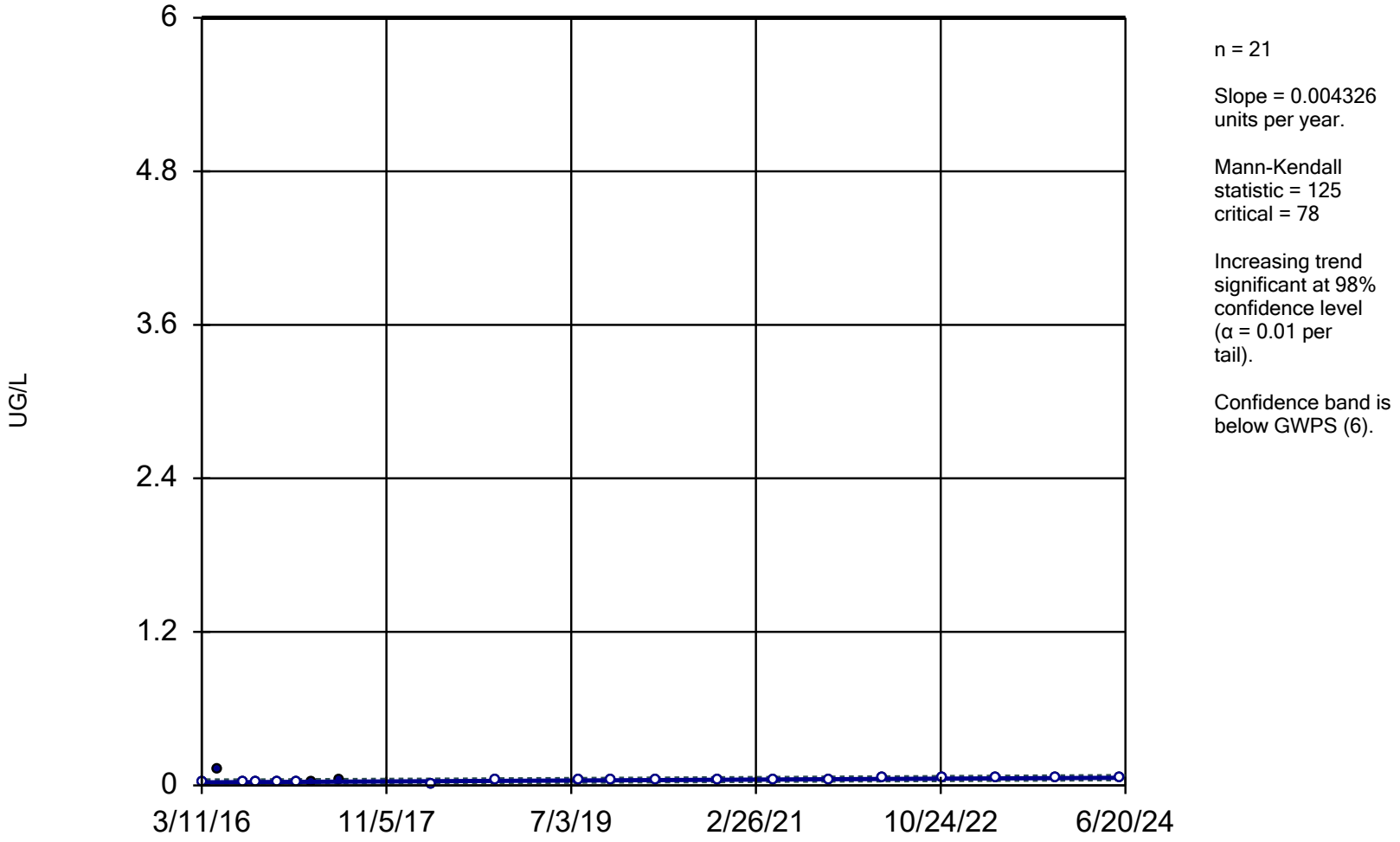
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-4



n = 21

Slope = 0.004326 units per year.

Mann-Kendall statistic = 125
critical = 78

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

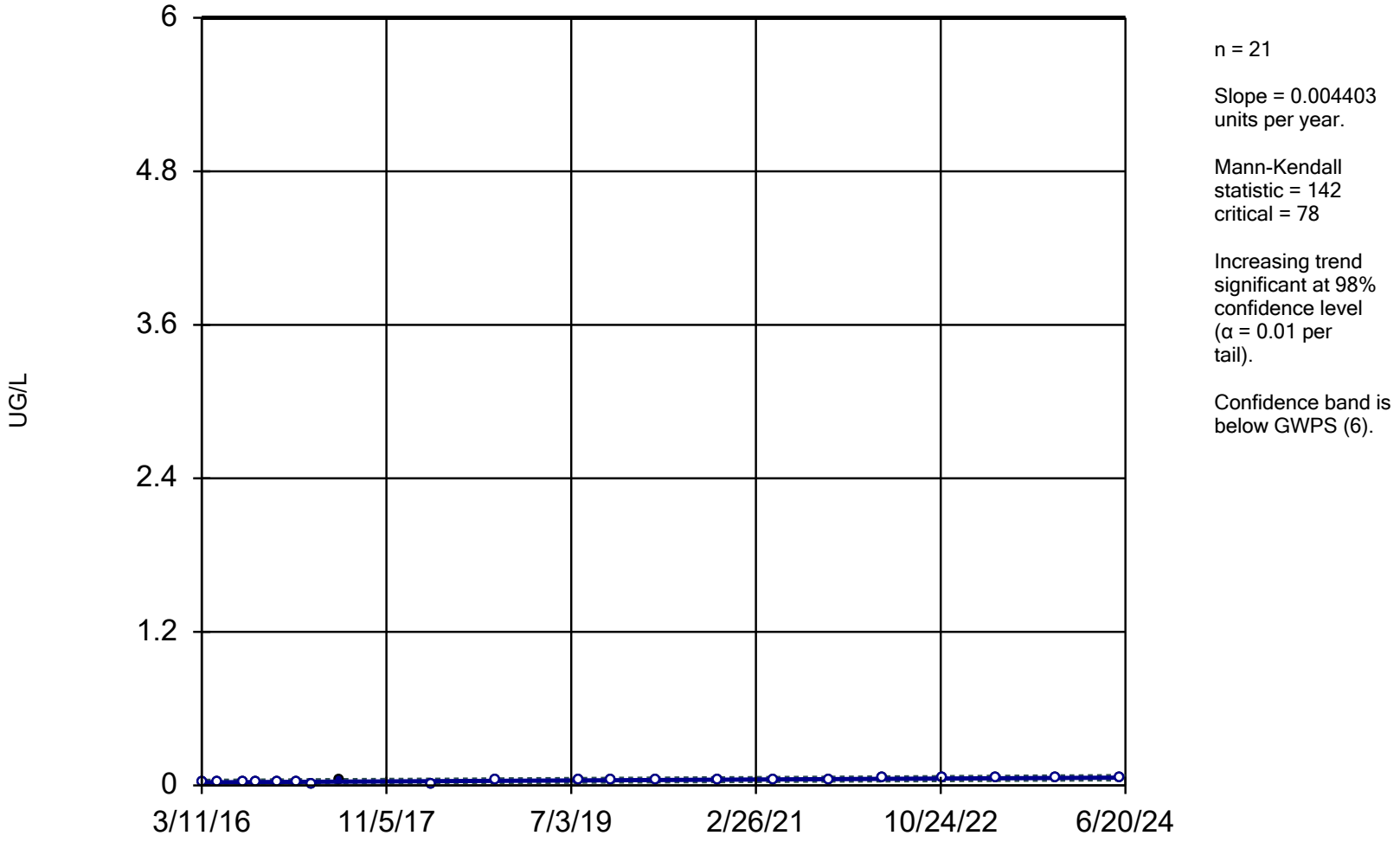
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-5



n = 21

Slope = 0.004403 units per year.

Mann-Kendall statistic = 142
critical = 78

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

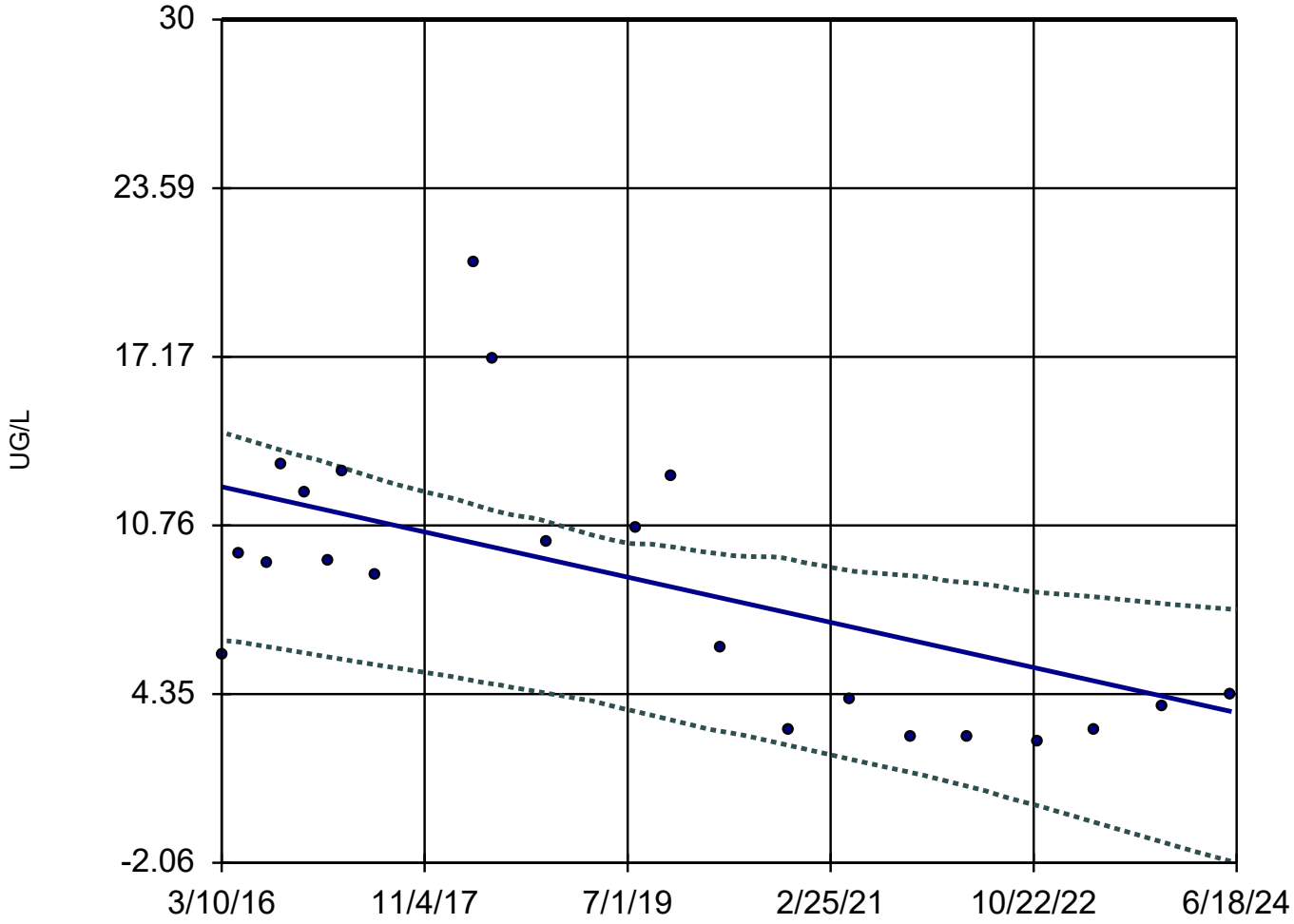
Constituent: ANTIMONY, TOTAL Analysis Run 8/30/2024 9:23 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-1



n = 22

Slope = -1.038 units per year.

Mann-Kendall statistic = -93
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (30).

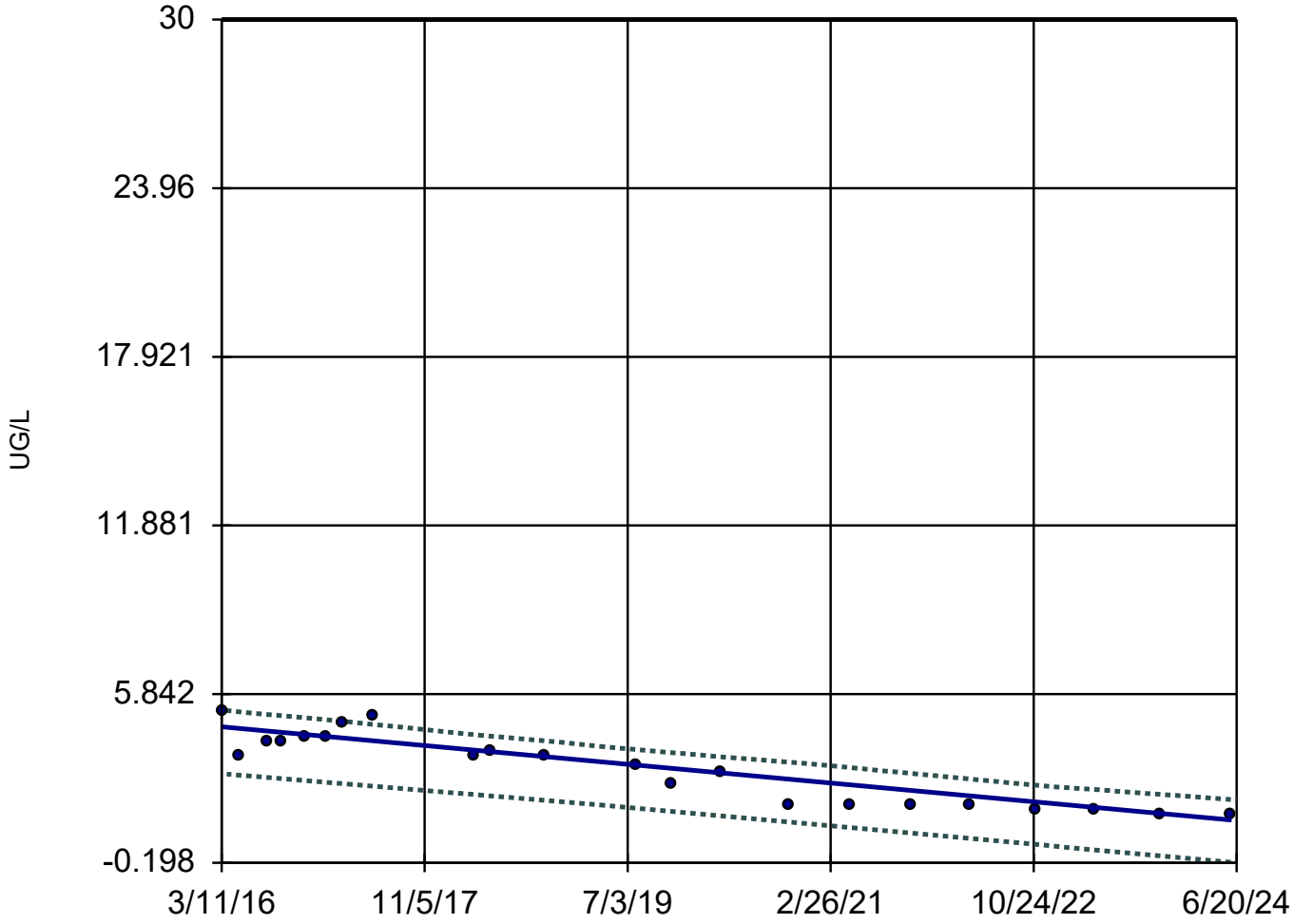
Constituent: ARSENIC, TOTAL Analysis Run 8/30/2024 9:23 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-5



n = 22

Slope = -0.4056 units per year.

Mann-Kendall statistic = -174 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (30).

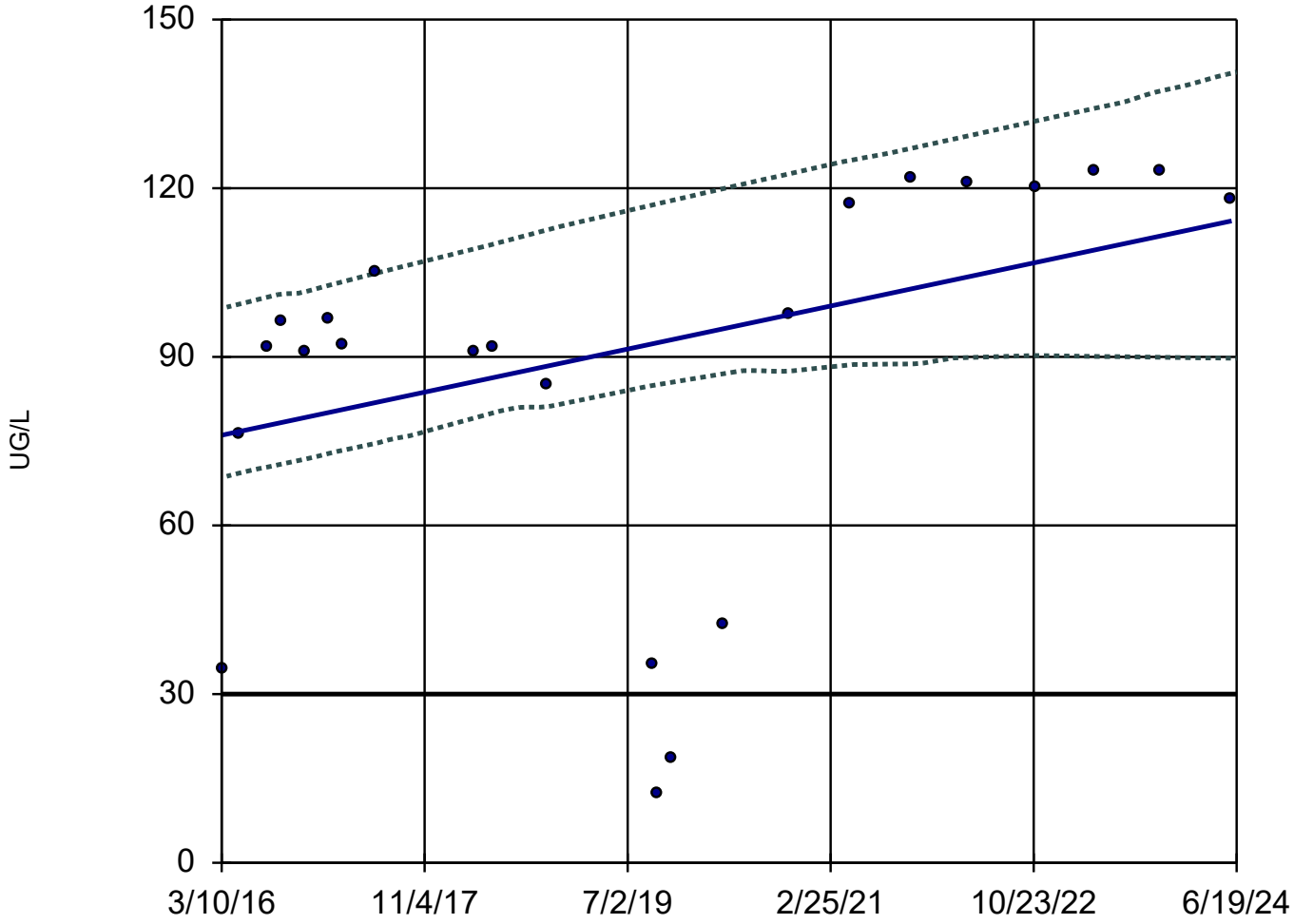
Constituent: ARSENIC, TOTAL Analysis Run 8/30/2024 9:23 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-7



n = 23

Slope = 4.627 units per year.

Mann-Kendall statistic = 102 critical = 89

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is above GWPS (30).

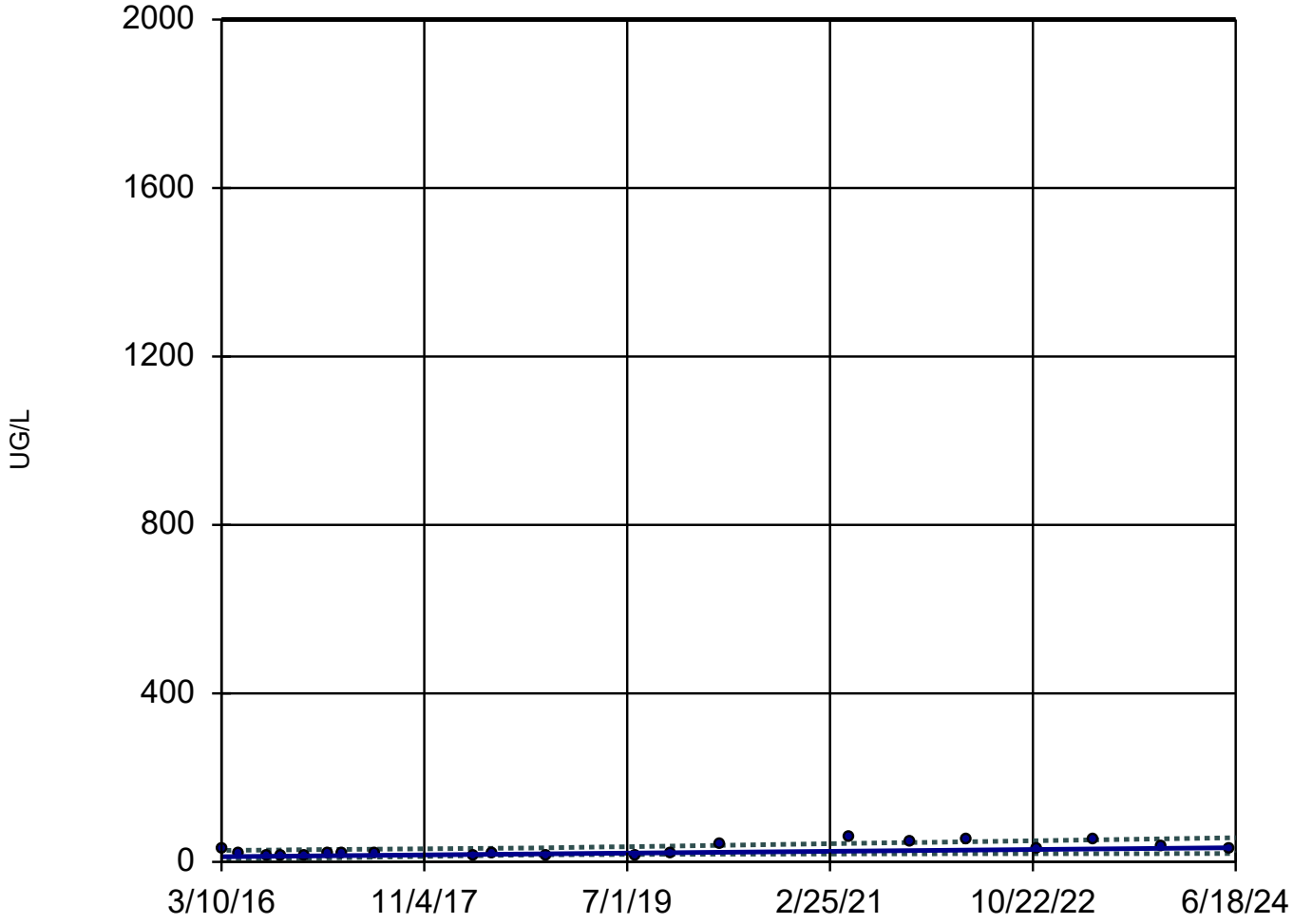
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-1



n = 21

Slope = 2.558 units per year.

Mann-Kendall statistic = 85
critical = 78

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

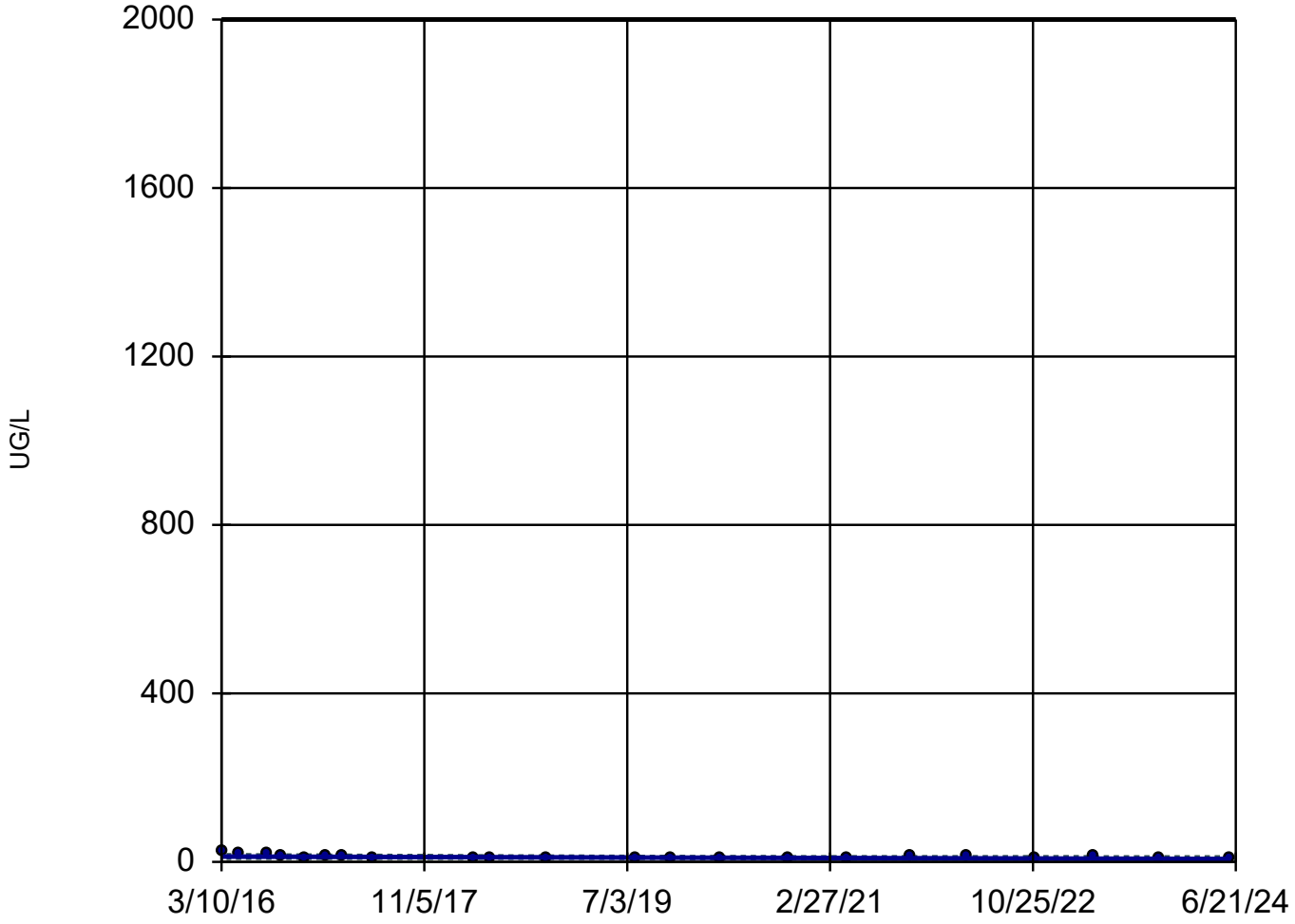
Constituent: BARIUM, TOTAL Analysis Run 8/30/2024 9:23 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-2



n = 22

Slope = -0.6817 units per year.

Mann-Kendall statistic = -88
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

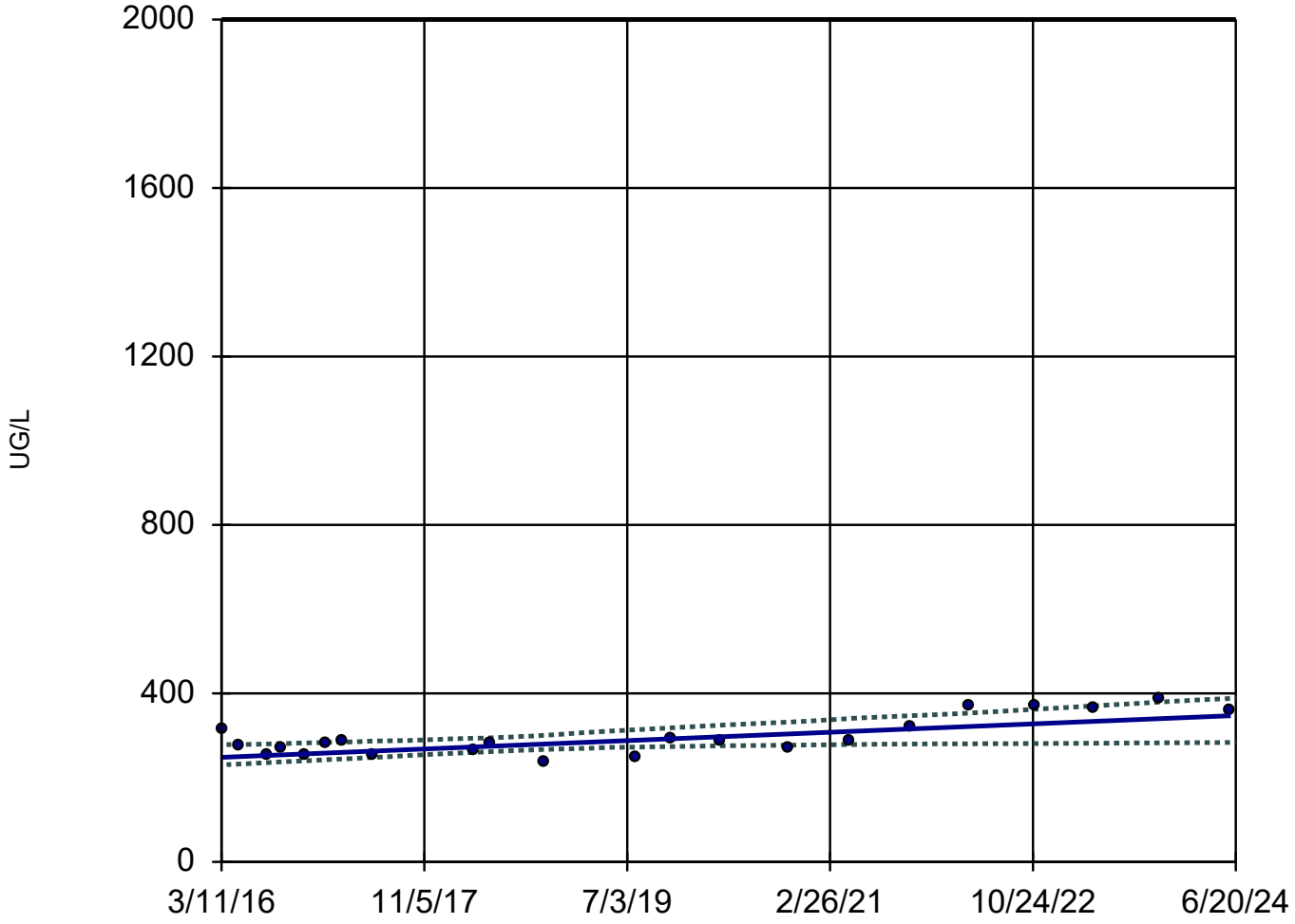
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-4



n = 22

Slope = 11.99 units per year.

Mann-Kendall statistic = 104 critical = 84

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

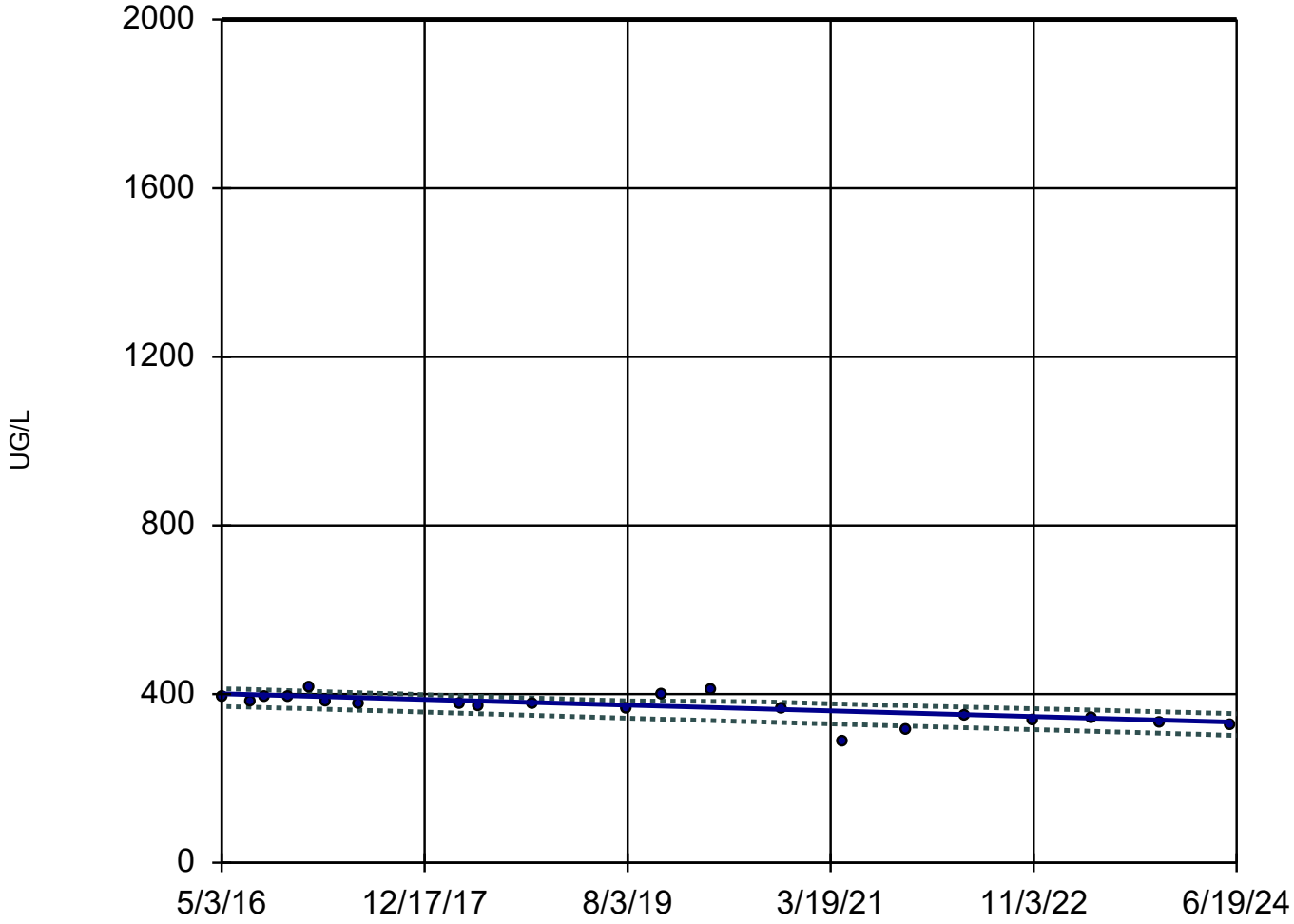
Constituent: BARIUM, TOTAL Analysis Run 8/30/2024 9:23 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-5



n = 21

Slope = -8.28 units per year.

Mann-Kendall statistic = -121 critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

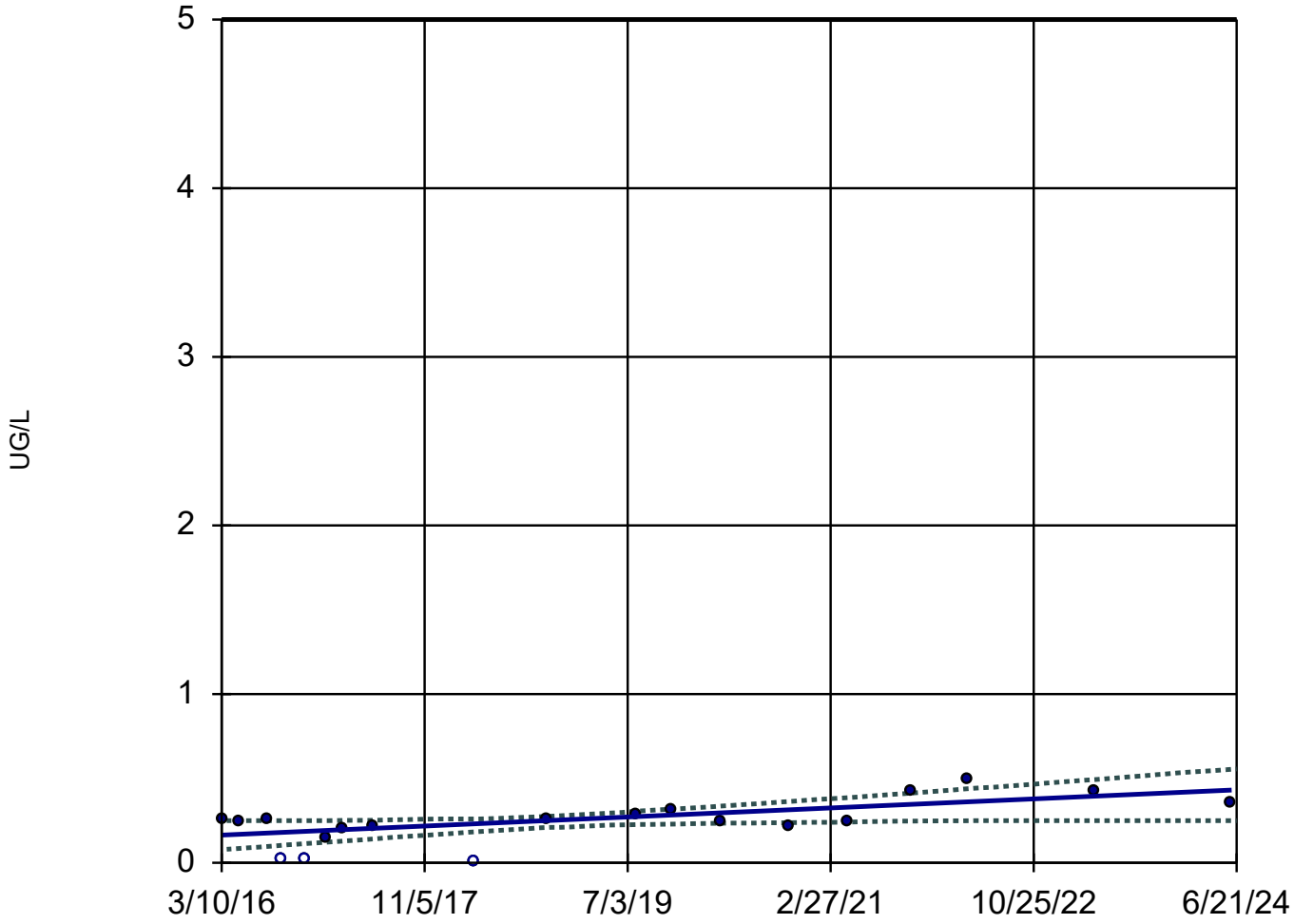
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-2



n = 19

Slope = 0.03235 units per year.

Mann-Kendall statistic = 70
critical = 68

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

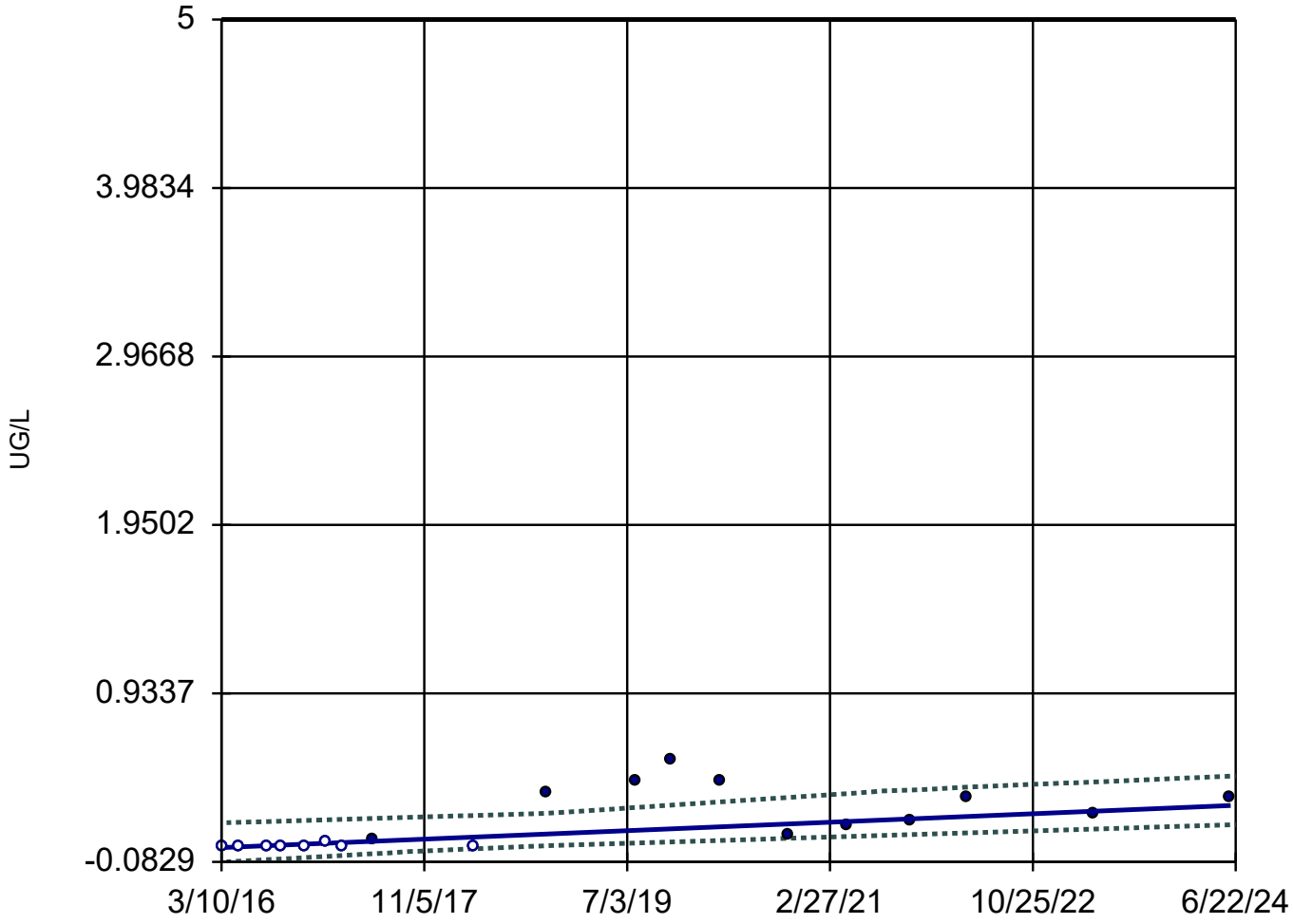
Constituent: CADMIUM, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 19

Slope = 0.03071 units per year.

Mann-Kendall statistic = 81
critical = 68

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

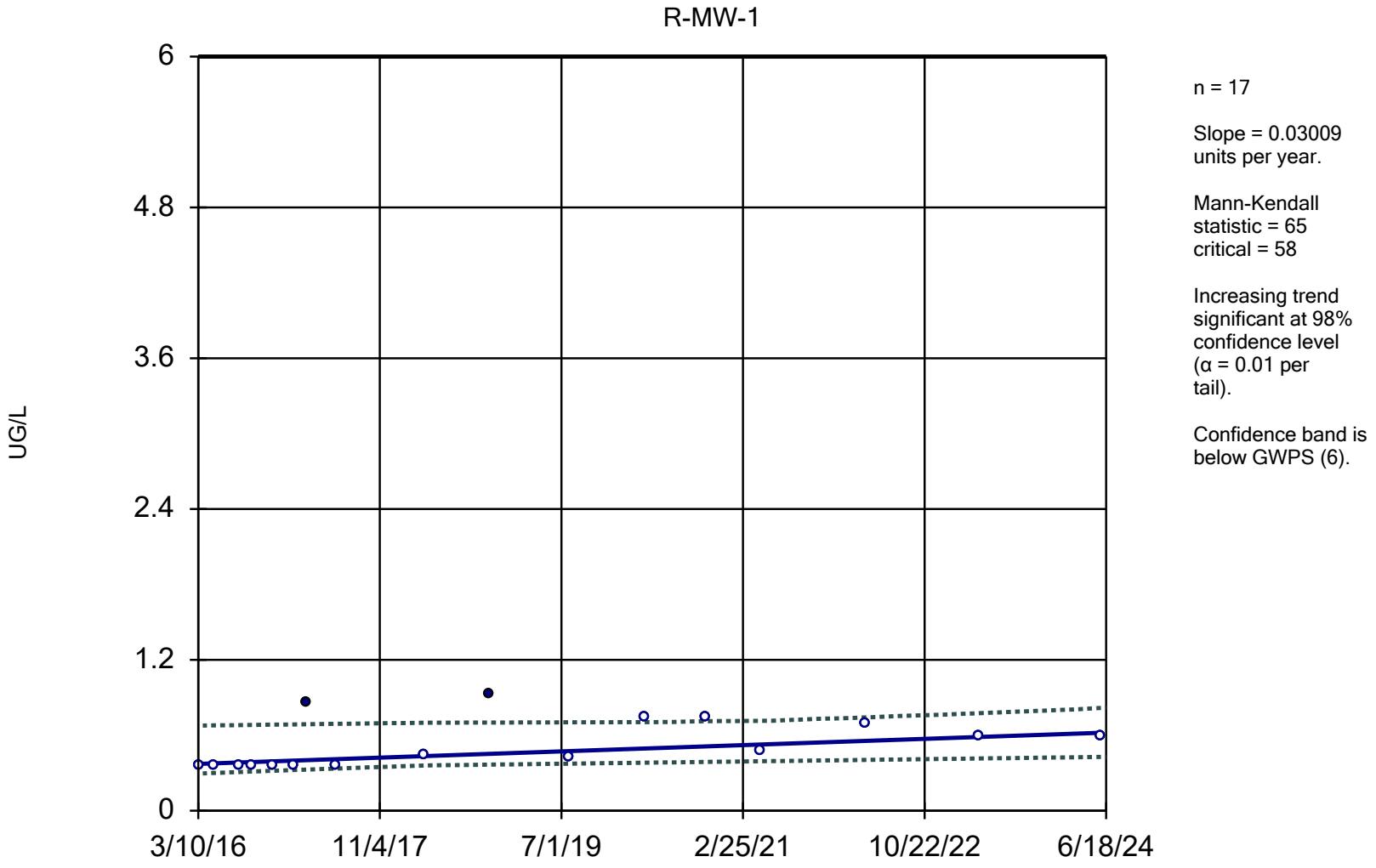
Confidence band is below GWPS (5).

Constituent: CADMIUM, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band



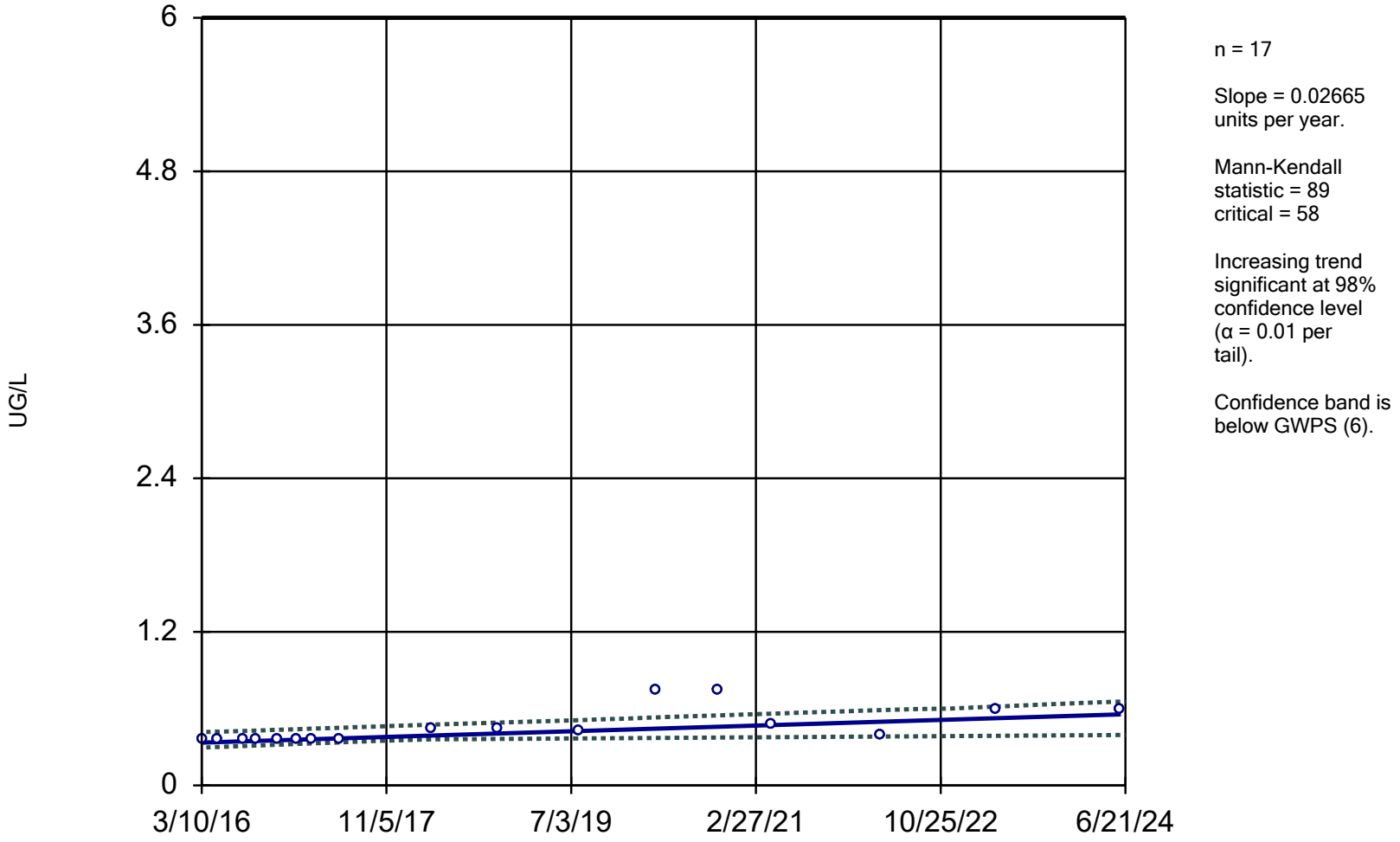
Constituent: COBALT, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-2



n = 17

Slope = 0.02665 units per year.

Mann-Kendall statistic = 89
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

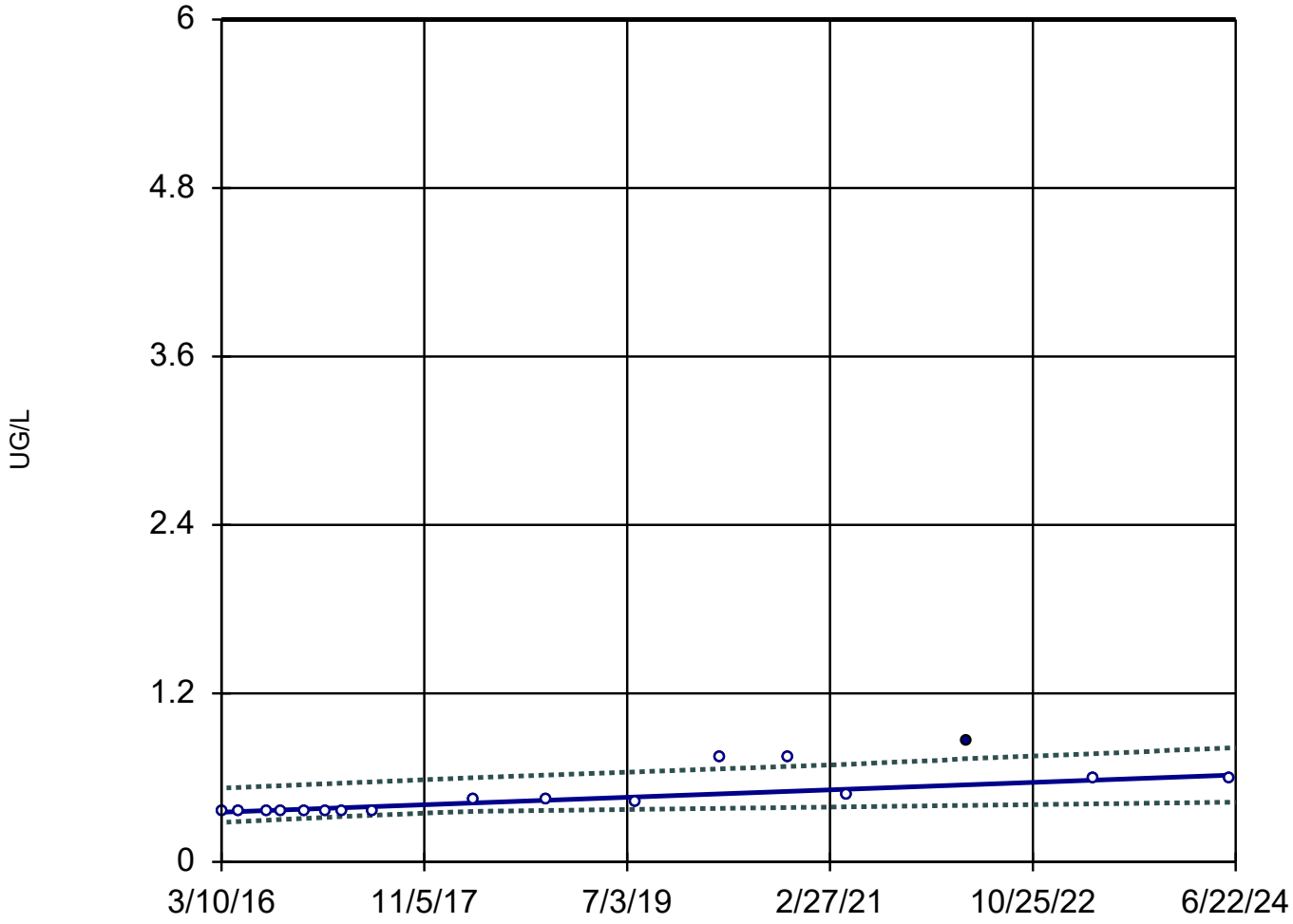
Constituent: COBALT, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 17

Slope = 0.03207 units per year.

Mann-Kendall statistic = 97
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

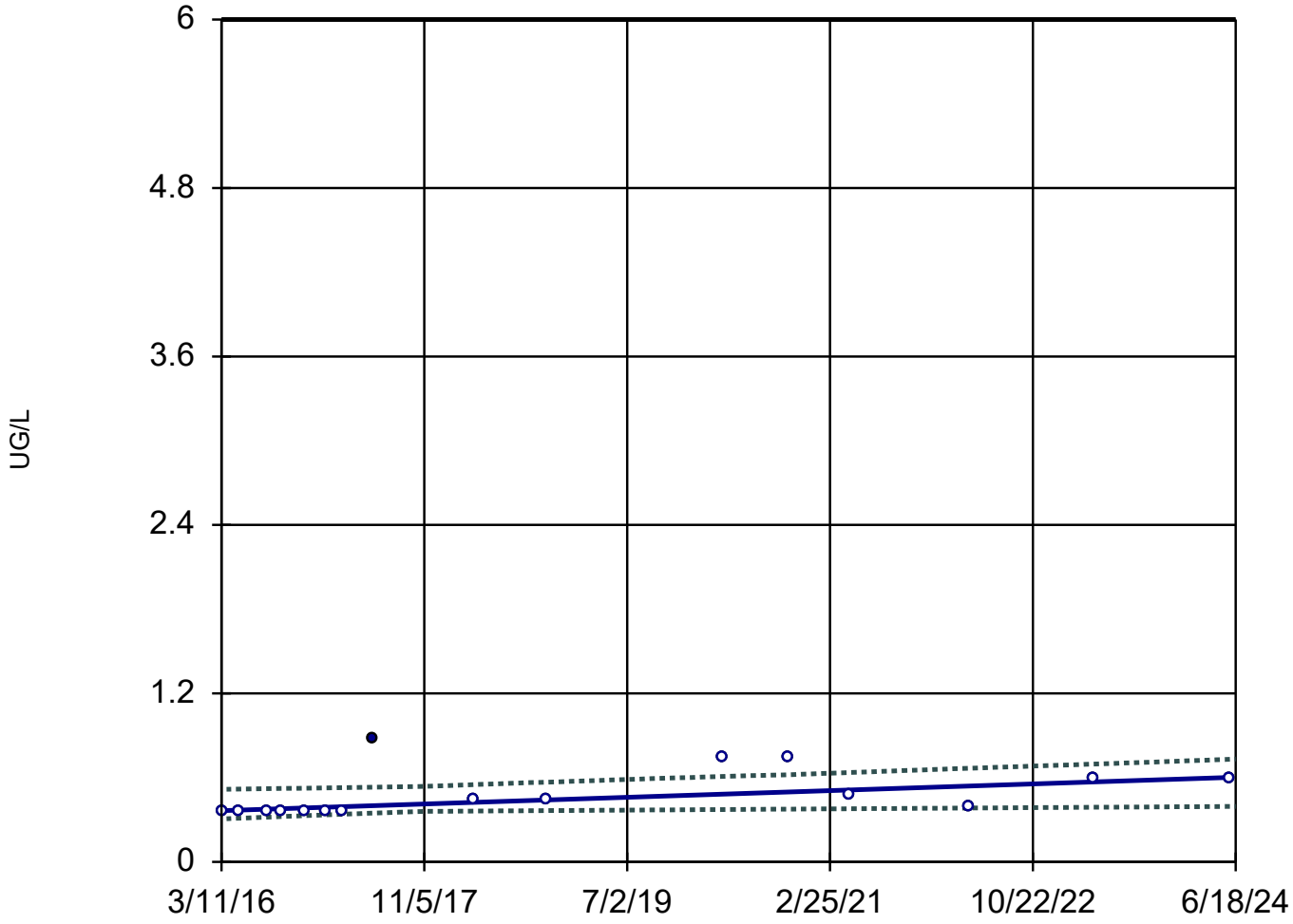
Constituent: COBALT, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-6



n = 16

Slope = 0.02868 units per year.

Mann-Kendall statistic = 64
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

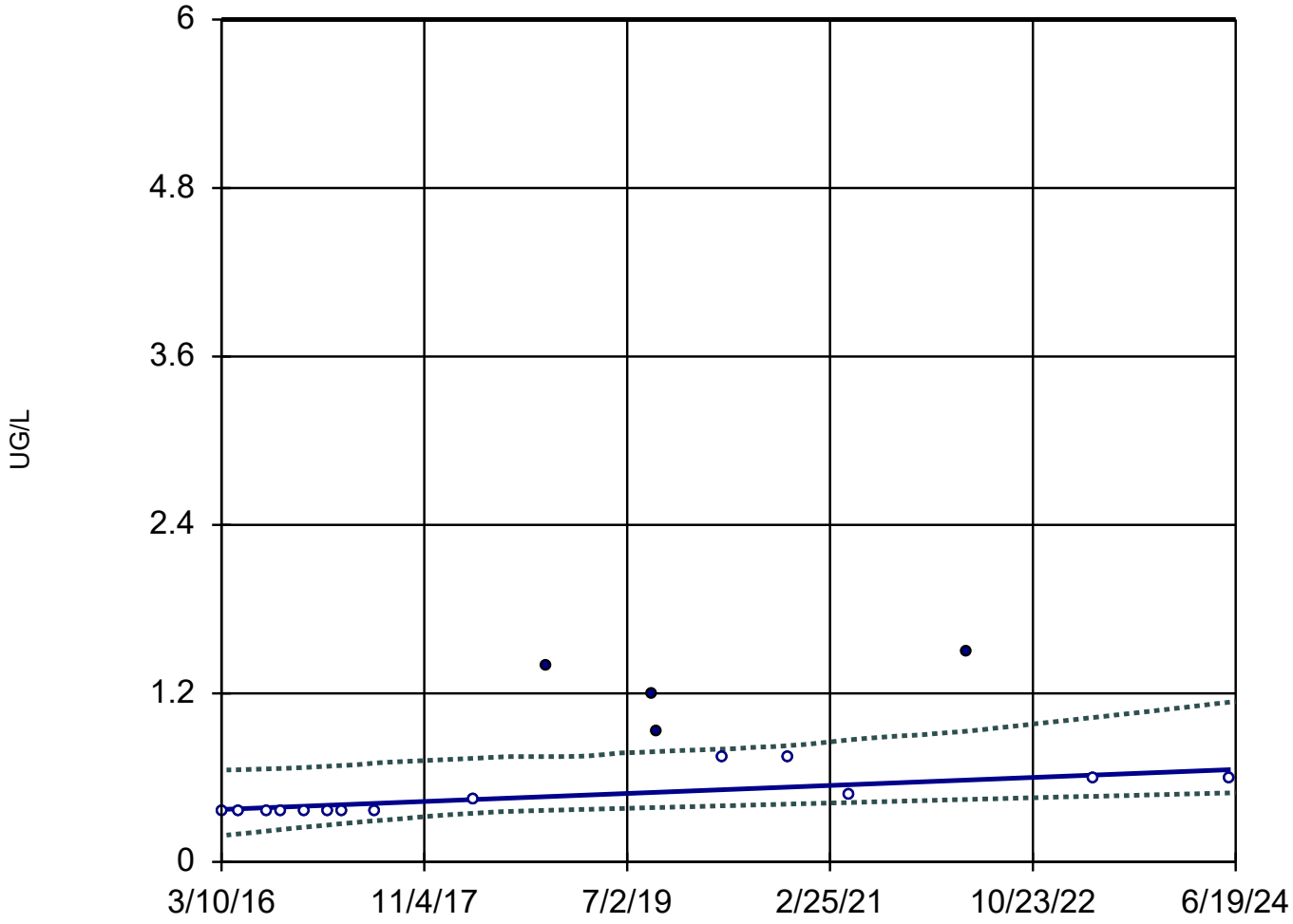
Constituent: COBALT, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-7



n = 18

Slope = 0.03438 units per year.

Mann-Kendall statistic = 83
critical = 63

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

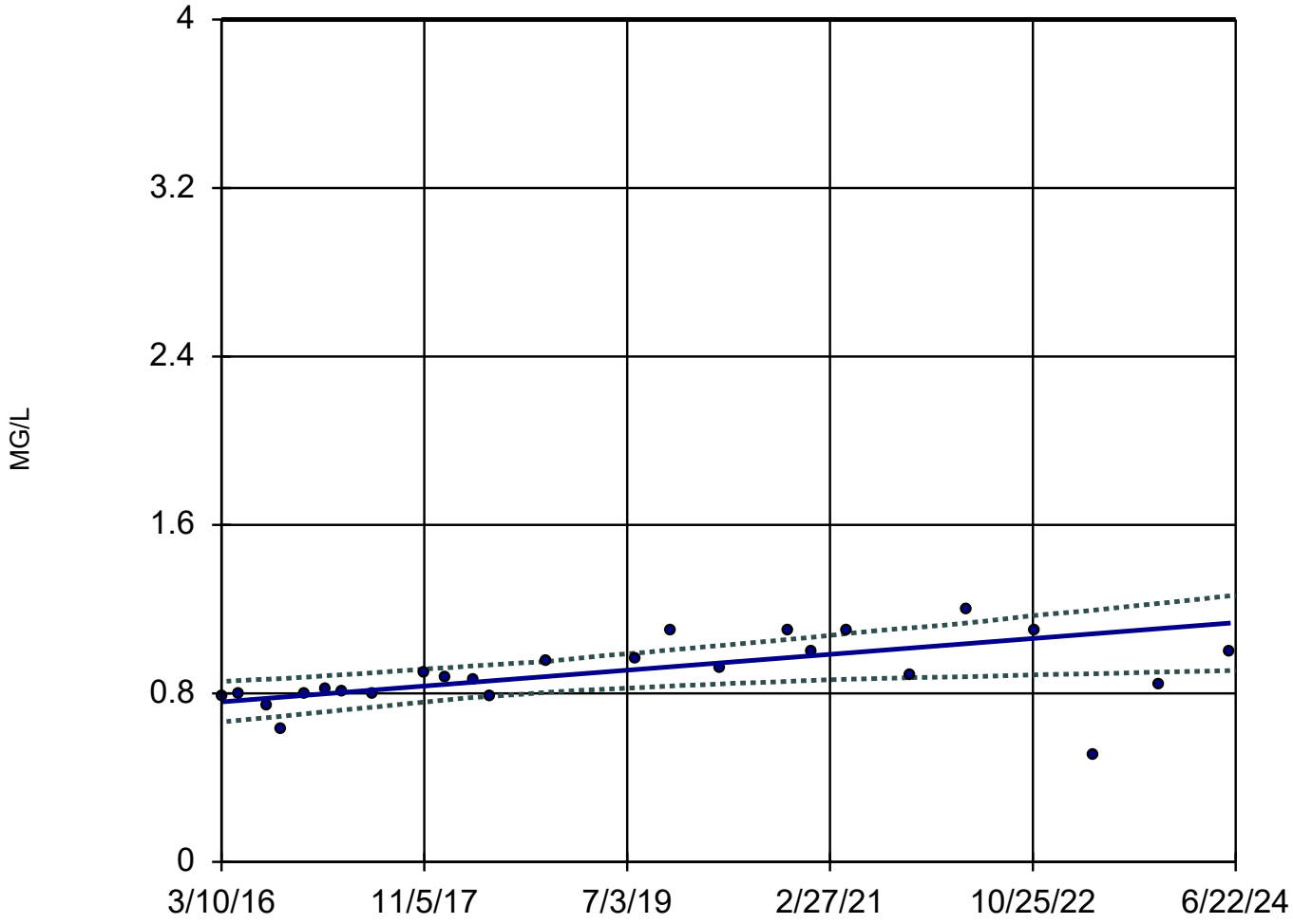
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-3



n = 25

Slope = 0.04543 units per year.

Mann-Kendall statistic = 143
critical = 101

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

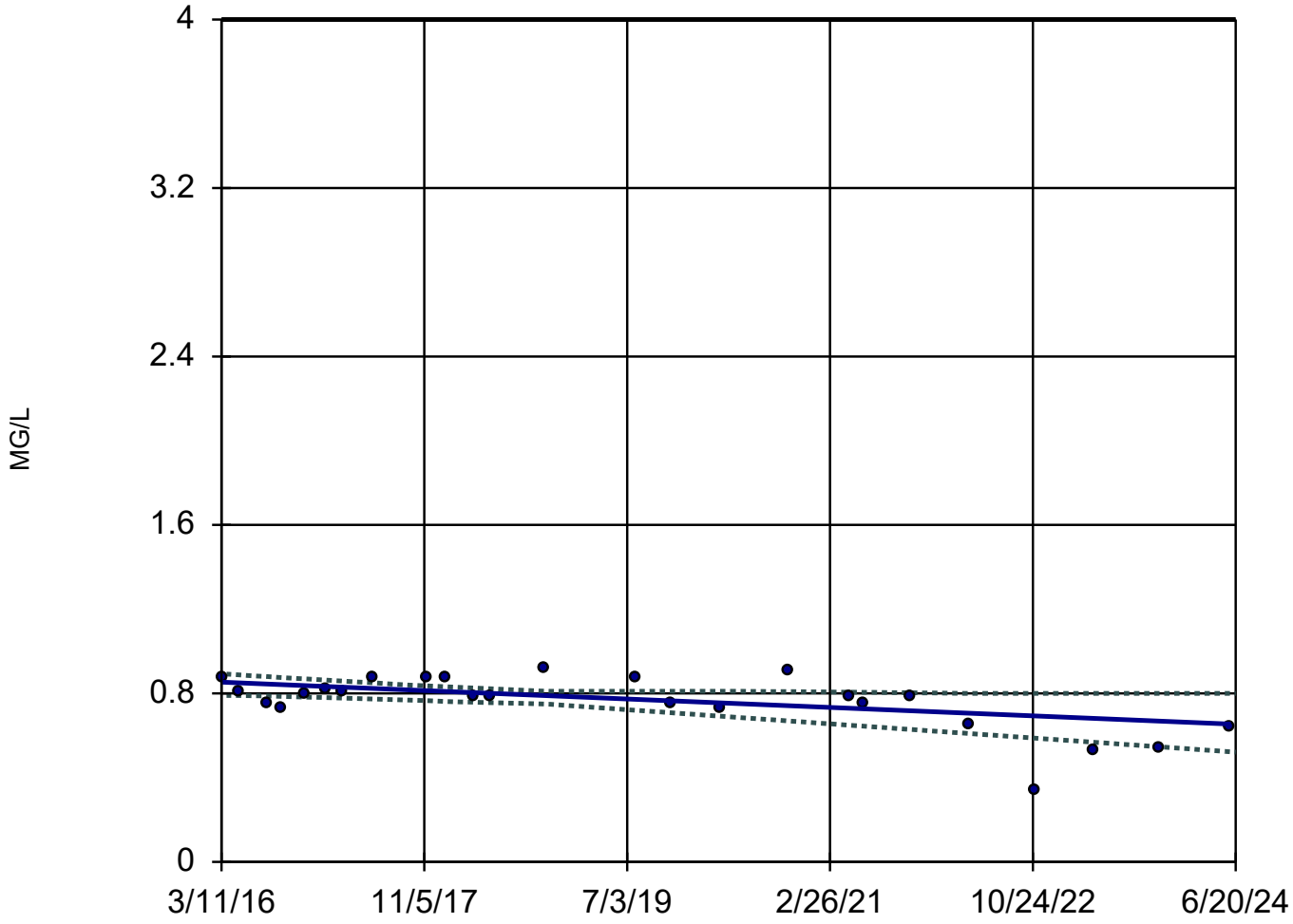
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-4



n = 25

Slope = -0.02417 units per year.

Mann-Kendall statistic = -107 critical = -101

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

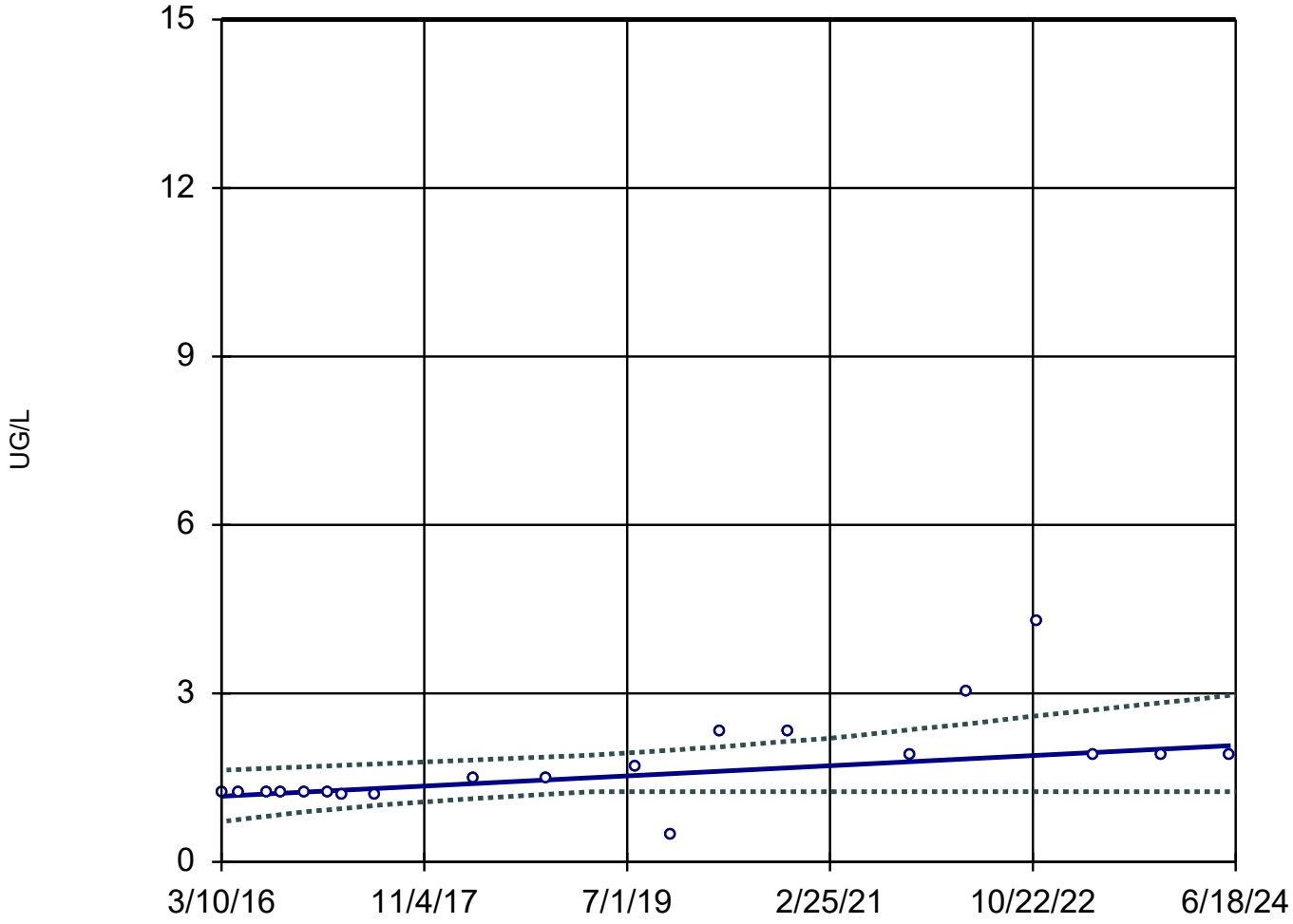
Constituent: FLUORIDE, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 20

Slope = 0.1095 units per year.

Mann-Kendall statistic = 92
critical = 73

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

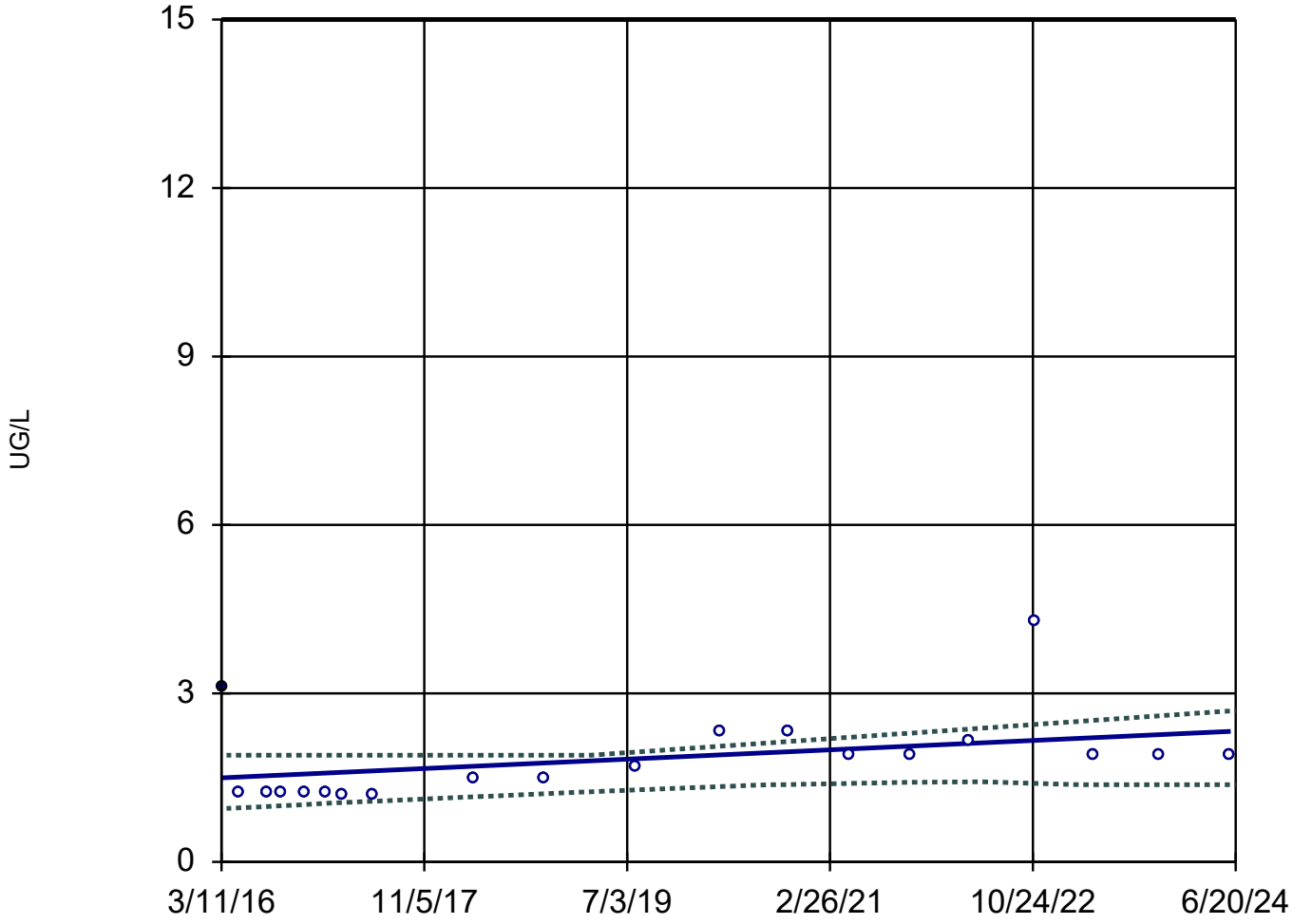
Constituent: LEAD, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-4



n = 20

Slope = 0.1006 units per year.

Mann-Kendall statistic = 75
critical = 73

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

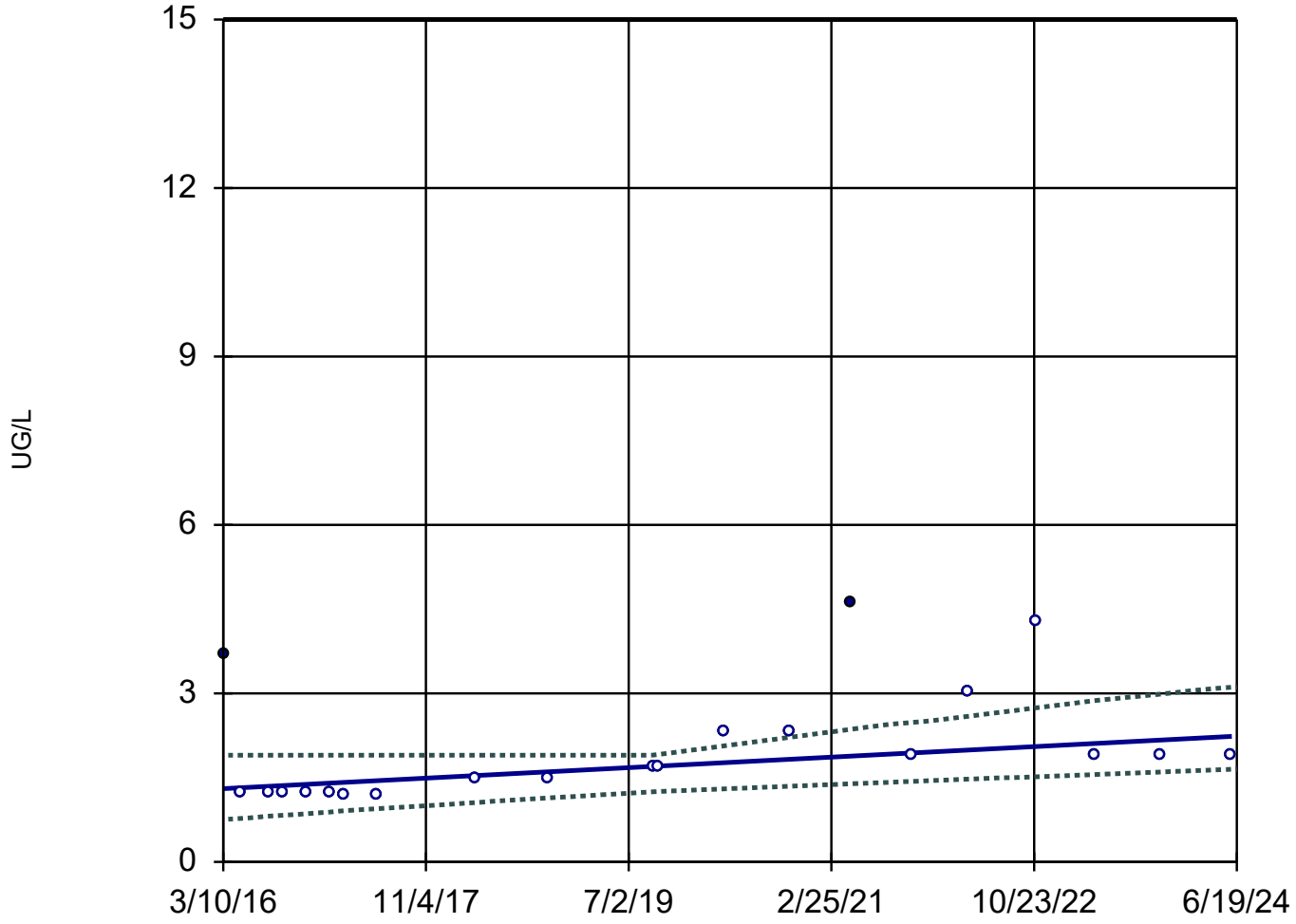
Constituent: LEAD, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-7



n = 21

Slope = 0.113 units per year.

Mann-Kendall statistic = 94
critical = 78

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (15).

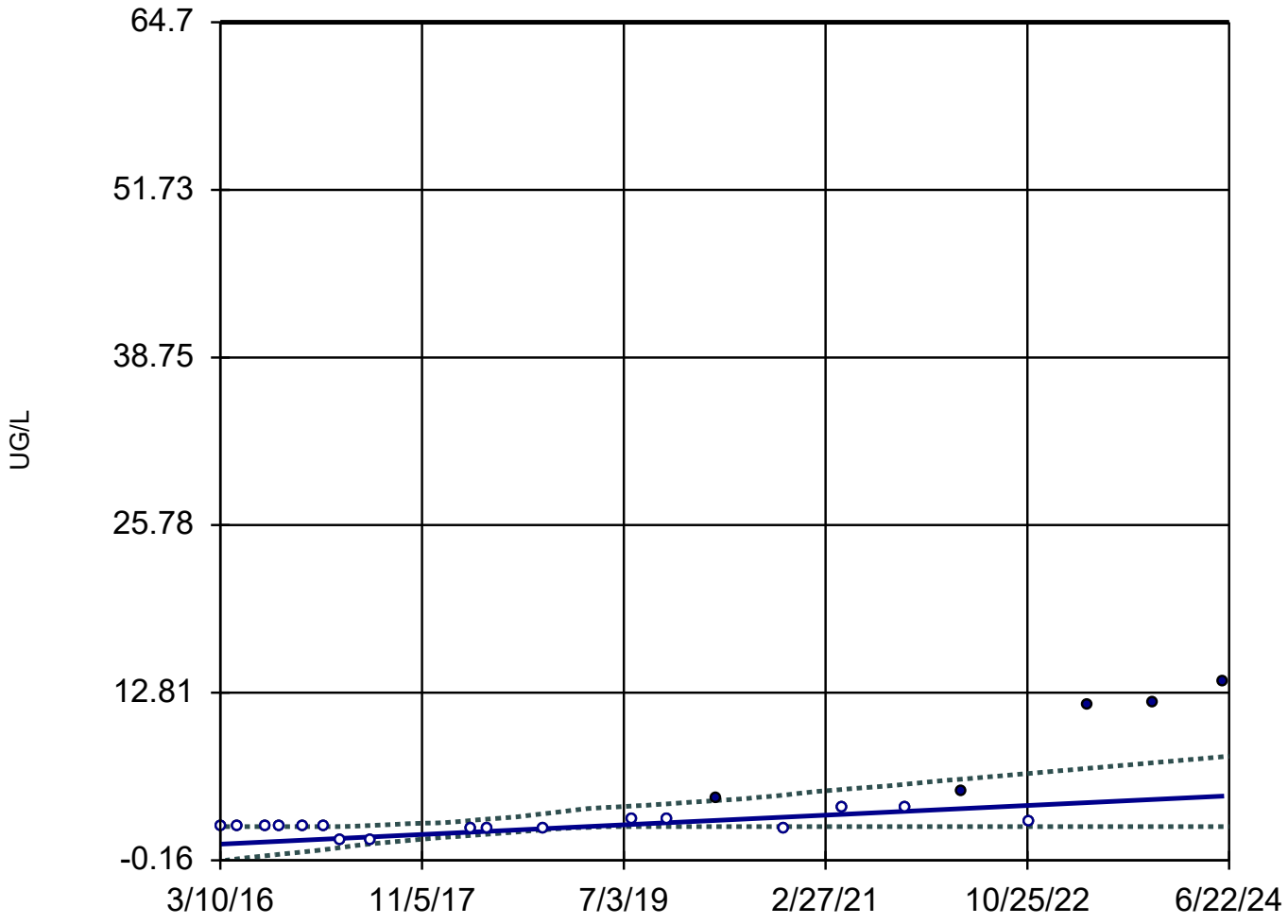
Constituent: LEAD, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 22

Slope = 0.4509 units per year.

Mann-Kendall statistic = 113
critical = 84

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

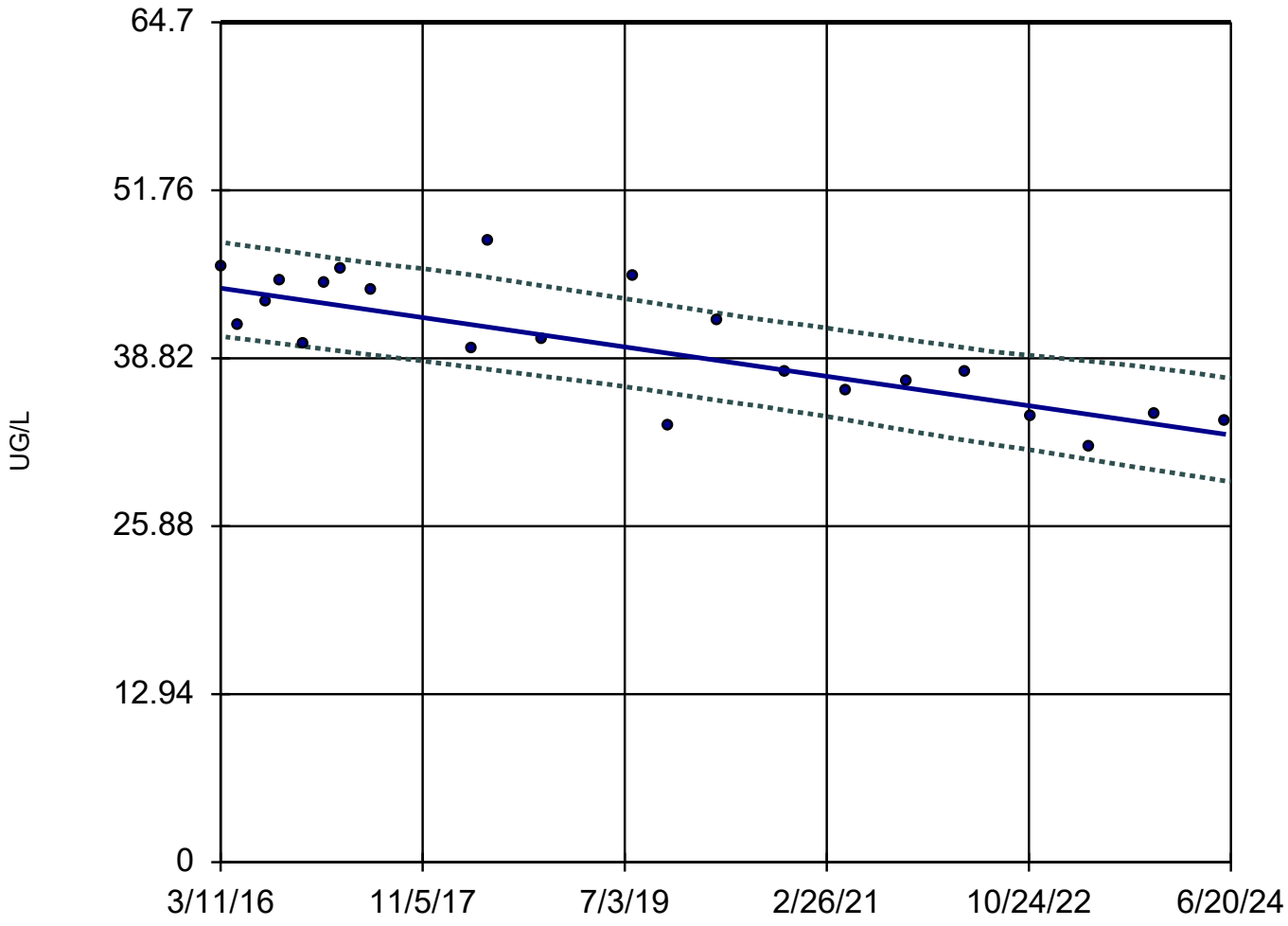
Constituent: LITHIUM, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-4



n = 22

Slope = -1.367 units per year.

Mann-Kendall statistic = -129 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

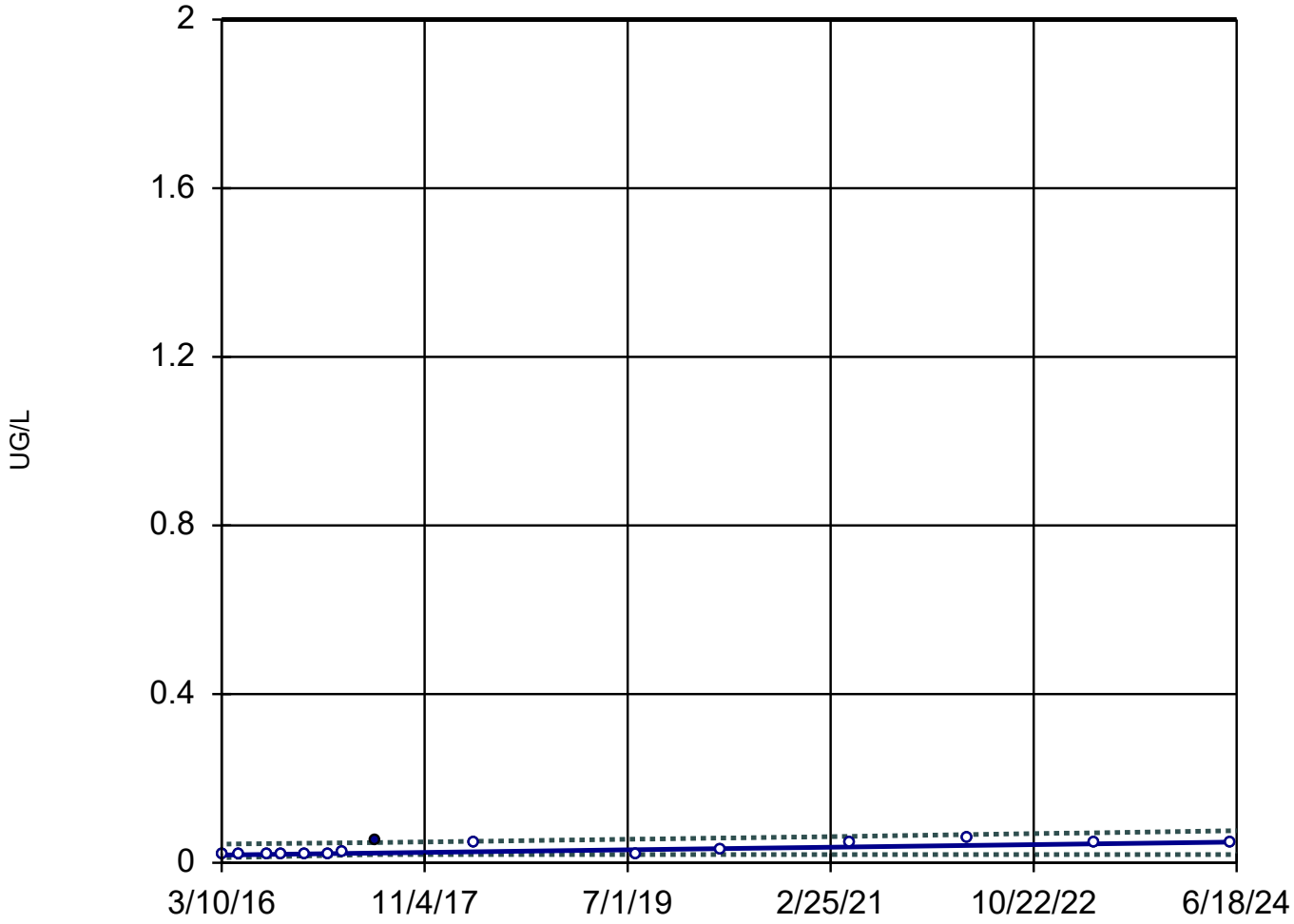
Constituent: LITHIUM, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 15

Slope = 0.003724 units per year.

Mann-Kendall statistic = 53
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

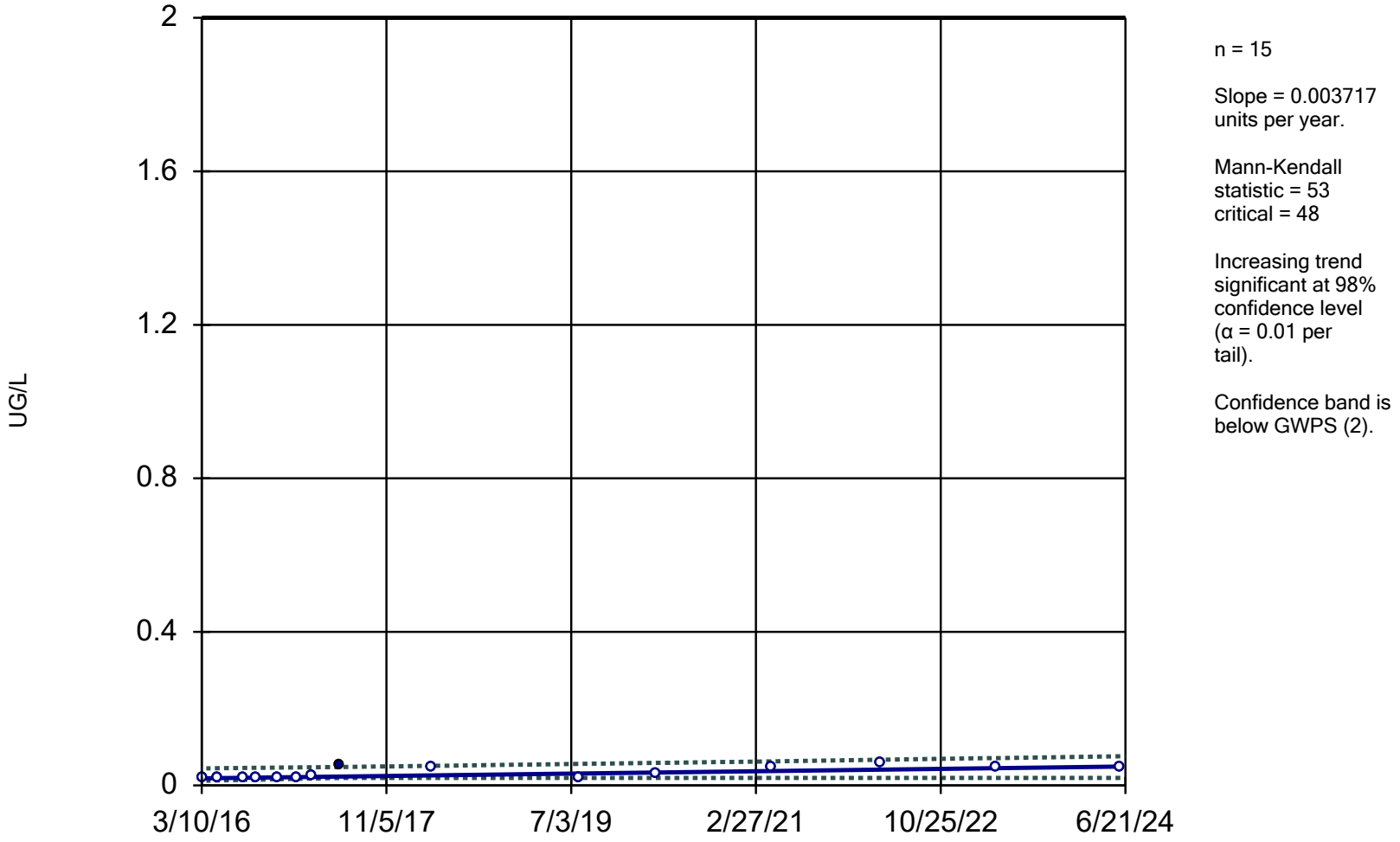
Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-2



n = 15

Slope = 0.003717 units per year.

Mann-Kendall statistic = 53
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

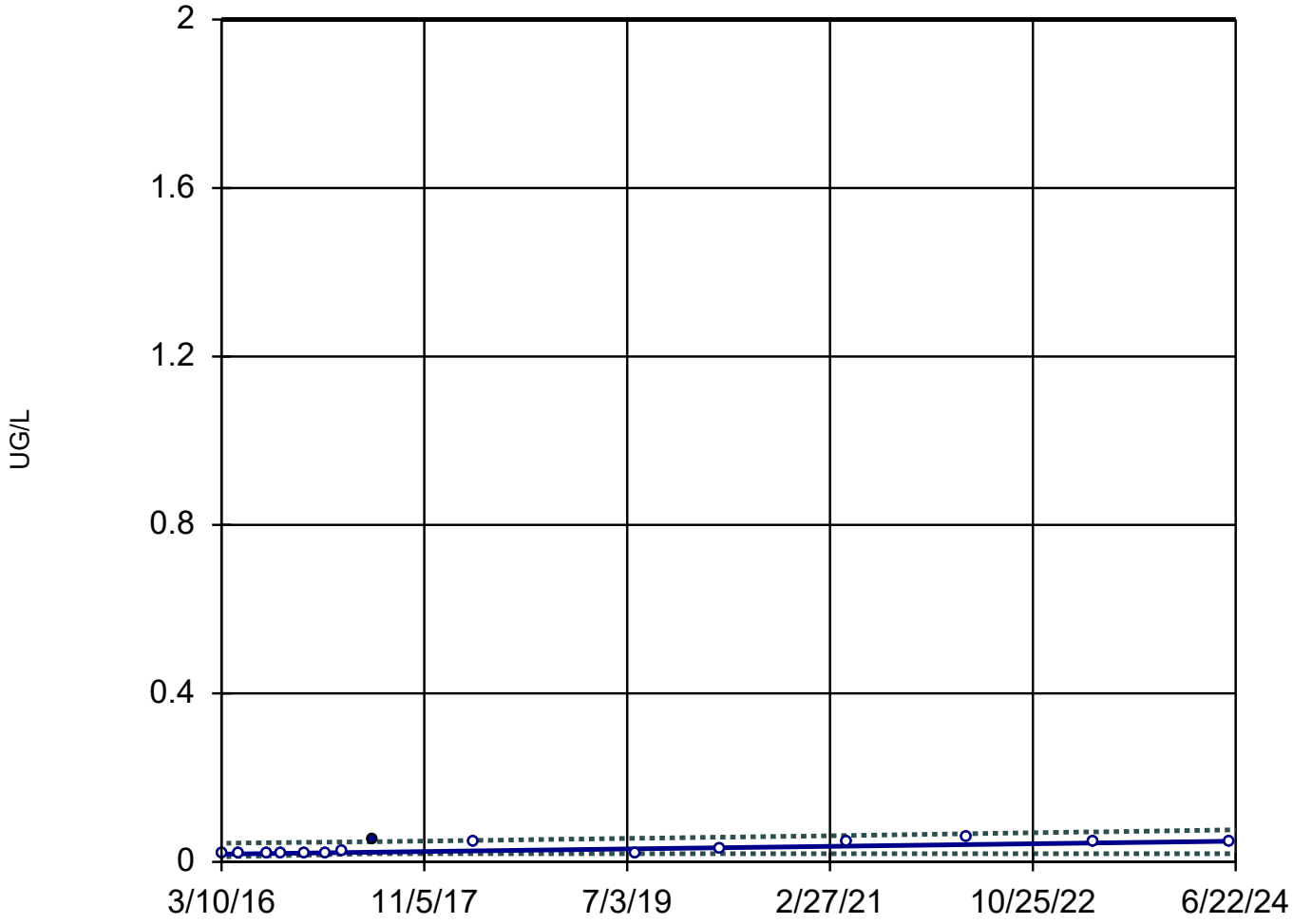
Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-3



n = 15

Slope = 0.003717 units per year.

Mann-Kendall statistic = 53
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

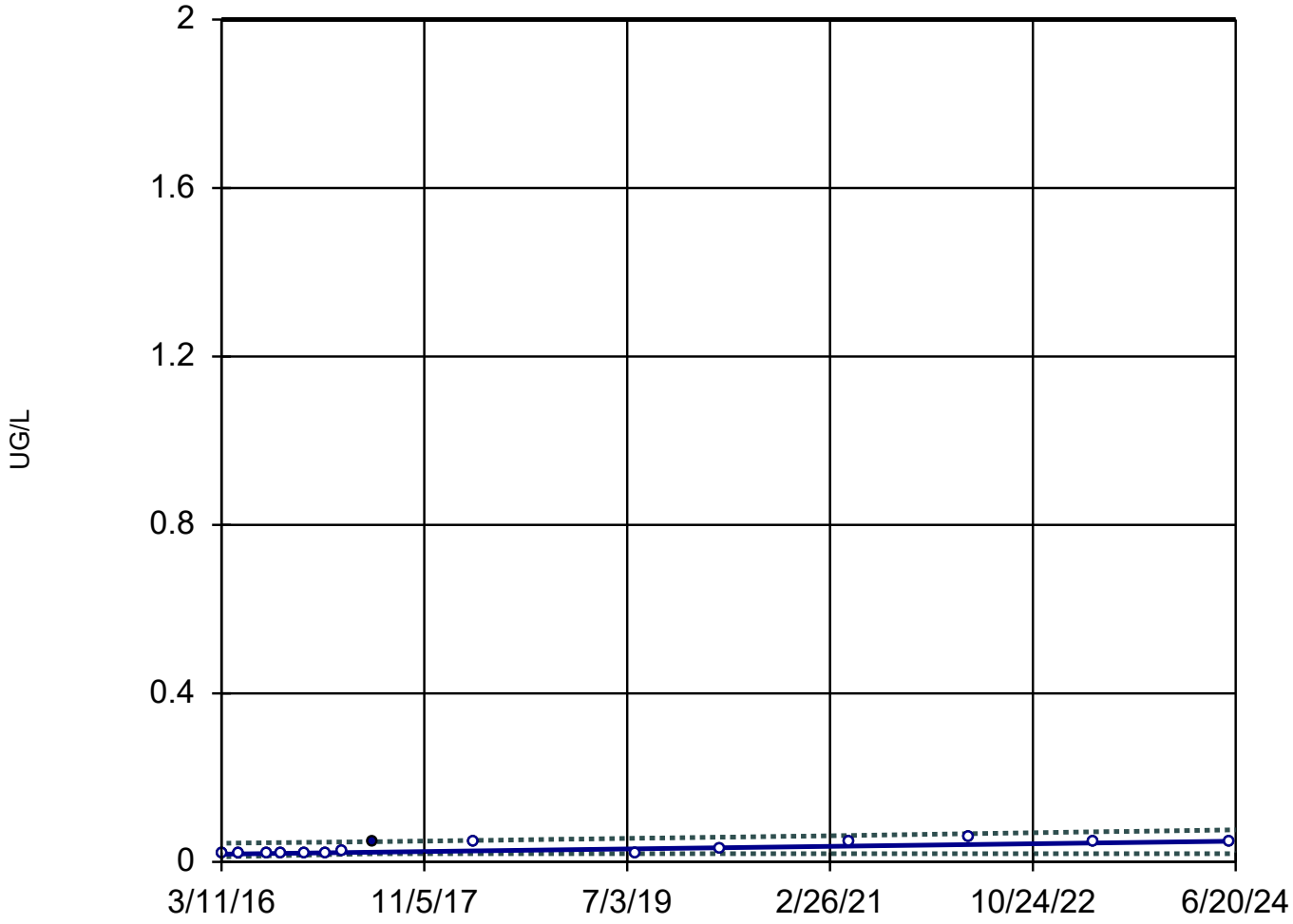
Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-4



n = 15

Slope = 0.003714 units per year.

Mann-Kendall statistic = 53
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

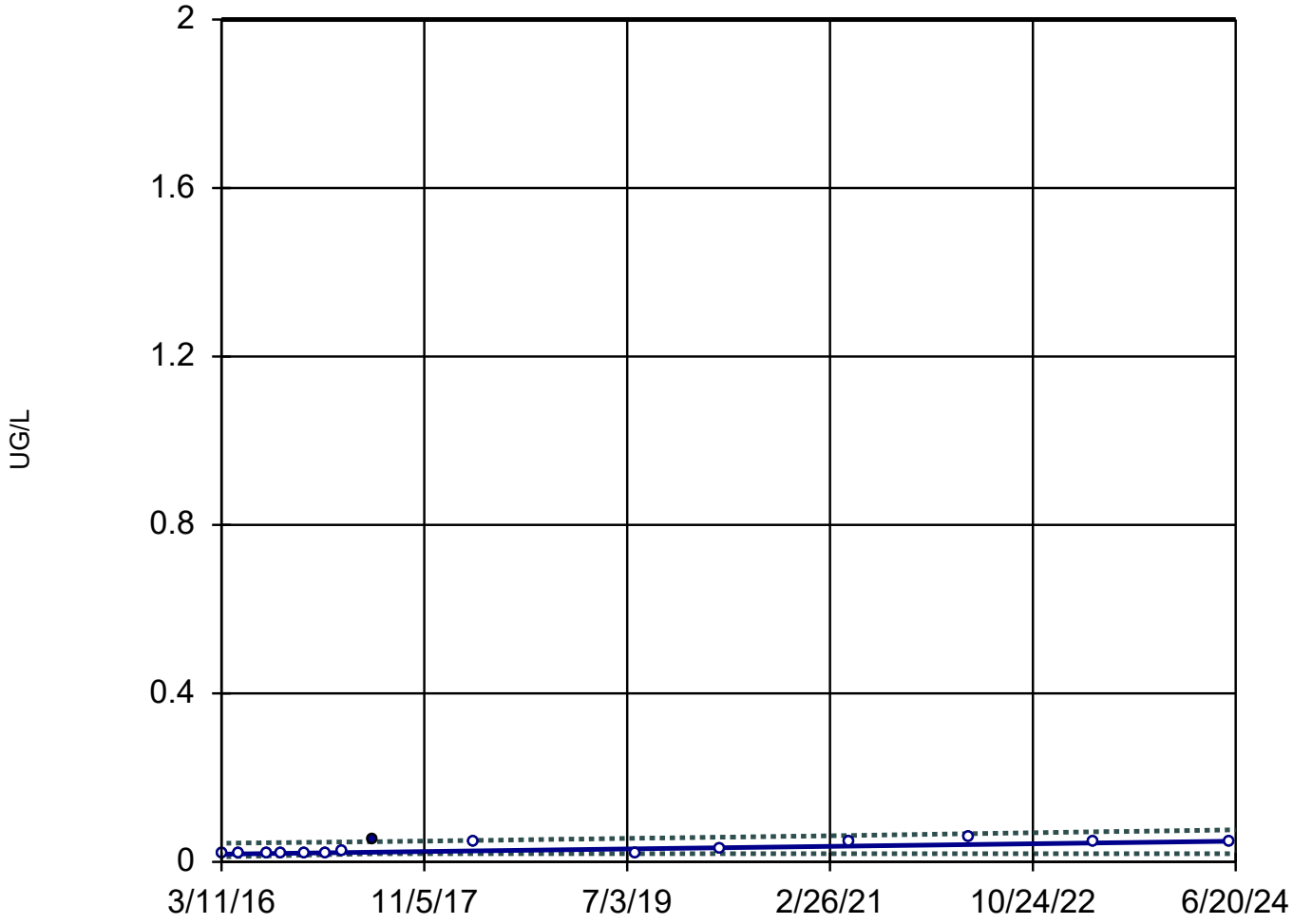
Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-5



n = 15

Slope = 0.003714 units per year.

Mann-Kendall statistic = 53
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

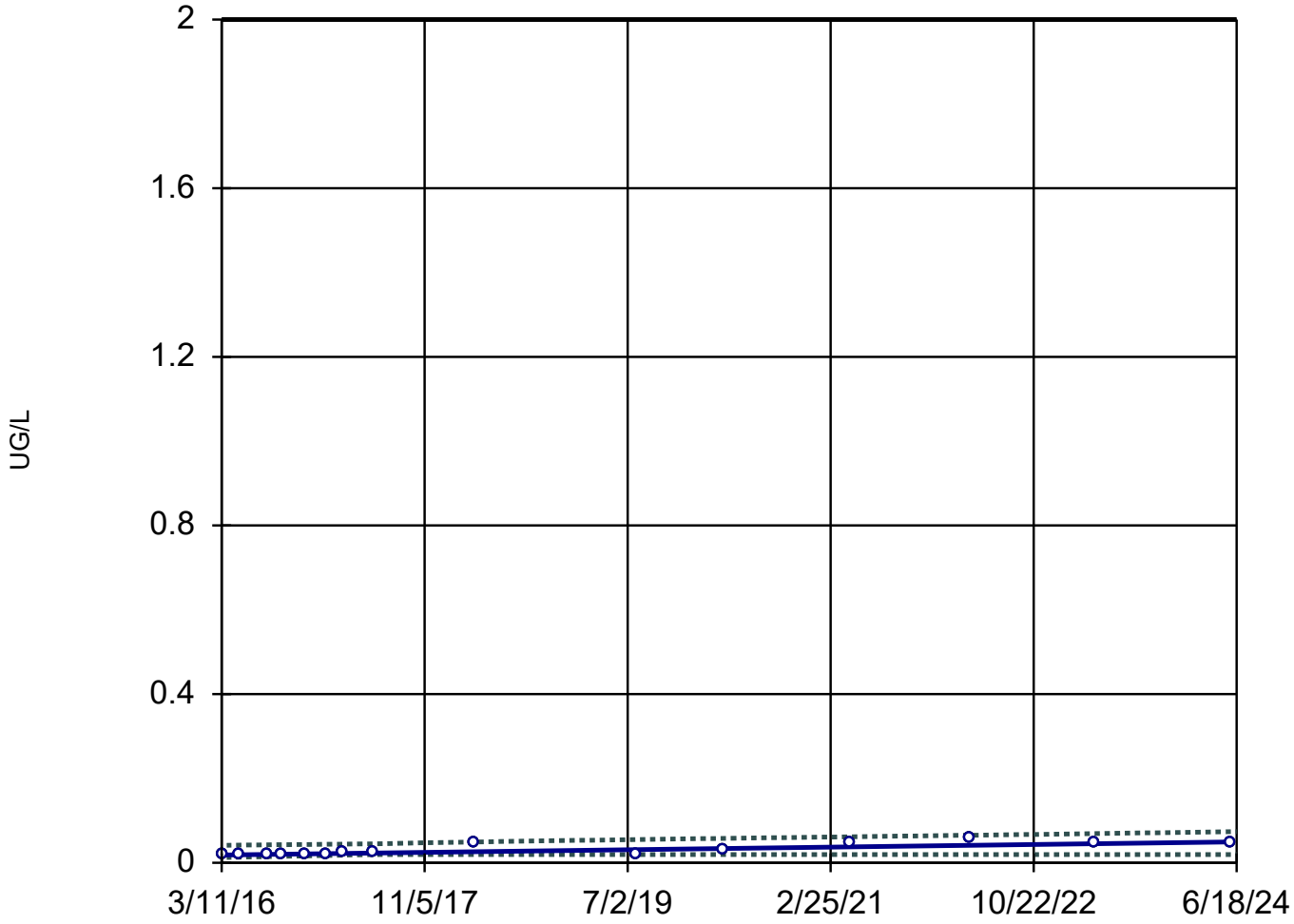
Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-6



n = 15

Slope = 0.003774 units per year.

Mann-Kendall statistic = 62
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

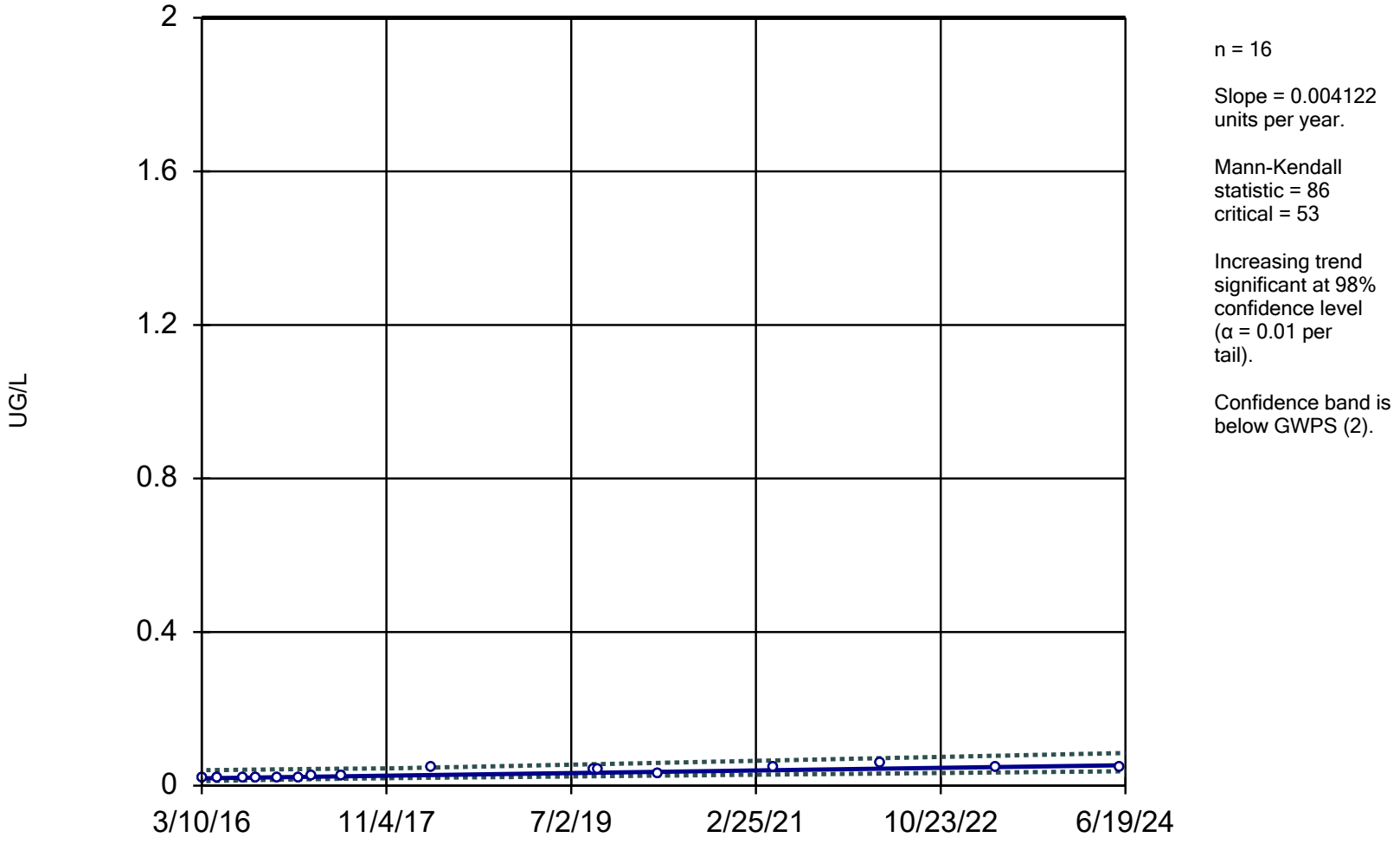
Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-7



n = 16

Slope = 0.004122 units per year.

Mann-Kendall statistic = 86
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

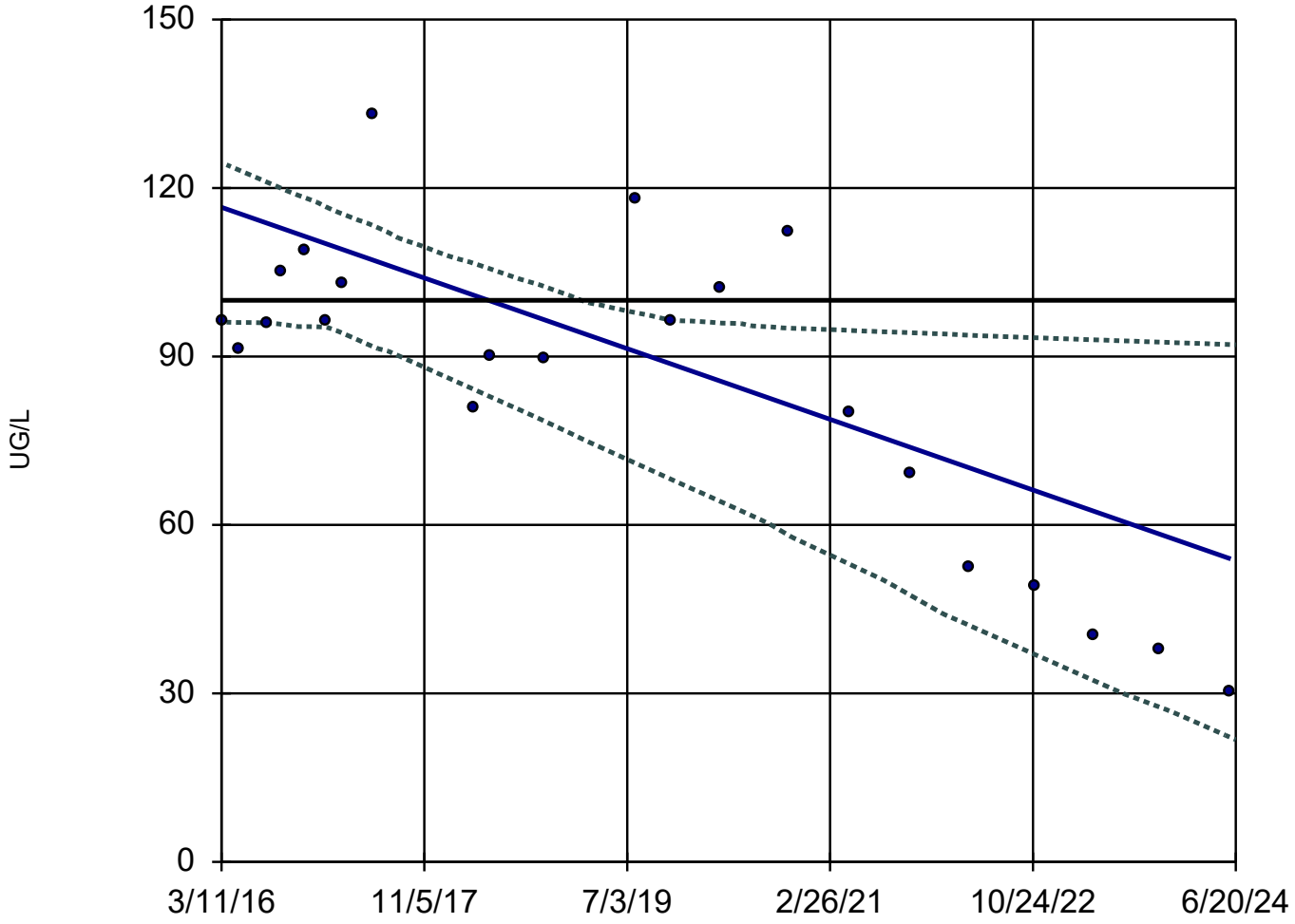
Confidence band is below GWPS (2).

Constituent: MERCURY, TOTAL Analysis Run 8/30/2024 9:24 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sen's Slope and 95% Confidence Band

R-MW-4



n = 22

Slope = -7.597 units per year.

Mann-Kendall statistic = -111 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (100) on 03/13/19.

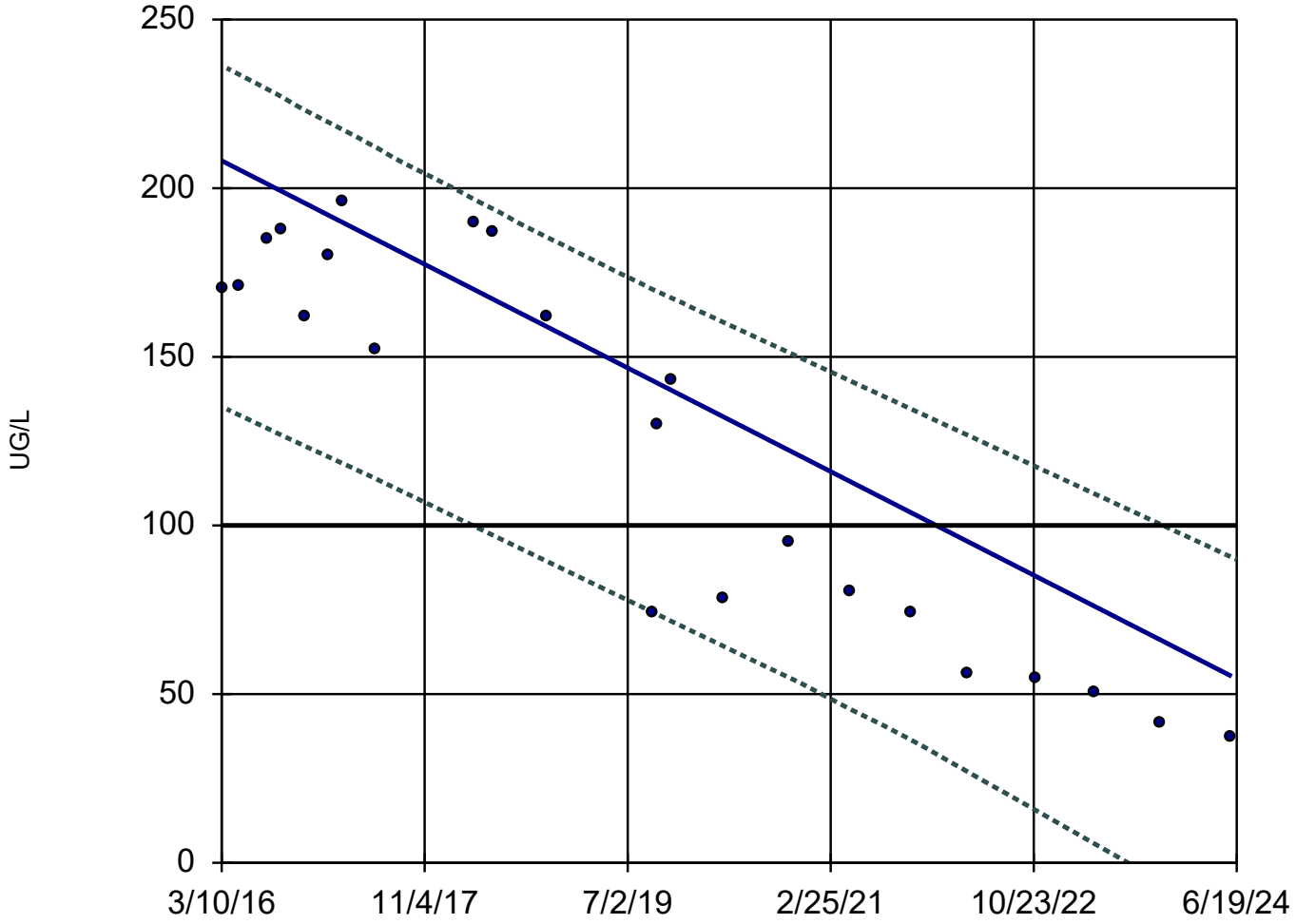
Constituent: MOLYBDENUM, TOTAL Analysis Run 8/30/2024 9:52 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-MW-7



n = 23

Slope = -18.55 units per year.

Mann-Kendall statistic = -178 critical = -89

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (100) on 04/16/18 and 11/21/23.

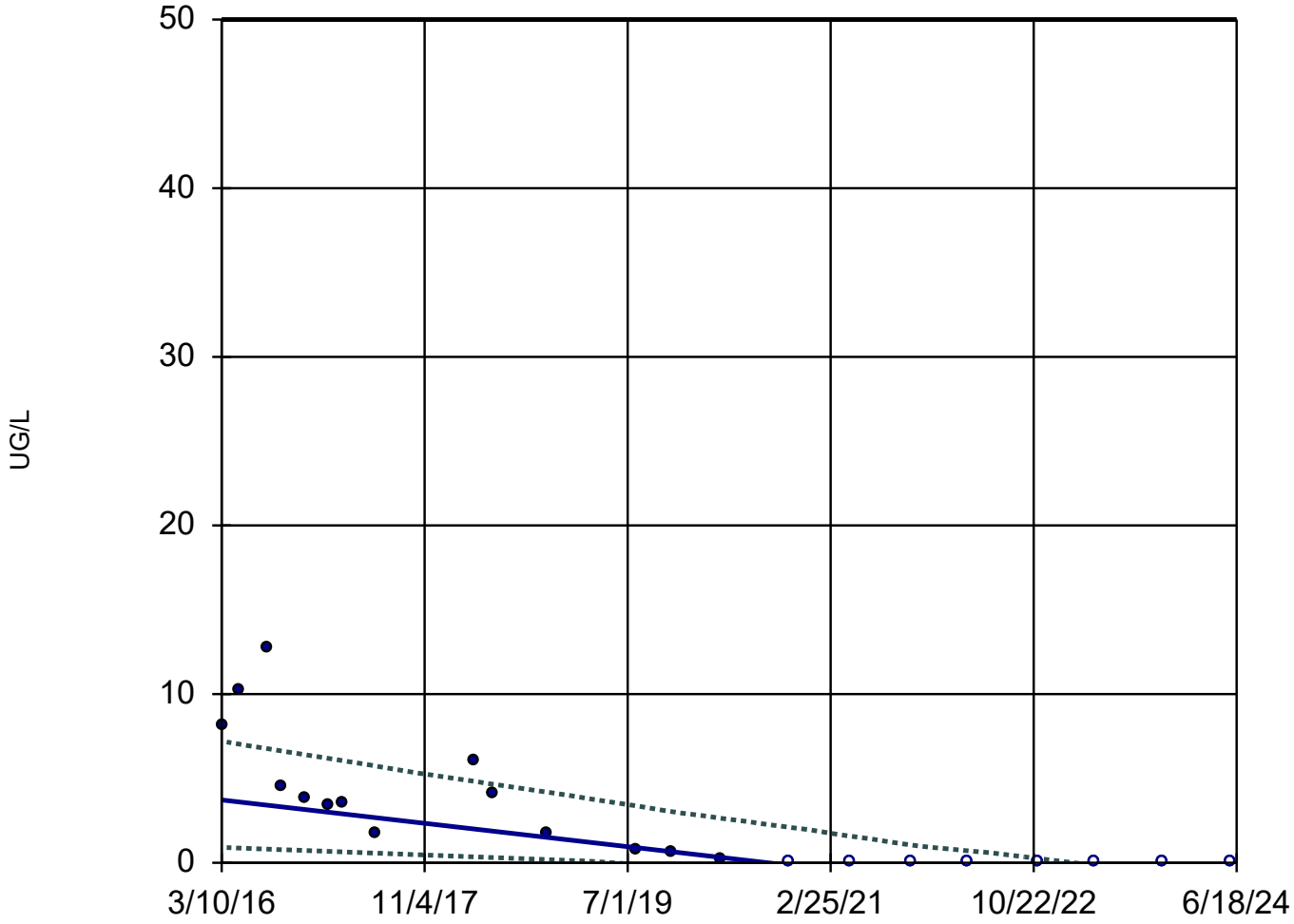
Constituent: MOLYBDENUM, TOTAL Analysis Run 8/30/2024 9:57 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-MW-1



n = 22

Slope = -0.8369 units per year.

Mann-Kendall statistic = -175
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (50).

Constituent: SELENIUM, TOTAL Analysis Run 8/30/2024 9:25 AM View: Assessment Monitoring

Rush Island E.C. Client: Ameren Data: RIEC Data

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 8/30/2024, 9:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	**R-MW-1**	**-0.09558**	**-102**	**-84**	**Yes**	**22**	**18.18**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-MW-2**	**-0.3157**	**-147**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-MW-3	-0.00...	-45	-84	No	22	54.55	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-MW-4**	**0.004326**	**125**	**78**	**Yes**	**21**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-MW-5**	**0.004403**	**142**	**78**	**Yes**	**21**	**95.24**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-MW-6	0.003076	32	84	No	22	68.18	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	R-MW-7	0.004091	71	89	No	23	82.61	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-MW-1**	**-1.038**	**-93**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-MW-2	2.714	50	84	No	22	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-MW-3	-4.206	-45	-84	No	22	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-MW-4	0.3752	73	84	No	22	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-MW-5**	**-0.4056**	**-174**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-MW-6	0.03271	23	68	No	19	15.79	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-MW-7**	**4.627**	**102**	**89**	**Yes**	**23**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-MW-1**	**2.558**	**85**	**78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-MW-2**	**-0.6817**	**-88**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-MW-3	1.894	53	84	No	22	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-MW-4**	**11.99**	**104**	**84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-MW-5**	**-8.28**	**-121**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-MW-6	-1.29	-14	-78	No	21	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-MW-7	-7.407	-83	-89	No	23	0	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-1	-0.00...	-38	-53	No	16	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-2	-0.00...	-24	-53	No	16	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-3	0	11	53	No	16	87.5	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-4	-0.00...	-24	-53	No	16	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-5	-0.00...	-24	-53	No	16	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-6	0	-18	-53	No	16	93.75	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	R-MW-7	0.008045	21	58	No	17	82.35	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-1	0.002721	45	63	No	18	77.78	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	**R-MW-2**	**0.03235**	**70**	**68**	**Yes**	**19**	**15.79**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**R-MW-3**	**0.03071**	**81**	**68**	**Yes**	**19**	**42.11**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	R-MW-4	0.001557	42	68	No	19	78.95	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-5	0.001585	68	68	No	19	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-6	0.001473	59	63	No	18	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-MW-7	0.001714	56	73	No	20	80	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-1	-0.00...	-6	-73	No	20	55	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-2	-0.02217	-20	-73	No	20	25	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-3	-0.04373	-39	-73	No	20	25	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-4	-0.03462	-39	-68	No	19	42.11	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-5	-0.02926	-48	-73	No	20	30	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-6	0	2	63	No	18	55.56	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-MW-7	-0.00...	-4	-78	No	21	47.62	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	**R-MW-1**	**0.03009**	**65**	**58**	**Yes**	**17**	**88.24**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**R-MW-2**	**0.02665**	**89**	**58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**R-MW-3**	**0.03207**	**97**	**58**	**Yes**	**17**	**94.12**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	R-MW-4	0.02397	51	58	No	17	82.35	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	R-MW-5	0.01754	40	58	No	17	88.24	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	**R-MW-6**	**0.02868**	**64**	**53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**R-MW-7**	**0.03438**	**83**	**63**	**Yes**	**18**	**77.78**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-MW-1	-0.0203	-85	-119	No	28	21.43	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 8/30/2024, 9:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
FLUORIDE, TOTAL (MG/L)	R-MW-2	0.02248	52	101	No	25	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-MW-3**	**0.04543**	**143**	**101**	**Yes**	**25**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	**R-MW-4**	**-0.02417**	**-107**	**-101**	**Yes**	**25**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-MW-5	0.004271	35	95	No	24	12.5	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-MW-6	0.01354	96	106	No	26	11.54	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-MW-7	-0.02664	-96	-112	No	27	18.52	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-MW-1**	**0.1095**	**92**	**73**	**Yes**	**20**	**100**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-MW-2	0.08239	8	78	No	21	4.762	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-MW-3	-0.2968	-75	-78	No	21	42.86	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-MW-4**	**0.1006**	**75**	**73**	**Yes**	**20**	**95**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-MW-5	0.1006	73	73	No	20	85	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-MW-6	0.1029	60	73	No	20	80	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-MW-7**	**0.113**	**94**	**78**	**Yes**	**21**	**90.48**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-MW-1	0	28	84	No	22	90.91	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-MW-2	0	22	84	No	22	81.82	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-MW-3**	**0.4509**	**113**	**84**	**Yes**	**22**	**77.27**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	**R-MW-4**	**-1.367**	**-129**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-MW-5	0.1649	31	84	No	22	45.45	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-MW-6	0.1108	32	78	No	21	66.67	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-MW-7	-0.5656	-61	-73	No	20	0	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	**R-MW-1**	**0.003724**	**53**	**48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-2**	**0.003717**	**53**	**48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-3**	**0.003717**	**53**	**48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-4**	**0.003714**	**53**	**48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-5**	**0.003714**	**53**	**48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-6**	**0.003774**	**62**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**R-MW-7**	**0.004122**	**86**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	R-MW-1	5.603	61	84	No	22	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-MW-2	-1.297	-5	-84	No	22	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-MW-3	-4.643	-15	-84	No	22	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**R-MW-4**	**-7.597**	**-111**	**-84**	**Yes**	**22**	**0**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	R-MW-5	0	8	84	No	22	81.82	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-MW-6	0	3	84	No	22	40.91	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**R-MW-7**	**-18.55**	**-178**	**-89**	**Yes**	**23**	**0**	**n/a**	**n/a**	**0.02**	**NP**
RADIUM [226 + 228] (PCI/L)	R-MW-1	0.02253	32	84	No	22	95.45	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-2	0.04049	52	78	No	21	95.24	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-3	0.01362	27	84	No	22	95.45	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-4	0.01844	40	84	No	22	81.82	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-5	0.003779	17	84	No	22	81.82	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-6	0.004615	3	84	No	22	77.27	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-MW-7	0.01694	59	89	No	23	91.3	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	**R-MW-1**	**-0.8369**	**-175**	**-84**	**Yes**	**22**	**36.36**	**n/a**	**n/a**	**0.02**	**NP**
SELENIUM, TOTAL (UG/L)	R-MW-2	0.02425	20	84	No	22	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-3	-0.01326	-46	-78	No	21	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-4	0	-36	-84	No	22	68.18	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-5	0	10	84	No	22	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-6	0.004637	10	78	No	21	14.29	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-MW-7	0	3	89	No	23	82.61	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-1	-0.02205	-37	-53	No	16	93.75	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-2	-0.00...	-23	-58	No	17	100	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 8/30/2024, 9:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
THALLIUM, TOTAL (UG/L)	R-MW-3	-0.00...	-23	-53	No	16	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-4	-0.00...	-23	-53	No	16	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-5	-0.00...	-23	-53	No	16	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-6	-0.01476	-37	-53	No	16	93.75	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	R-MW-7	-0.00...	-33	-58	No	17	94.12	n/a	n/a	0.02	NP

Appendix D

November 2023 Corrective Action Statistical Evaluation

Memorandum

March 18, 2024

To:	Lisa Meyer – Ameren Missouri	**Project Number:**	23008
CC:	Ameren Missouri - Susan Knowles, Craig Giesmann, Charlie Henderson, Bill Kutosky		
From:	Rocksmith Geoengineering - Mark Haddock, P.E., Jeff Ingram, R.G., Grant Morey	**Email:**	Jeff.Ingram@Rocksmithgeo.com
RE:	**Corrective Action Statistical Evaluation, RCPA Surface Impoundment, Rush Island Energy Center, Jefferson County, Missouri**		

1.0 INTRODUCTION

This Technical Memorandum provides the results of the Corrective Action Monitoring statistical analyses from the November 2023 sampling event for the RCPA Surface Impoundment at the Rush Island Energy Center (RIEC) located in Jefferson County, Missouri. As outlined in the remedy selection report for the RCPA, Corrective Action at the RCPA consists of two phases, as follows:

1) Source control, stabilization, and containment of CCR by installation of a low-permeability geomembrane cap.
2) Once source control is achieved, monitor the natural attenuation (MNA) of groundwater concentrations to address limited and localized CCR-related impacts. Ongoing monitoring and modeling evaluations to document concentration trends following Corrective Action.

In addition to MNA as a Corrective Measure, Ameren has also initiated a supplemental corrective measure consisting of groundwater extraction, treatment, and re-injection using ex-situ treatment technologies with chemical precipitation and selective ion exchange.

Phase 1 of Corrective Action commenced in August 2019, and was substantially completed on December 15, 2020, with the installation of a low permeability cover system. Included in this memorandum is a brief summary of constituents that are currently in exceedance of the groundwater protection standard (GWPS), a list of site-specific Groundwater Protection Standards (**Table 1**), and the Sanitas Technologies™ (Sanitas) statistical software output for each of the Appendix IV parameters (**Appendix A** and **Appendix B**).

The initial Corrective Action sampling event was completed in April 2020, and a total of nine sampling events have been completed for the Corrective Action Program at the RIEC to date. This analysis uses results collected since the beginning of Corrective Action monitoring (April 2020) for the determination of constituents exceeding the GWPS. Data collected prior to this time were collected during active conditions of the RCPA, prior to the cessation of CCR disposal in the RCPA, and are not representative of groundwater conditions since the initiation of closure.

Trend tests using the Sen's Slope/Mann Kendall method require a minimum of eight independent results, as outlined in the USEPA Unified Guidance. Therefore, trend tests were completed for the following Appendix IV constituents: antimony, arsenic, barium, chromium, fluoride, lead, lithium, molybdenum, radium 226 + 228, and selenium.

Several constituents were reported at concentrations below the Practical Quantitation Limit (PQL) during the April 2020, 2021, 2022, and/or 2023 sampling events, including beryllium, cadmium, cobalt, mercury, and thallium. When these constituents were not detected during the initial Corrective Action sampling event, they were not re-sampled/tested during the subsequent semi-annual sampling events in each calendar year. As a result, there are fewer results available and the Sen's Slope/Mann Kendall Analyses cannot yet be completed for these Appendix IV constituents.

2.0 STATISTICAL EVALUATION

The Appendix IV constituents were evaluated for exceedances above the GWPS using the methods and procedures outlined in the Corrective Action Groundwater Monitoring Plan's (CAGMP's) Statistical Analysis Plan (SAP). An outlier analysis was completed as the first step of the statistical evaluation. The outlier analysis was performed only on the results collected as a part of the Corrective Action Monitoring Program. In addition to outliers noted in previous Corrective Action evaluations, the following outliers were removed prior to the calculation of confidence limits:

- Barium
  - R-P-17S at 38.4 micrograms per liter (µg/L) on 11/22/2022: result is statistically lower than other barium results at the same monitoring well. This low result is not consistent with previous or subsequent barium results at the well and is an outlier.
- Fluoride
  - R-P-19S at non-detect (<0.12 µg/L) on 4/24/2023: result is statistically lower than other fluoride results at the same monitoring well. The low result is not consistent with previous or subsequent fluoride results at the well and is an outlier.
- Lithium
  - R-P-17S at 10.4 µg/L on 11/2/2022: result is statistically lower than other lithium results at the same monitoring well. The low result is not consistent with previous or subsequent lithium results at the well and is an outlier.

An analysis of the outliers removed to date was completed. No previously identified outliers were added back into the dataset prior to the calculation of confidence intervals in **Appendix A** trending confidence bands in **Appendix B**.

Following the outlier analysis, the second step in the statistical analysis was to calculate confidence intervals and compare those to the site-specific GWPS (**Appendix A)**. Confidence interval evaluation was supplemented with Sen's Slope/Mann Kendall Analyses on constituents that have eight independent sampling results at a given well, per the USEPA Unified Guidance (**Appendix B**). The Sen's Slope/Mann-Kendall Analysis identifies well-analyte pairs that have statistically significant trends and calculates confidence bands that vary with time. The upper confidence band, in relation to the GWPS for a given constituent, is used to determine exceedances, as outlined in the site CAGMP. As discussed previously, beryllium, cadmium, cobalt, mercury, and thallium do not have the requisite quantity of results to perform Sen's Slope/Mann Kendall Analyses, so only confidence intervals were produced for those constituents.

Using these corrective action statistical methods, as of November 2023, the wells with constituents exceeding the GWPS are as follows:

- Arsenic at R-P-05S, R-P-17I[1], R-P-17S, R-P-19I[2], and R-P-21S
- Lead at R-P-19I[2]
- Lithium at R-P-19I and R-P-21D
- Molybdenum at R-P-10S[2], R-P-17D, R-P-17I, R-P-19D[2], R-P-19I[2], P-P-21D, R-P-21I, and R-P-22D

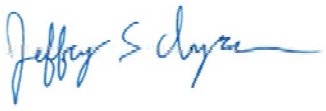
Lithium at R-P-22S was previously identified as an exceedance in the April 2021 corrective action statistical evaluation. It is no longer an exceedance as of November 2023 as the upper confidence interval limit is below the GWPS. All other arsenic, lead, lithium, and molybdenum exceedances previously identified in April 2023 remain as of this evaluation. Variability in the initial groundwater sampling results after the closure of the RCPA is expected, especially at wells nearest the CCR unit, where closure grading and disturbance activities were greatest. The groundwater concentrations in many of these wells with exceedances are trending downward, as indicated. The concentrations reported in these results following closure are expected to be variable but are expected to decrease over time as stabilization occurs and supplemental corrective measures are put into service, such as the groundwater treatment system.

Closing

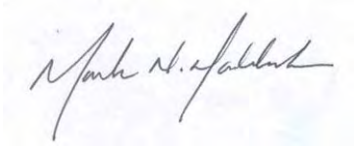
Rocksmith appreciates this opportunity to provide hydrogeological and engineering support services to Ameren. If you have any questions or comments regarding the information provided, please contact the undersigned.

Sincerely,

Rocksmith Geoengineering, LLC



Jeff Ingram, R.G.
Senior Geologist, Partner



Mark Haddock, P.E., R.G.
Principal Engineer, Senior Partner

Attachments

Tables

Table 1 – RCPA Groundwater Protection Standards

Appendices

Appendix A – Sanitas Confidence Interval Statistical Output

Appendix B – Sanitas Trending Confidence Bands Statistical Output

[1] Arsenic results at R-P-17I are trending downward in a statistically significant manner and the upper limit of the confidence band is approaching the GWPS.

[2]These results display an overall downward trend since April 2020 that is not statistically significant at the 98% confidence level.

Tables

Table 1 - RCPA Groundwater Protection Standards
RCPA Surface Impoundment
Rush Island Energy Center

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring[6]
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	30	30
Barium	µg/L	2000	2000	548.6
Beryllium	µg/L	4	4	DQR
Cadmium	µg/L	5	5	DQR
Chromium	µg/L	100	100	2.363
Cobalt	µg/L	6	6	DQR
Fluoride	mg/L	4	4	0.2896
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	64.7	64.7
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	2.297
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter
2. mg/L - milligrams per liter
3. pCi/L - picocuries per liter
4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Updated January 9, 2023 at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.
5. Health Based Groundwater Protection Standards (GWPS) were adoped for Appendix IV parameters without an MCL (i.e. cobalt, lithium, molybdenum, and lead). Information available at https://www.epa.gov/coalash/coal-ash-rule.
6. Values were calculated using statistical methods outlined for Detection Monitoring and are used for returning to Detection Monitoring based on available data to date.
7. DQR - Double Quantification Rule. If all baseline data are less than the Practical Quantitation Limit (PQL), then the DQR will be used. More information on the DQR is provided in the Statistical Analysis Plan.
8. Site GWPS is either the MCL/Health Based GWPS or based on background levels (calculated as described in the Statistical Analysis Plan for Assessment Monitoring), whichever is higher.
9. GWPS and background values calculated using results up through April 2023 from monitoring wells MW-B1 and MW-B2.

ROCKSMITH GEOENGINEERING

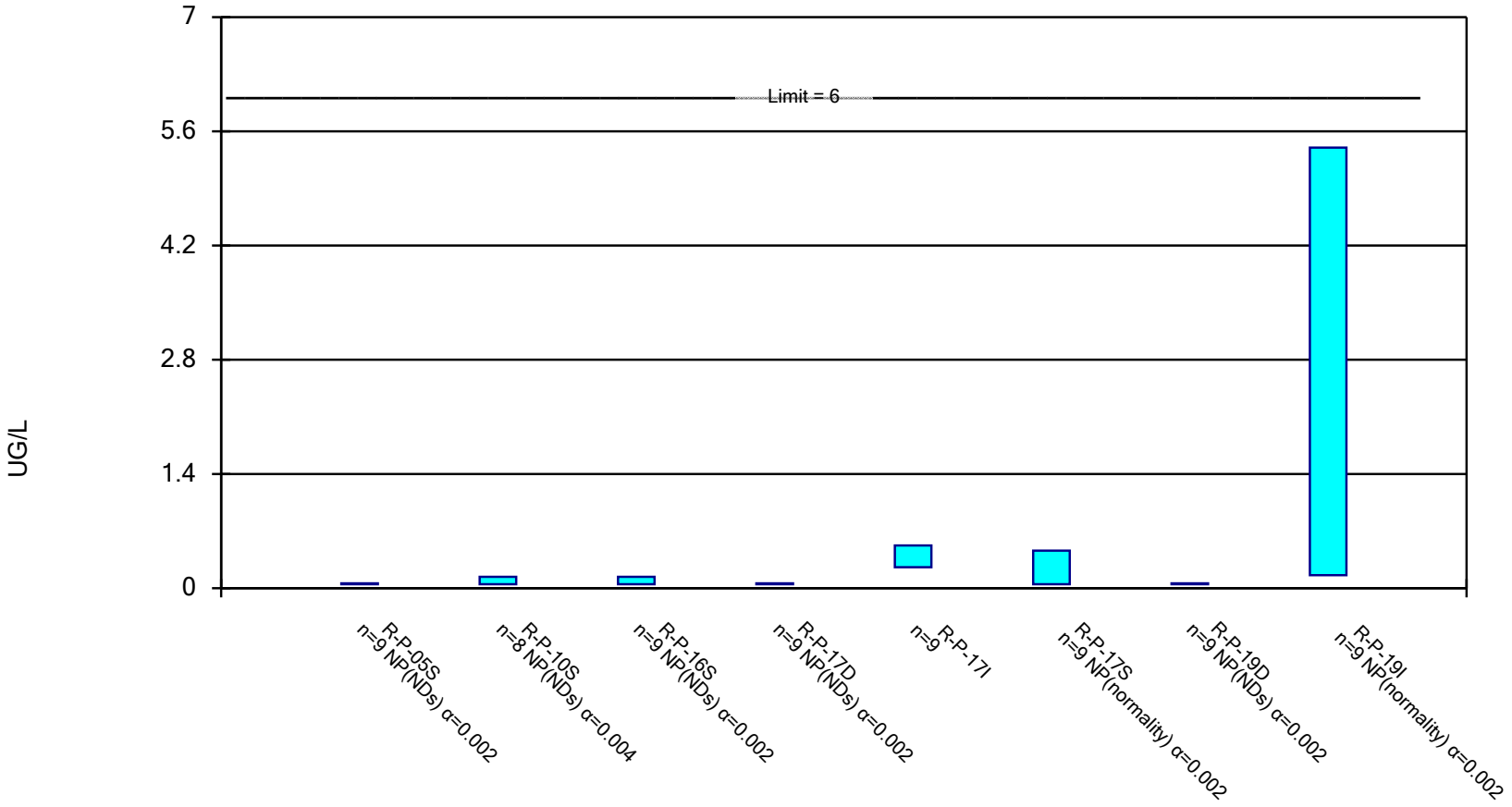
Prepared by: GTM
Checked by: JSI
Reviewed by: MNH

Appendix A
Sanitas Confidence Interval Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



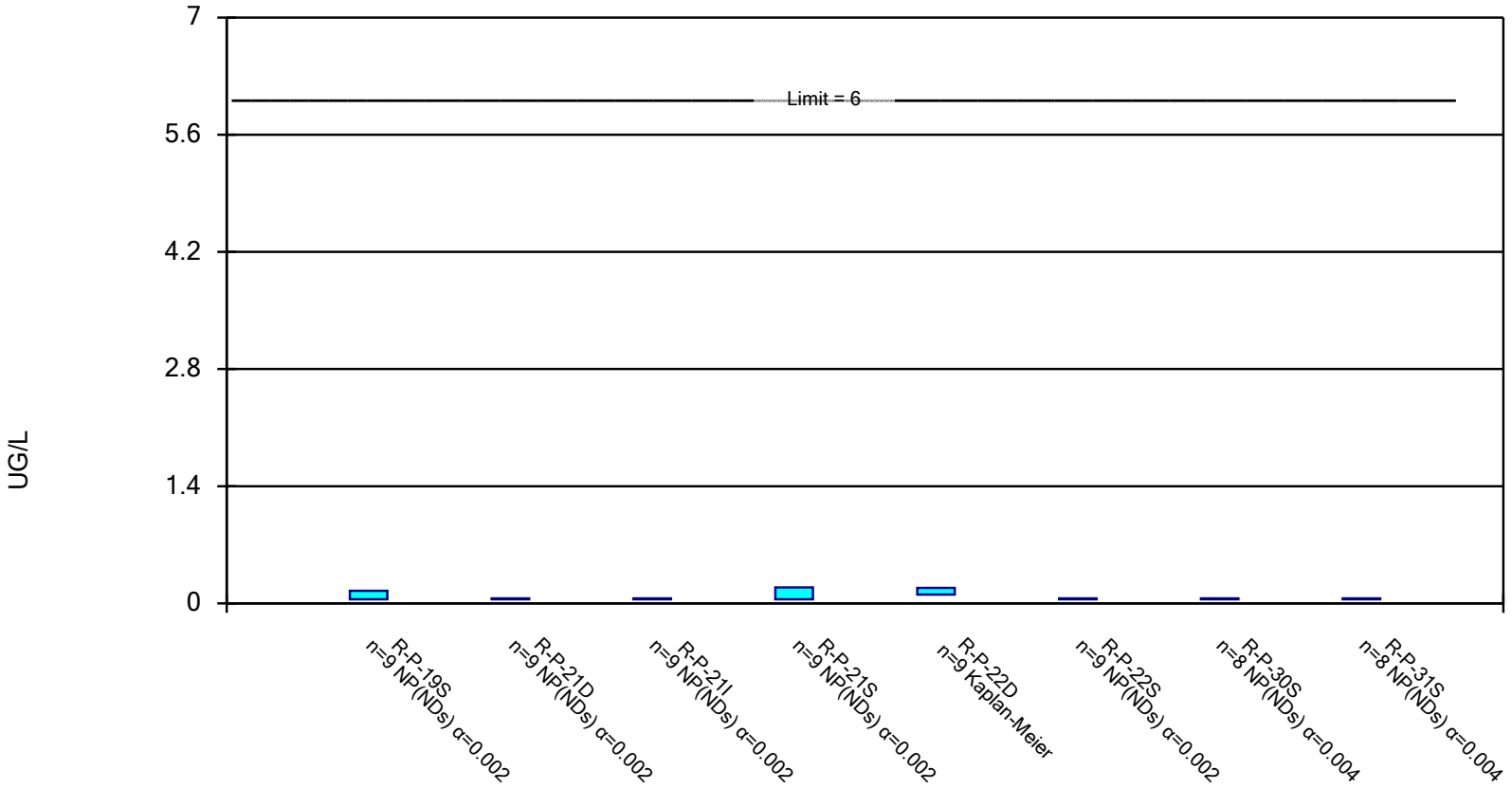
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



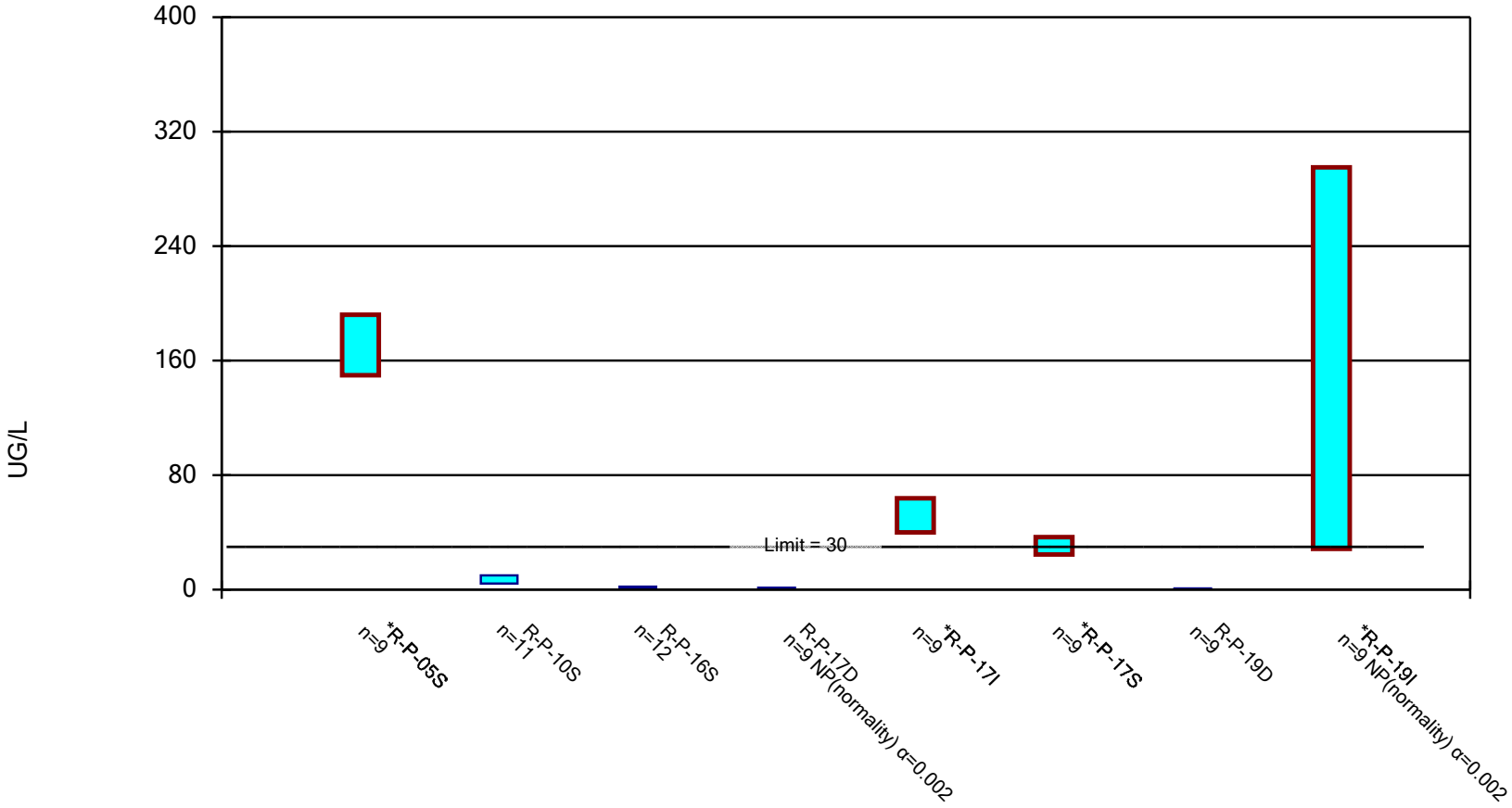
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



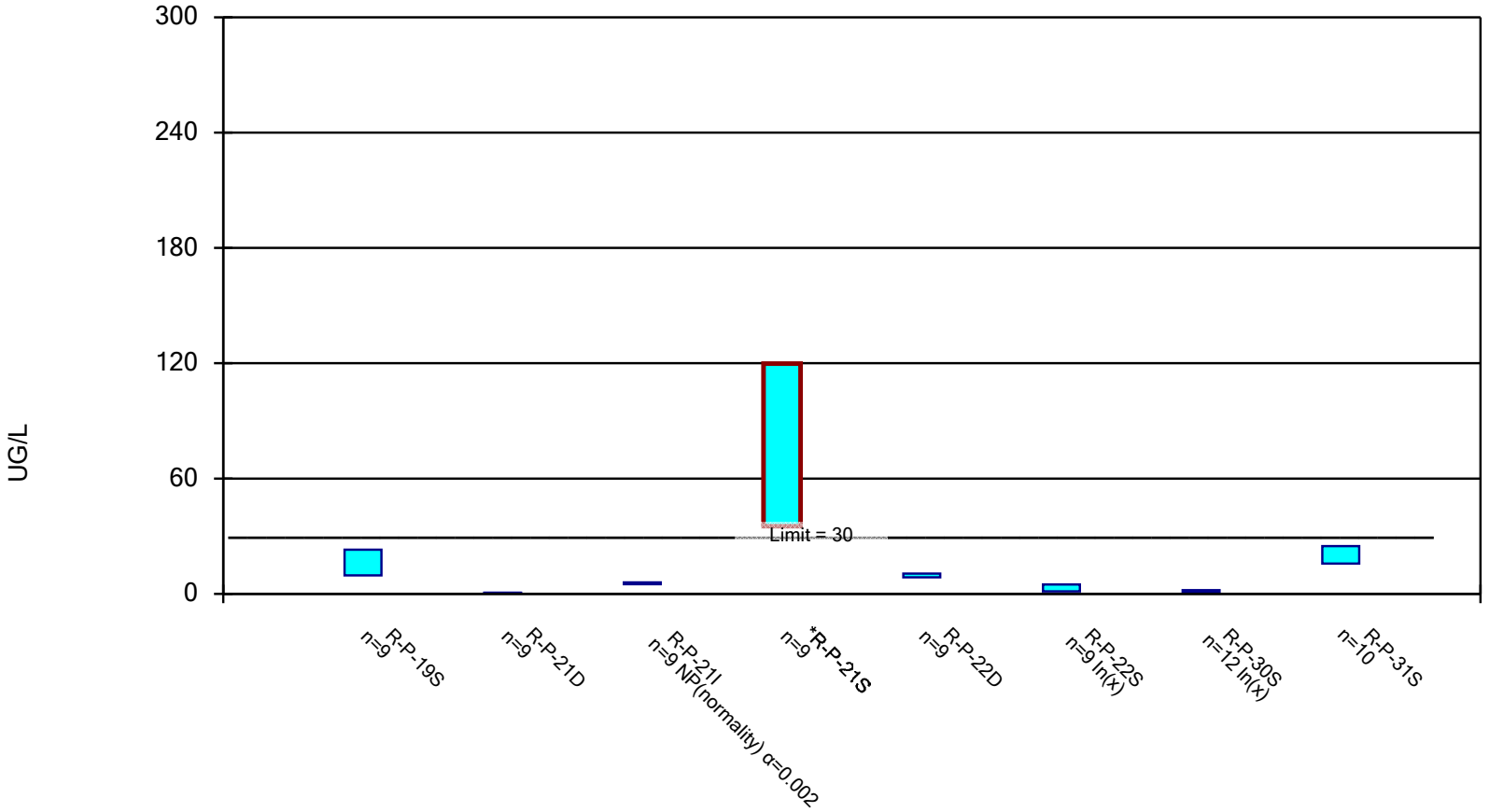
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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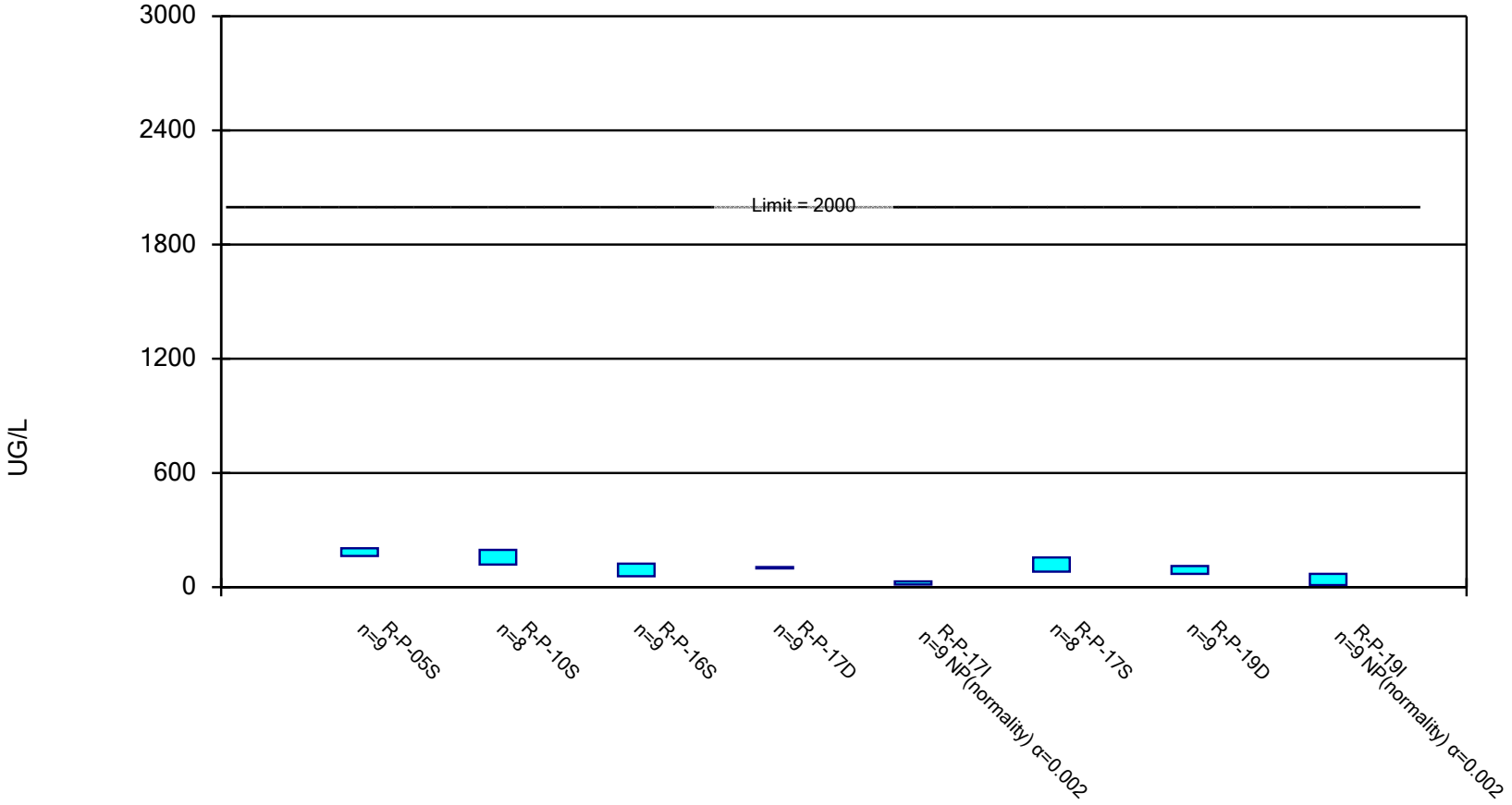
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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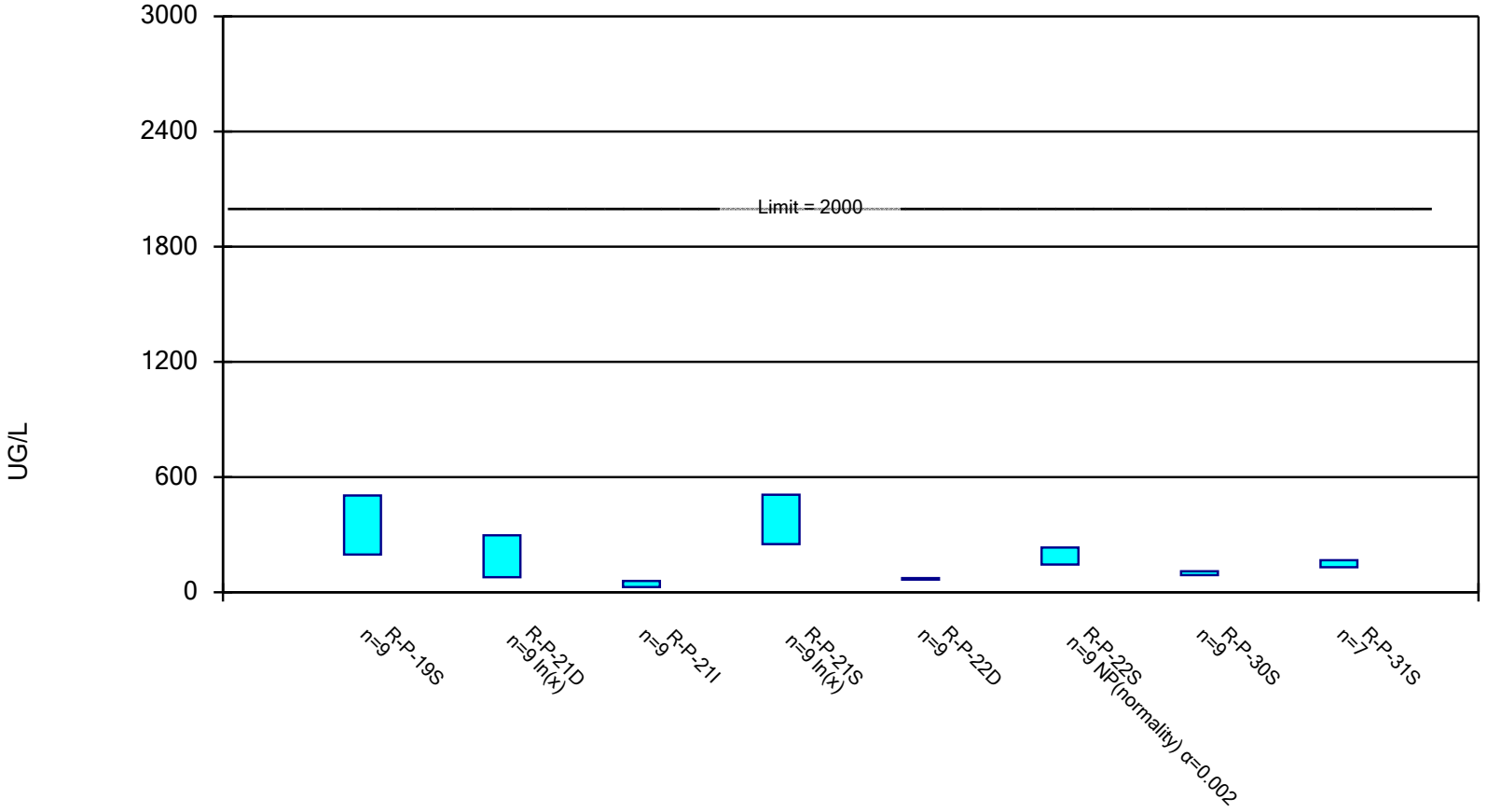
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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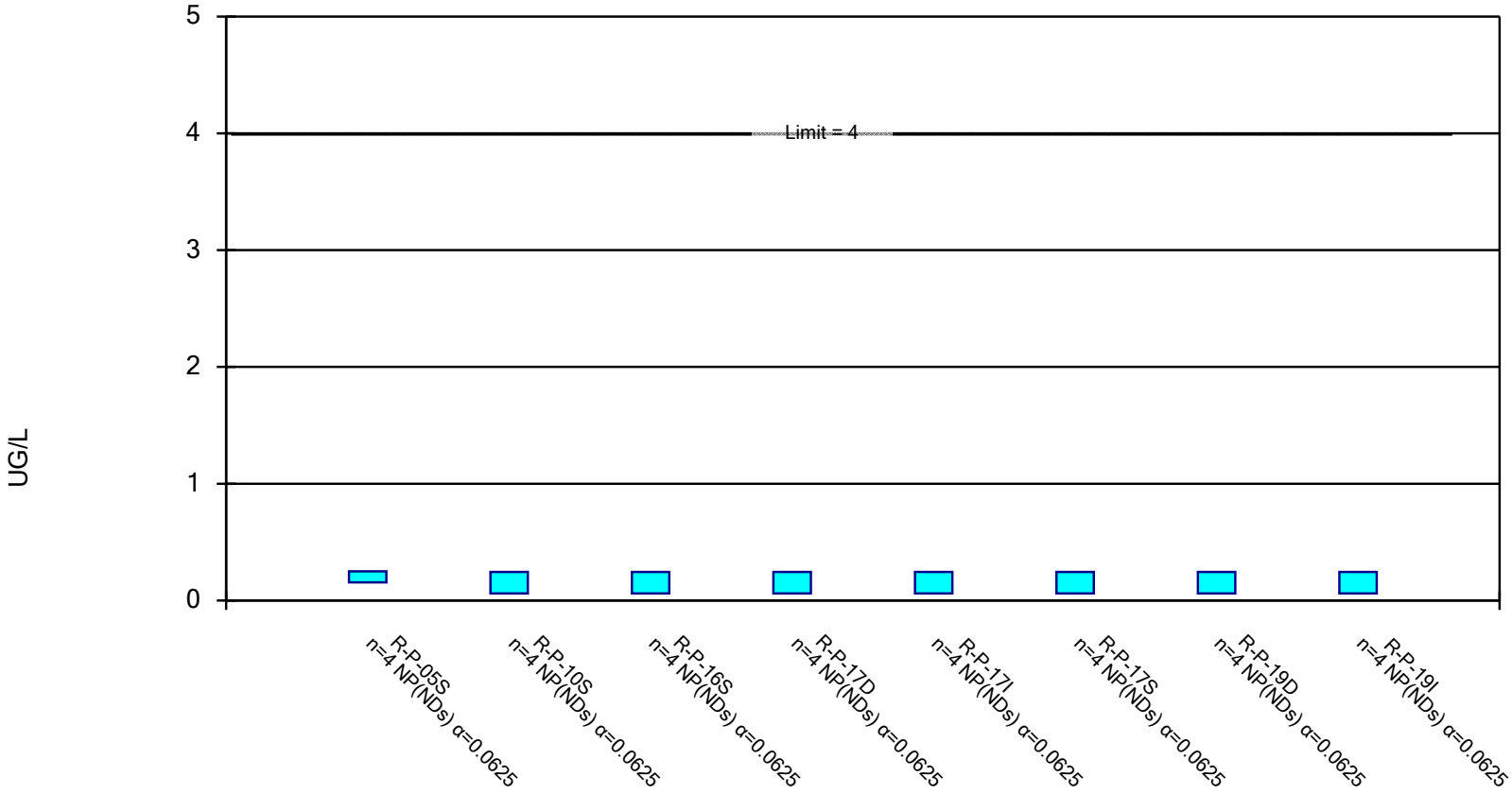
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

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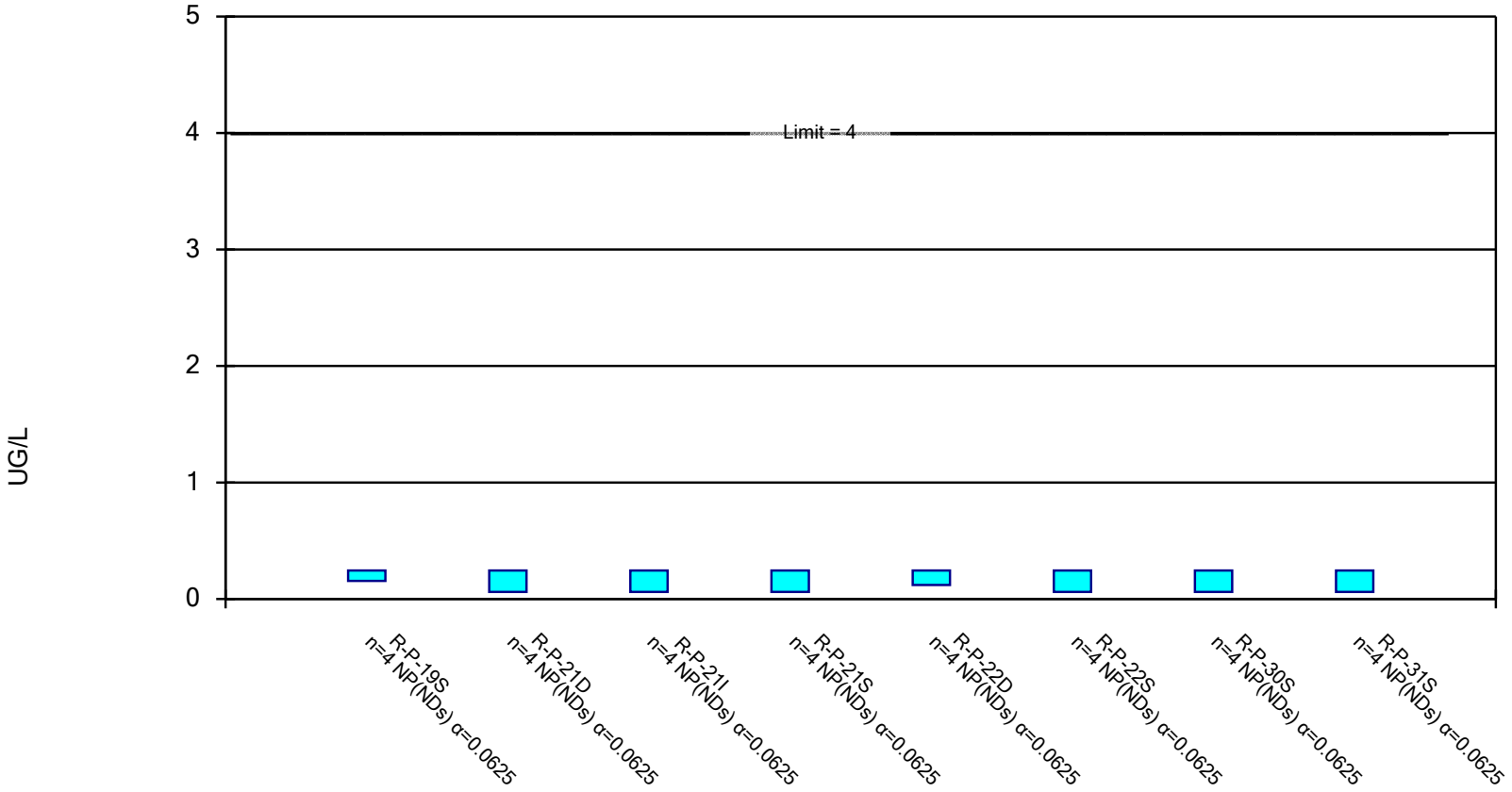
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

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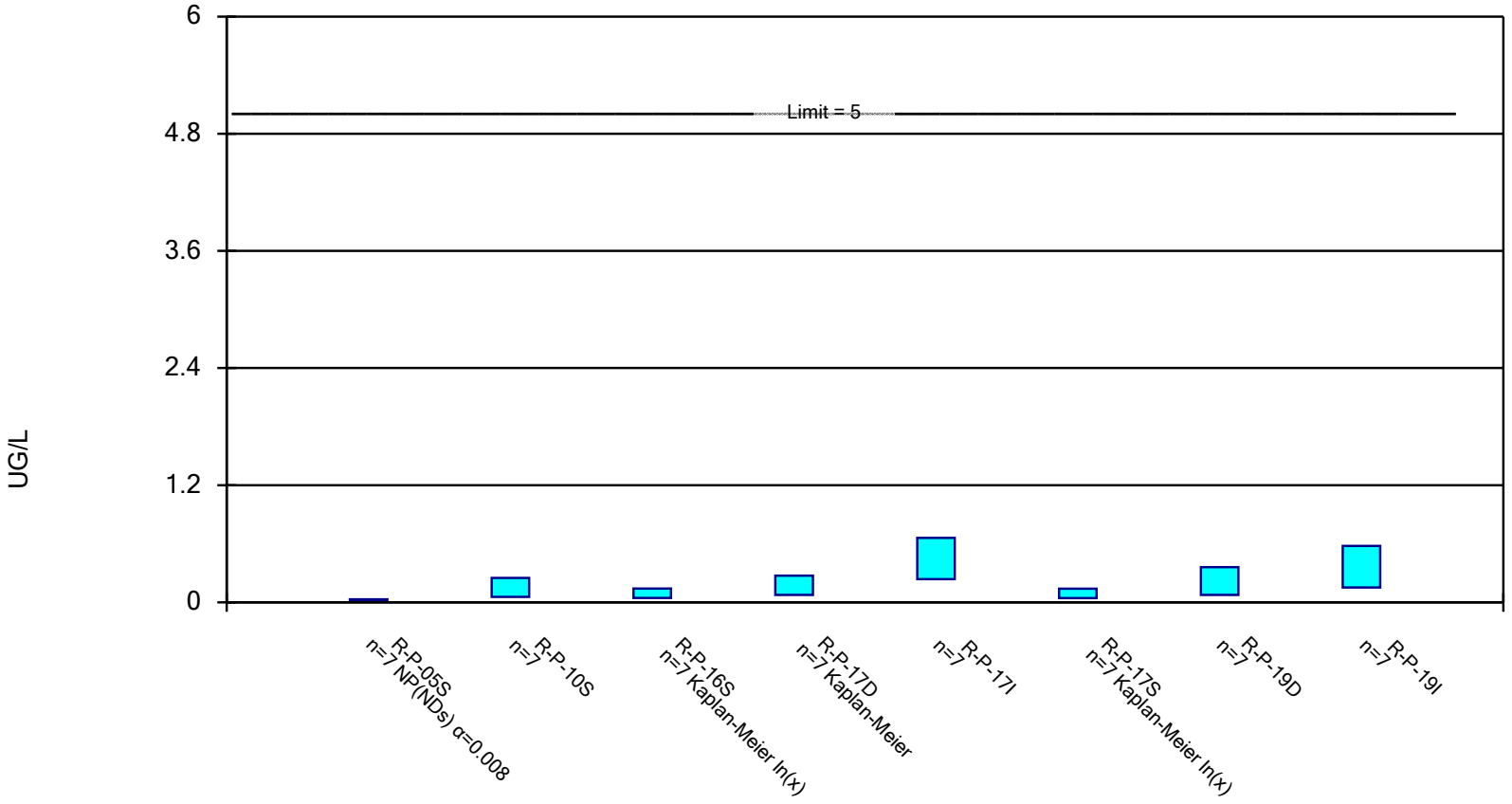
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



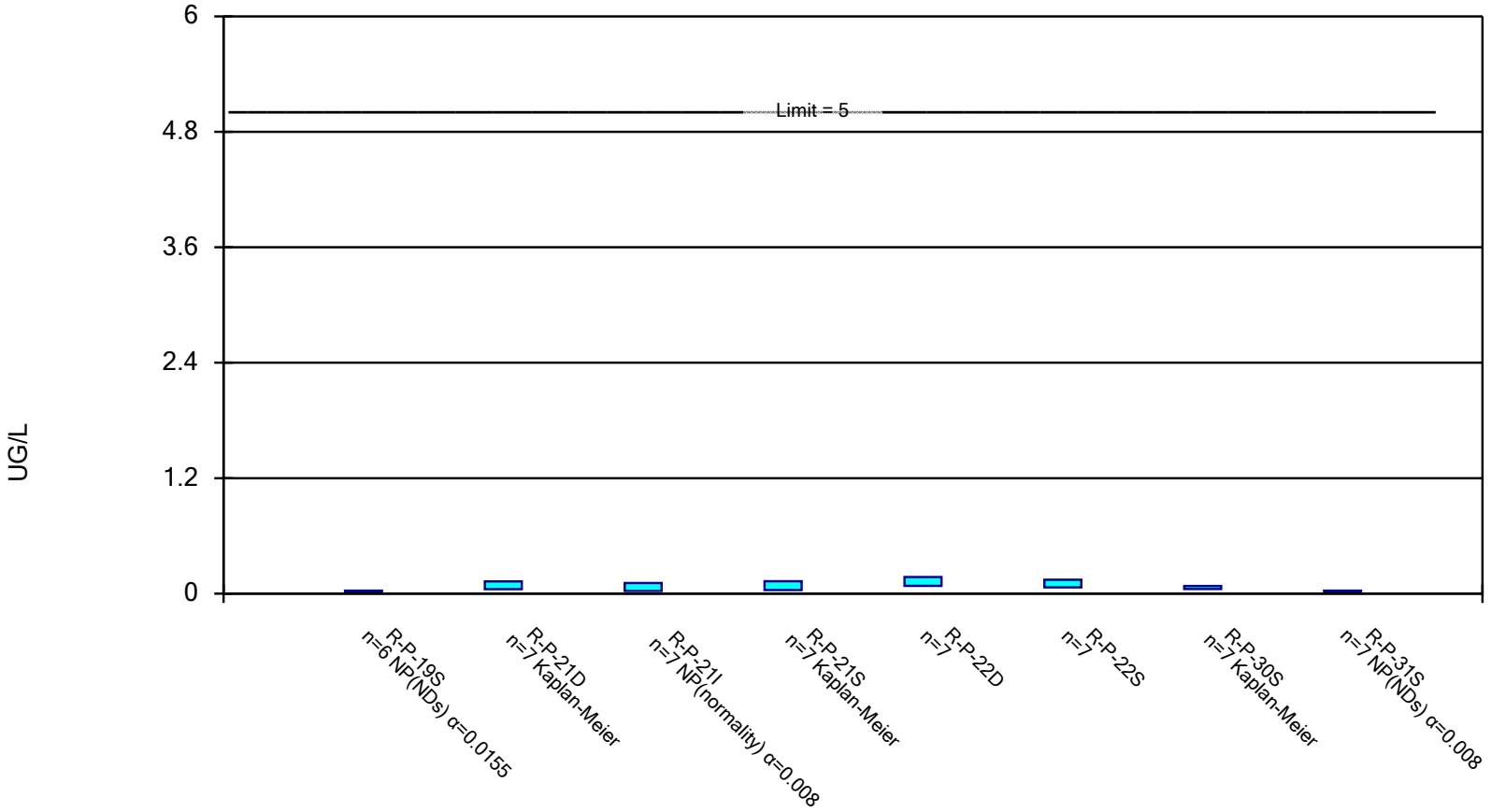
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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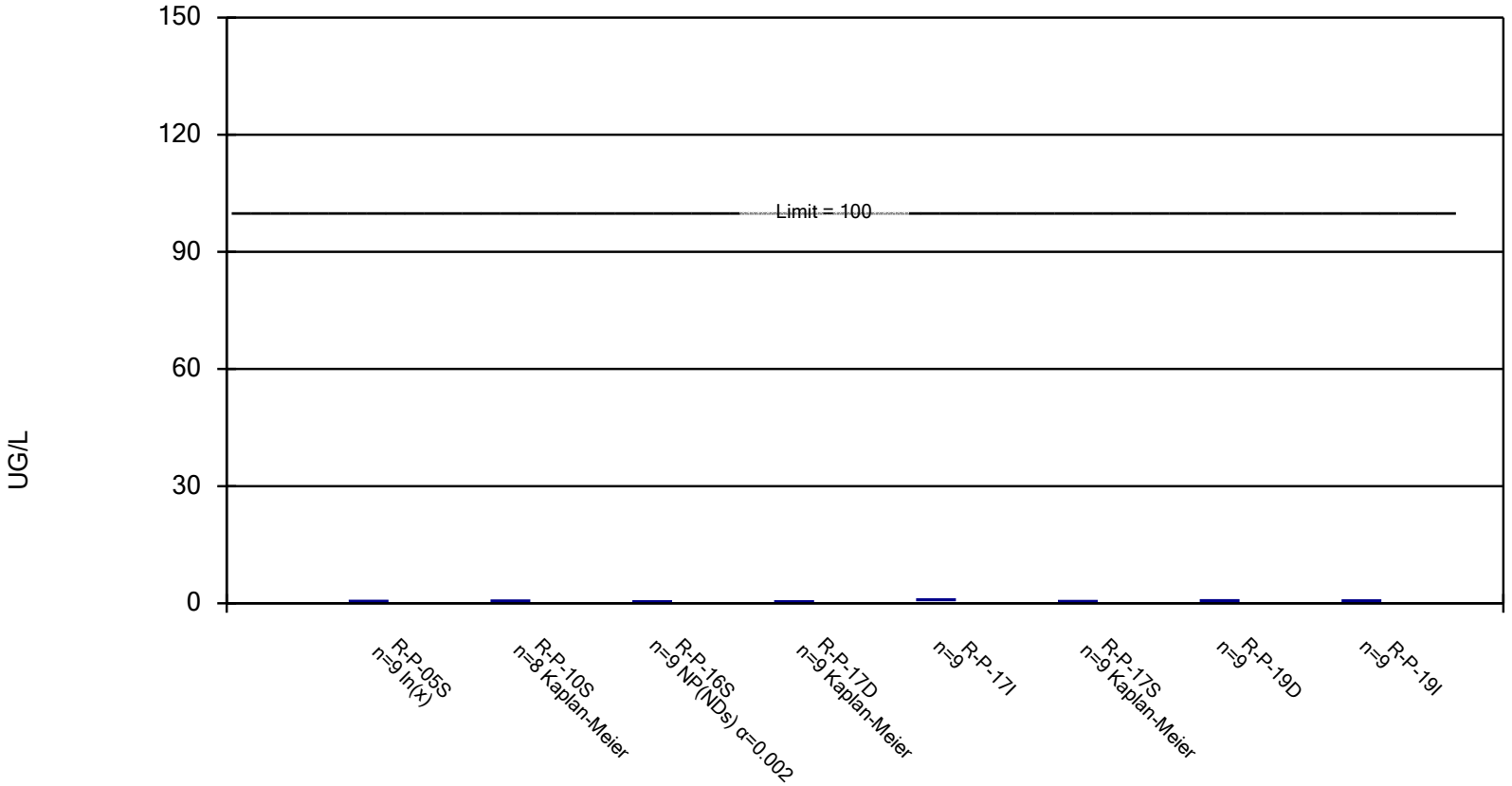
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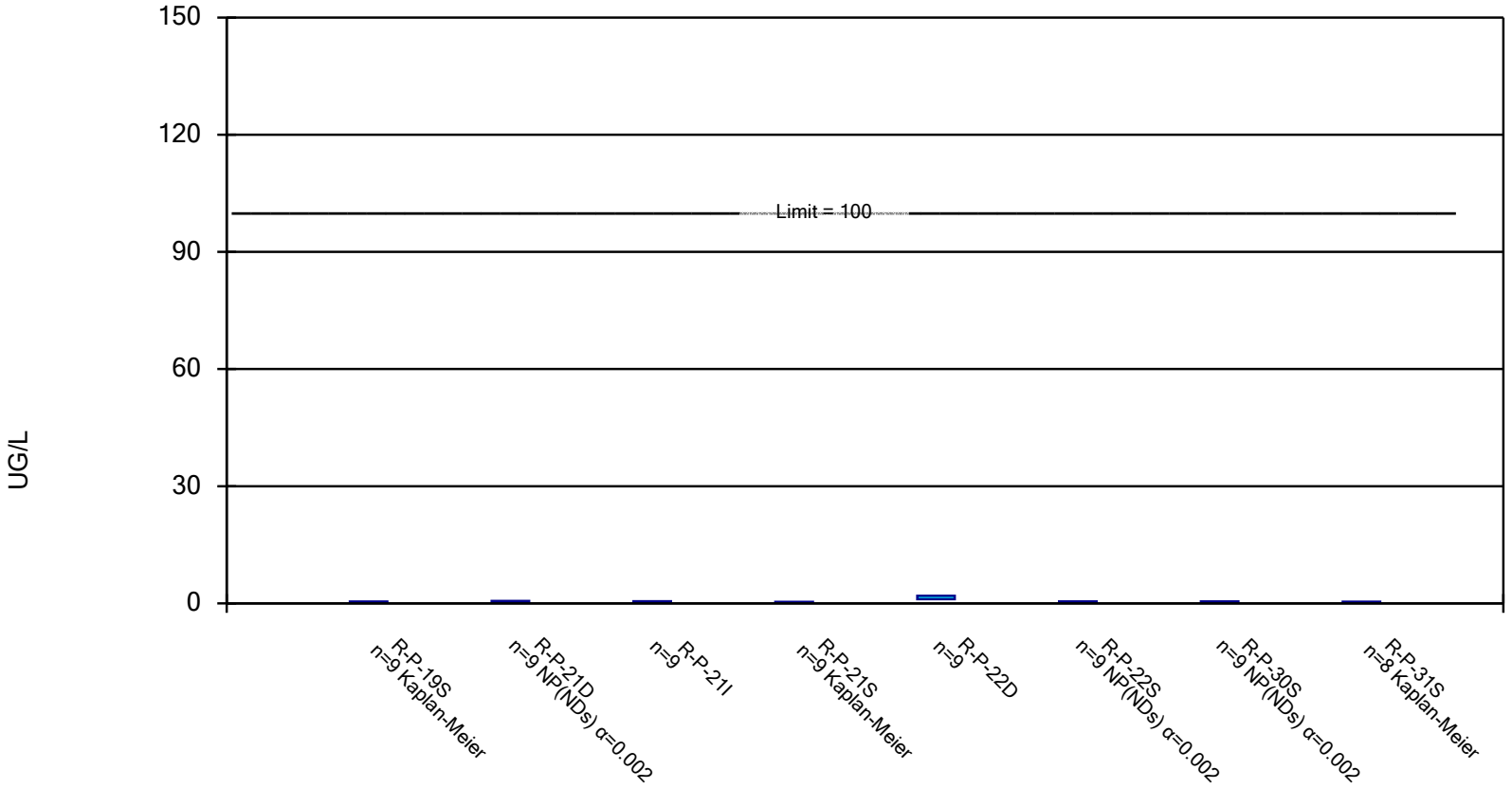
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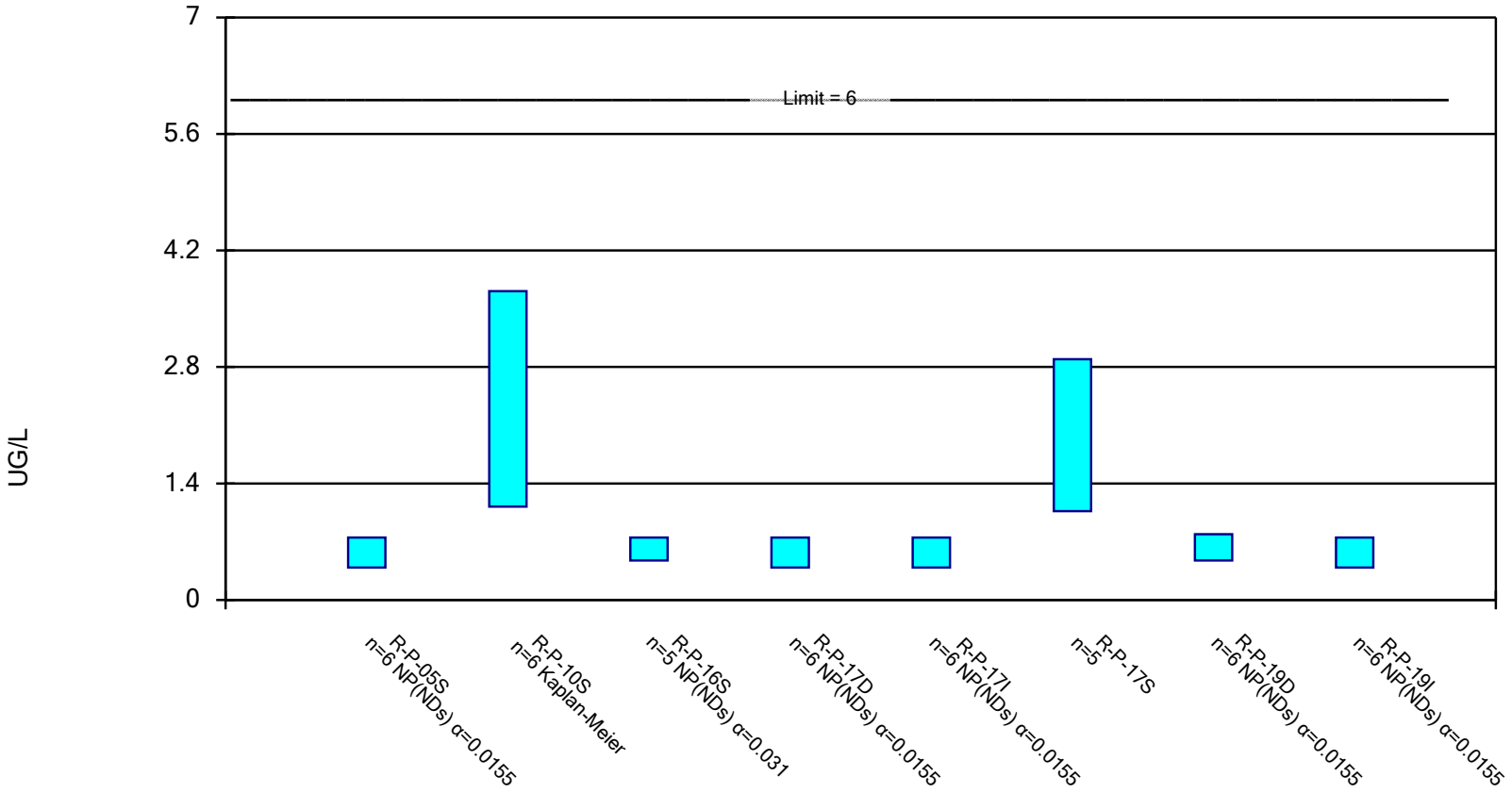
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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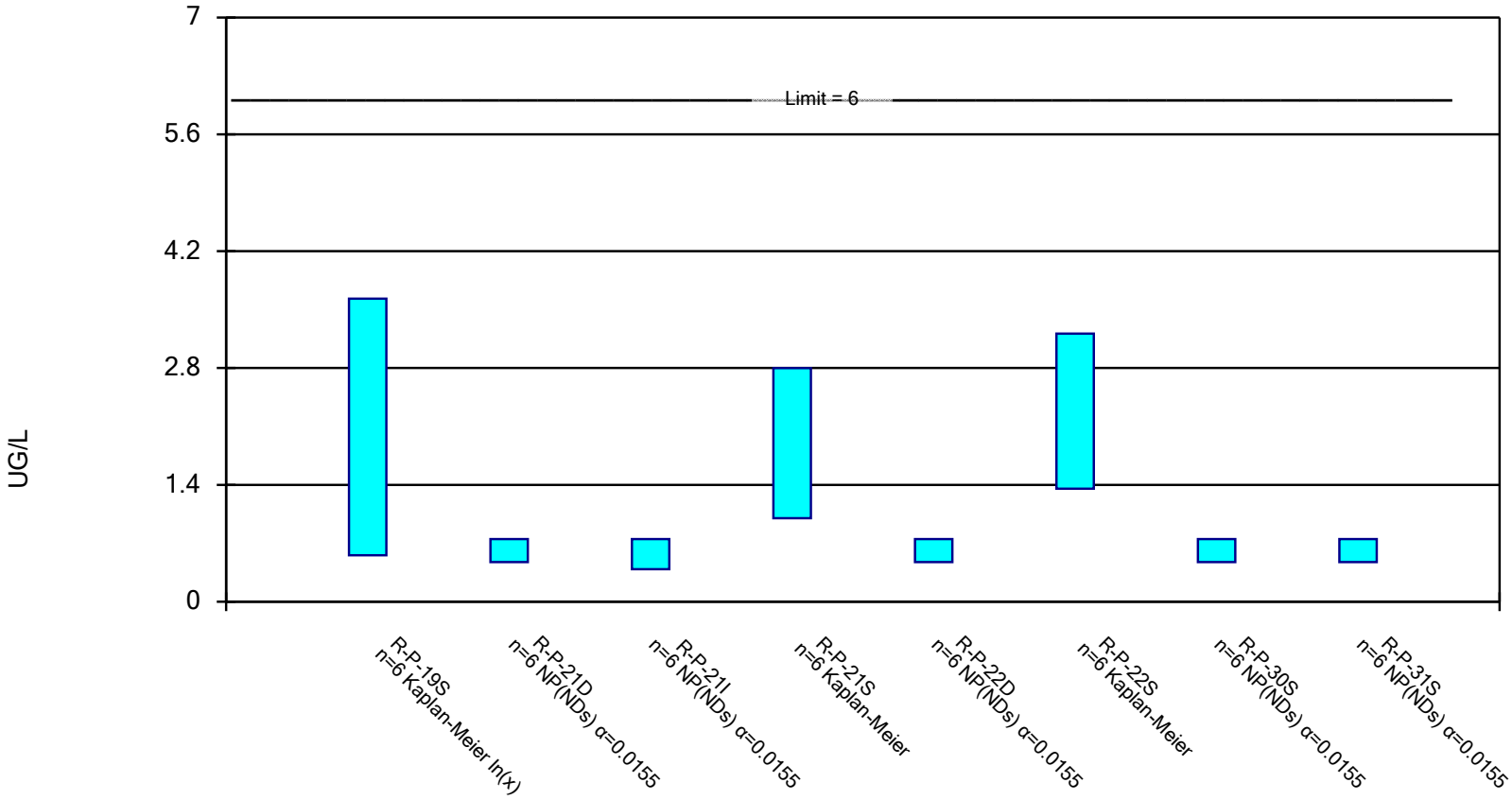
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Rush Island E.C. Client: Ameren Data: RIEC Data

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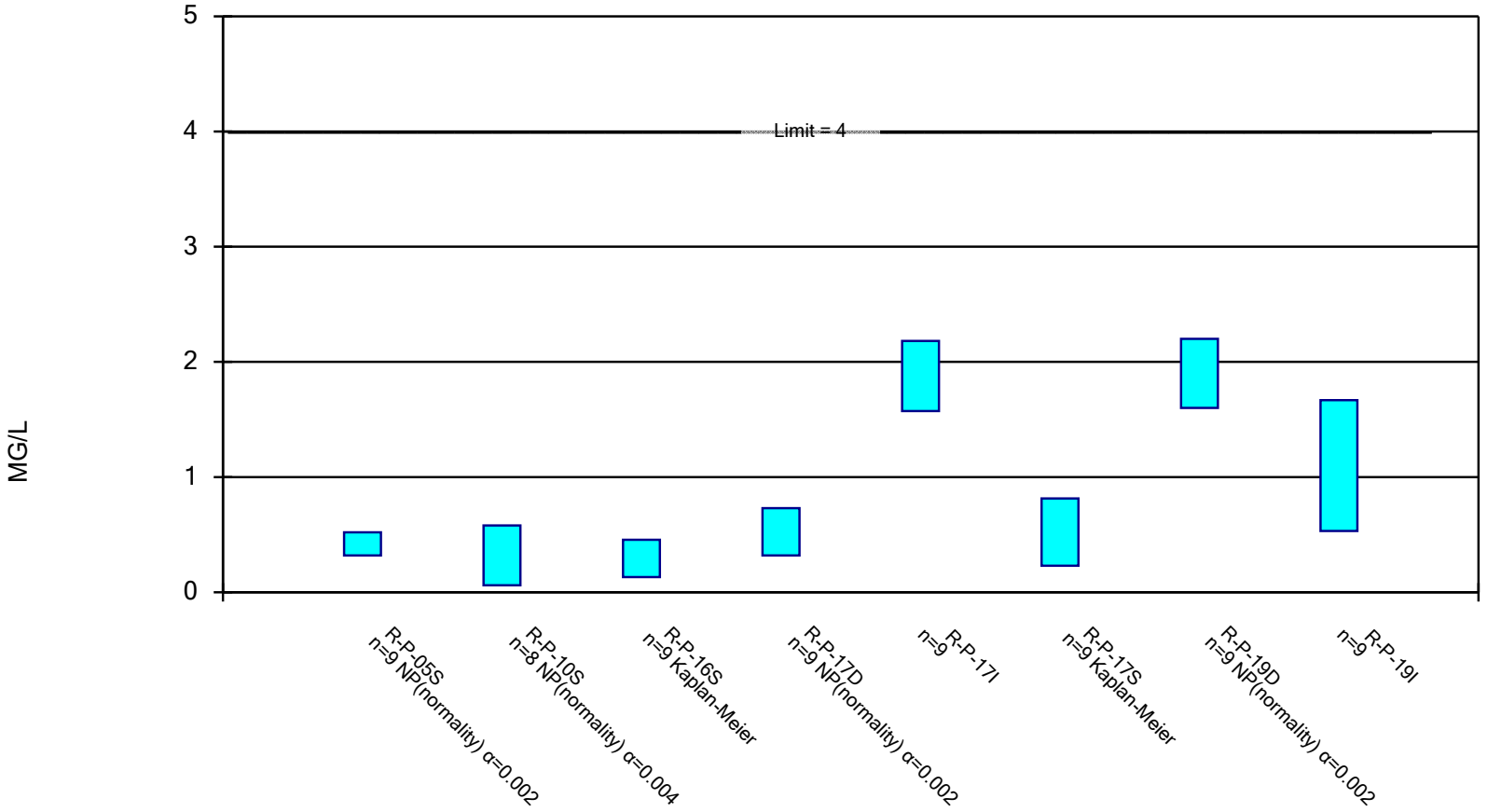
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Rush Island E.C. Client: Ameren Data: RIEC Data

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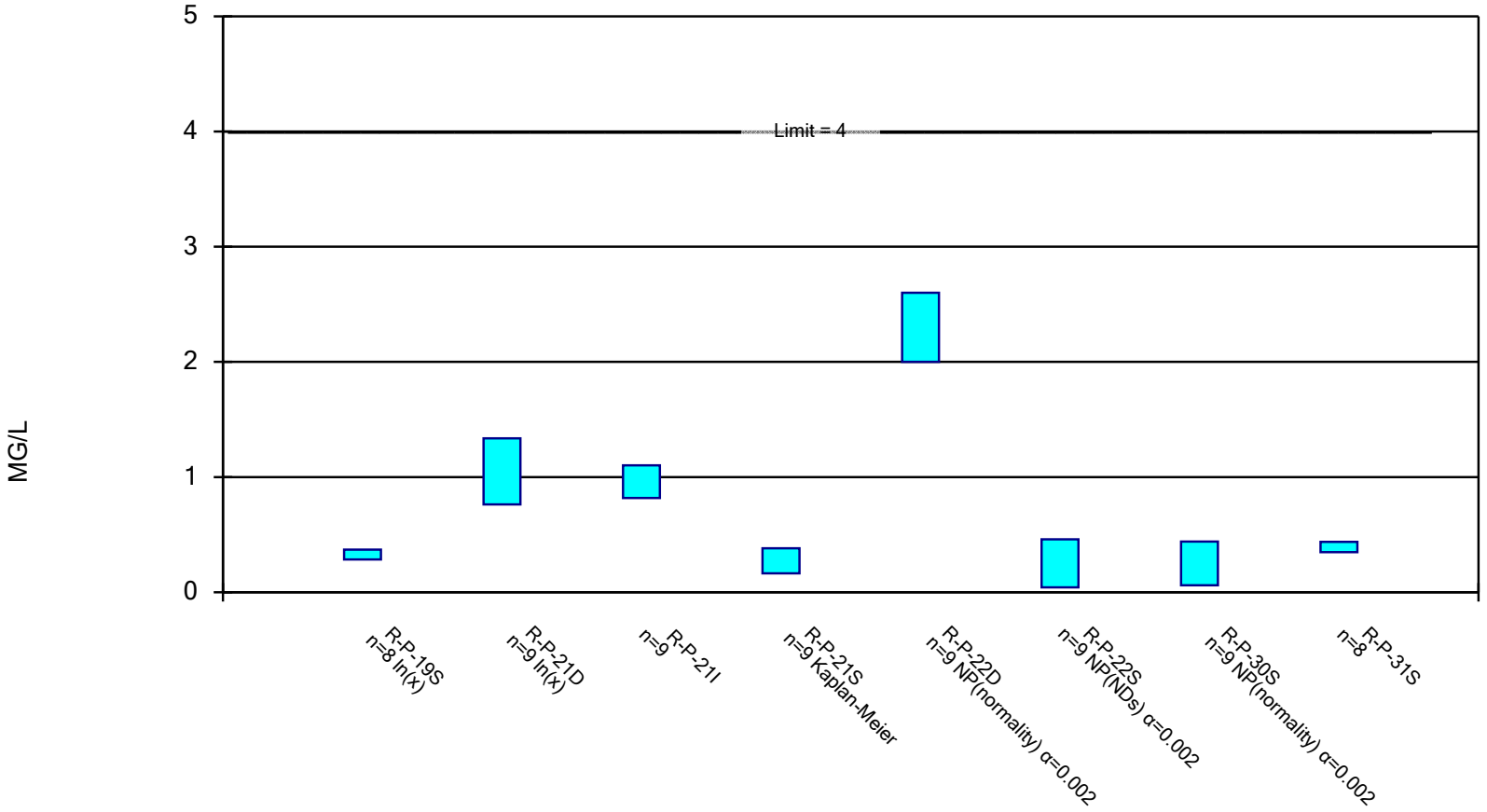
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Rush Island E.C. Client: Ameren Data: RIEC Data

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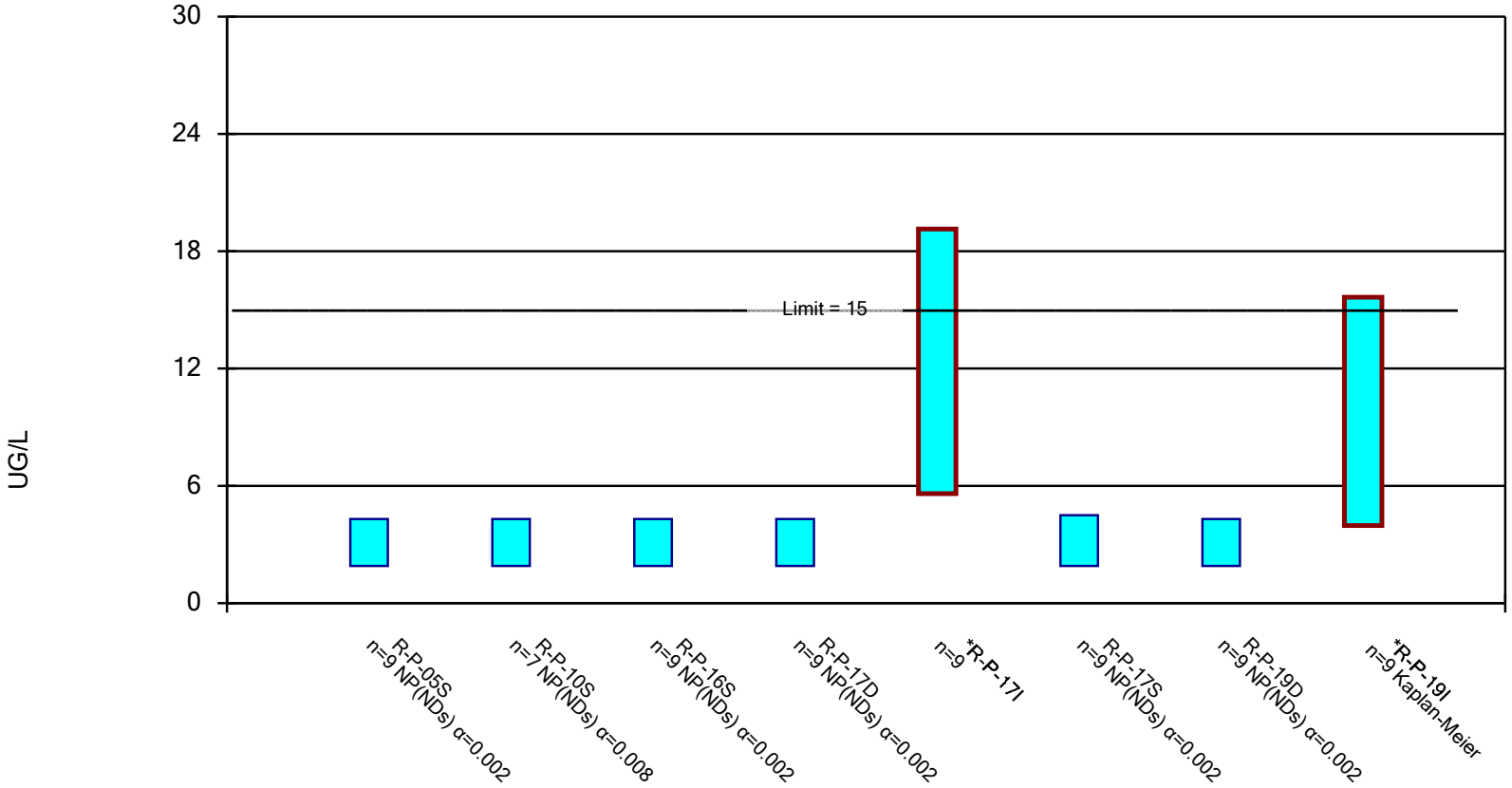


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Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

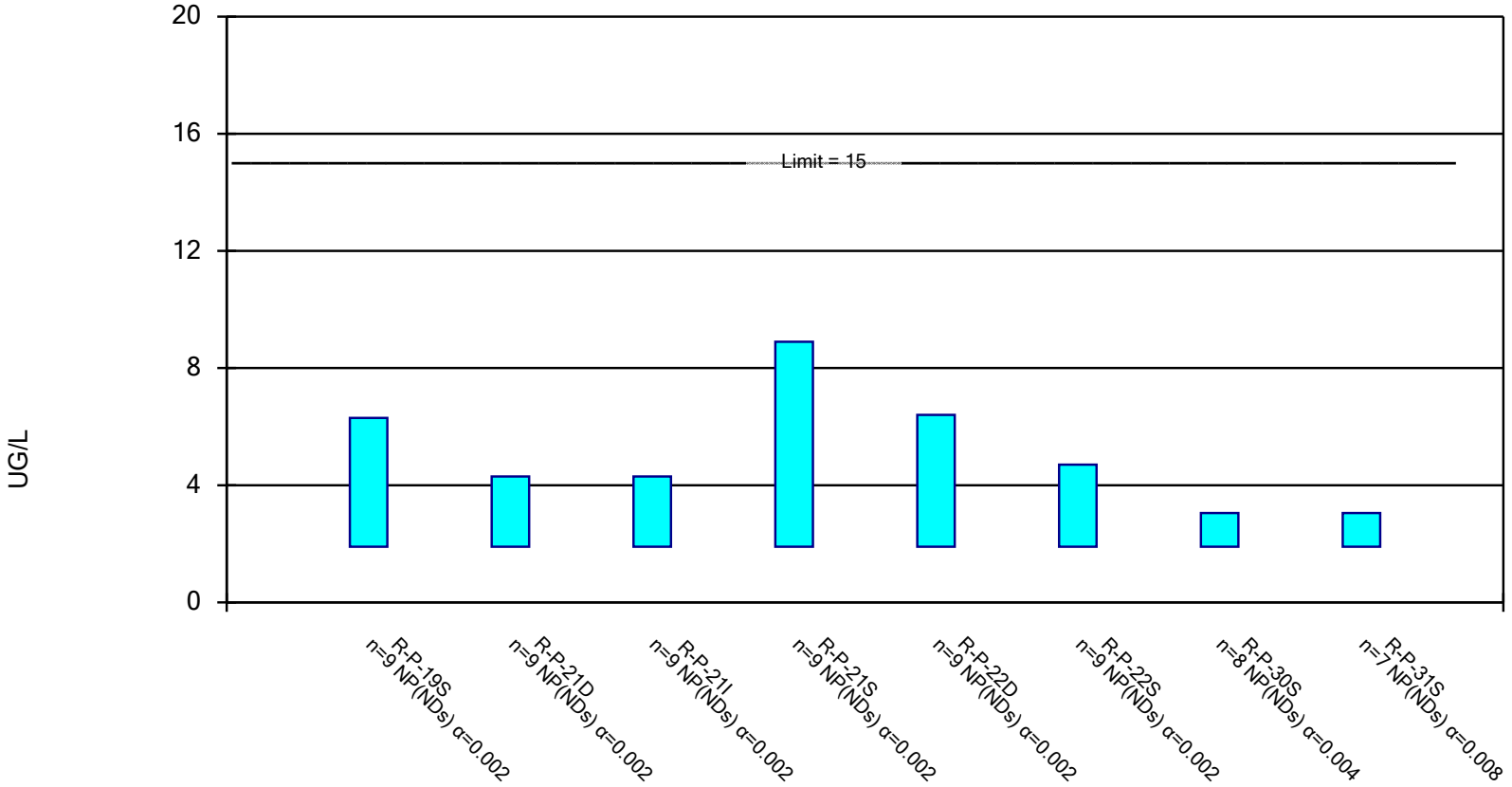


Constituent: LEAD, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



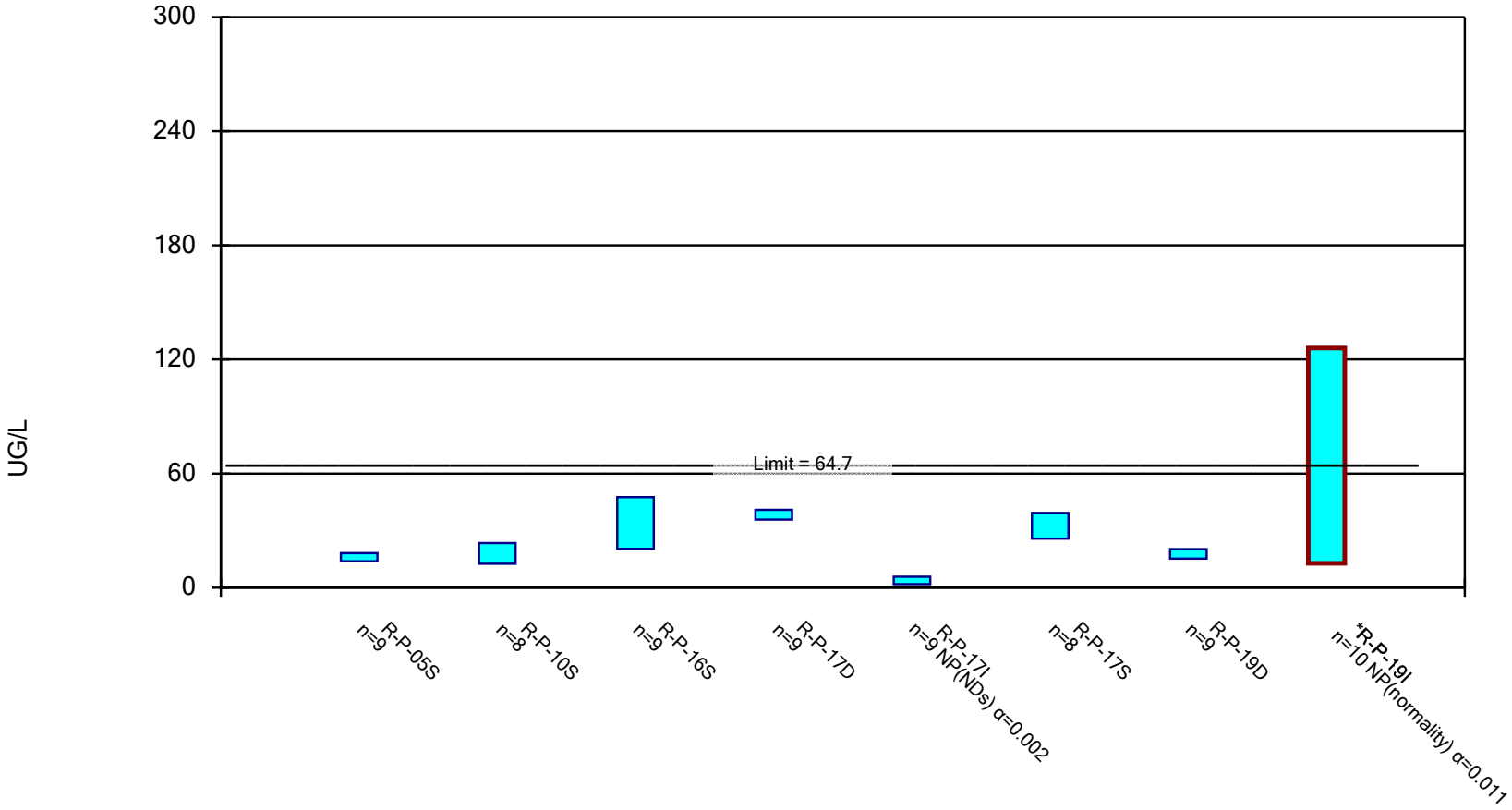
Constituent: LEAD, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



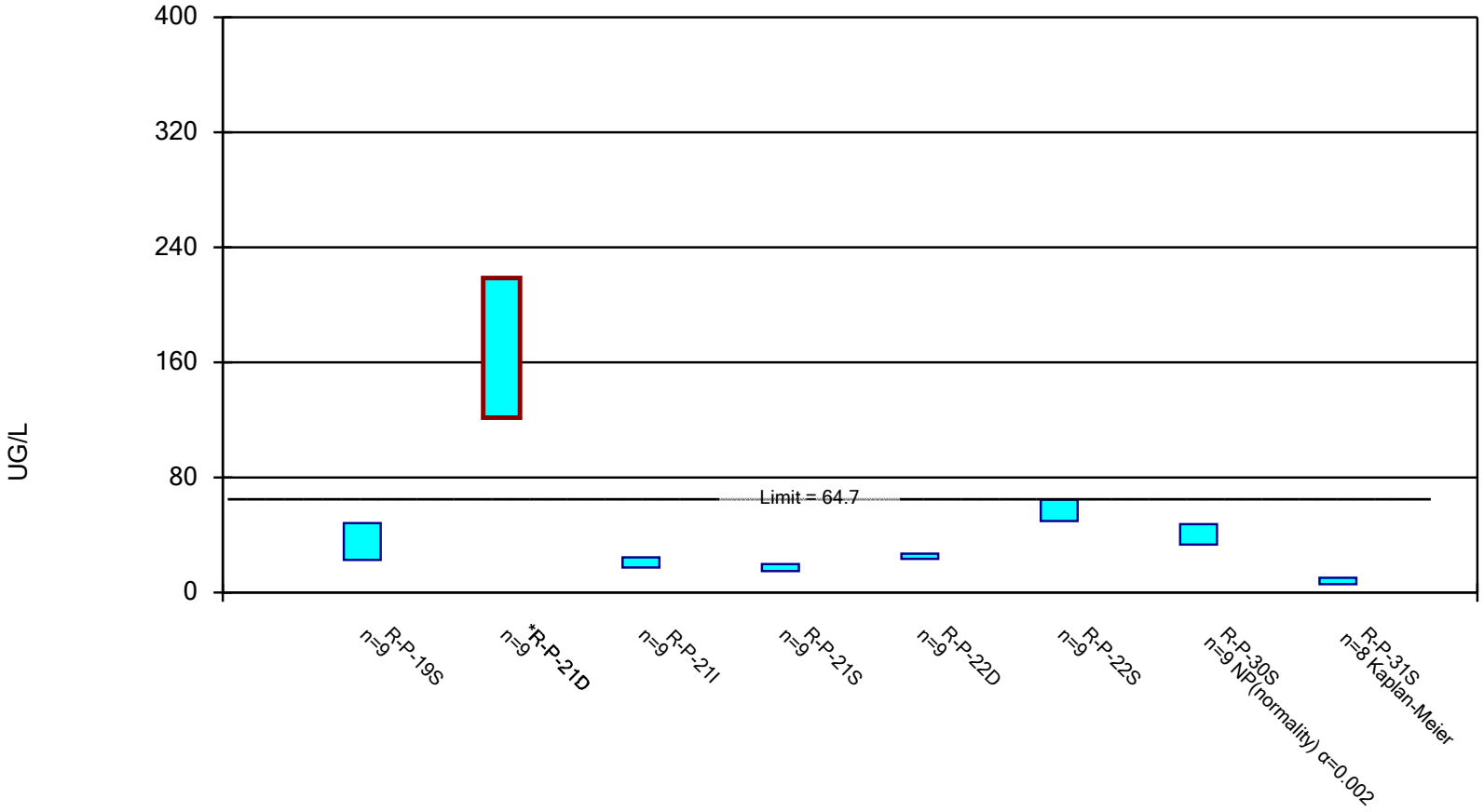
Constituent: LITHIUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



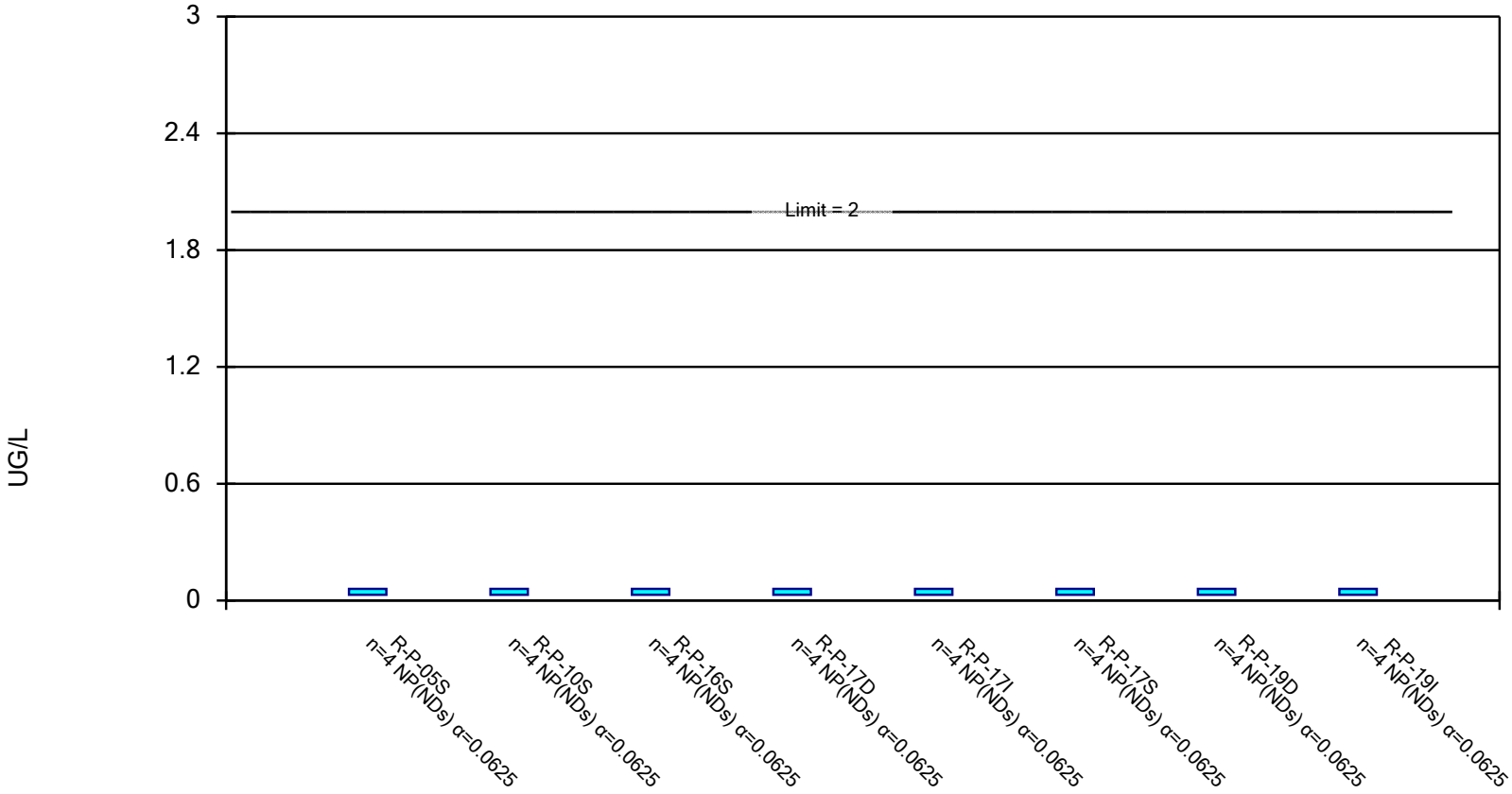
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



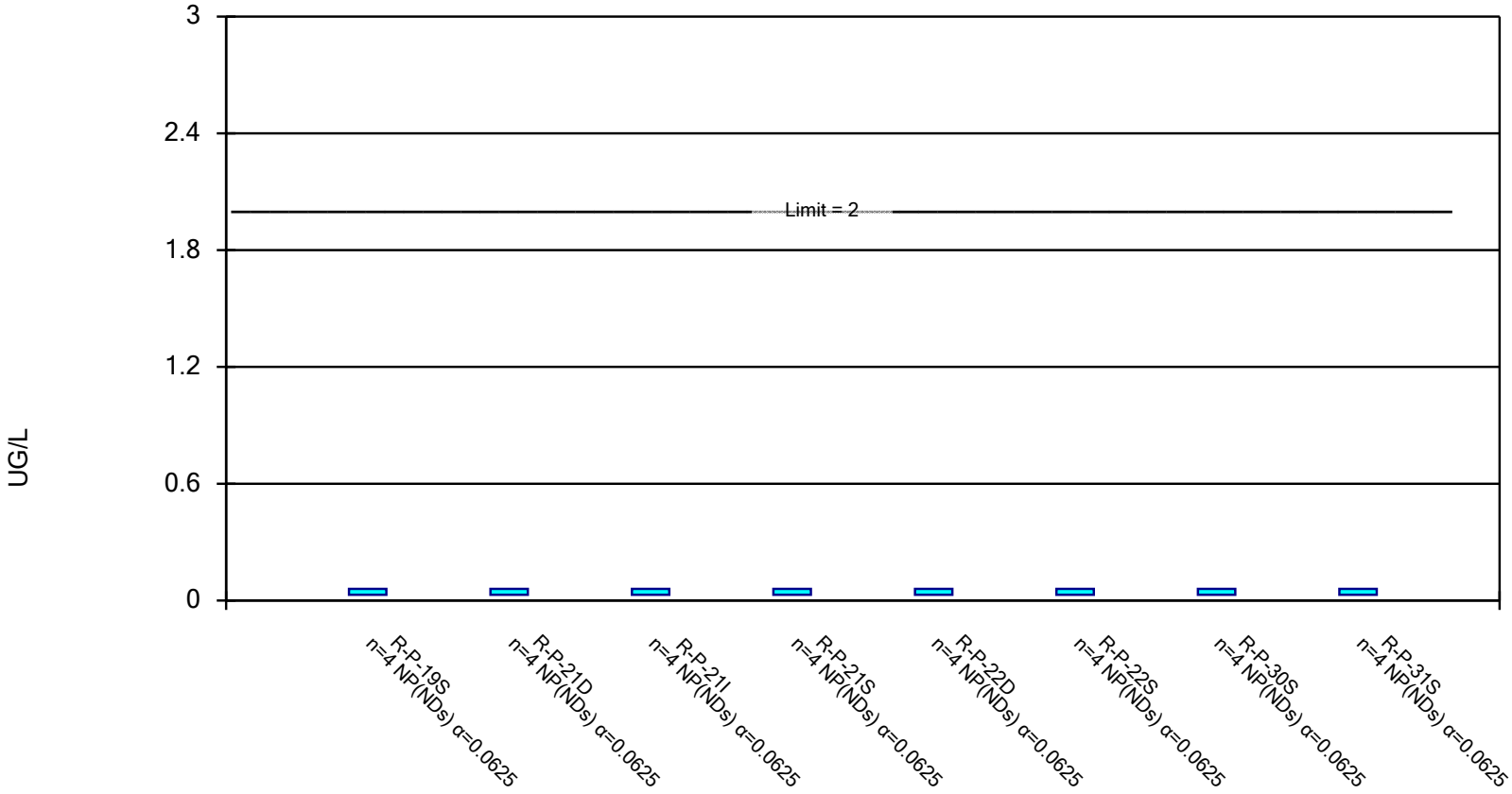
Constituent: MERCURY, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



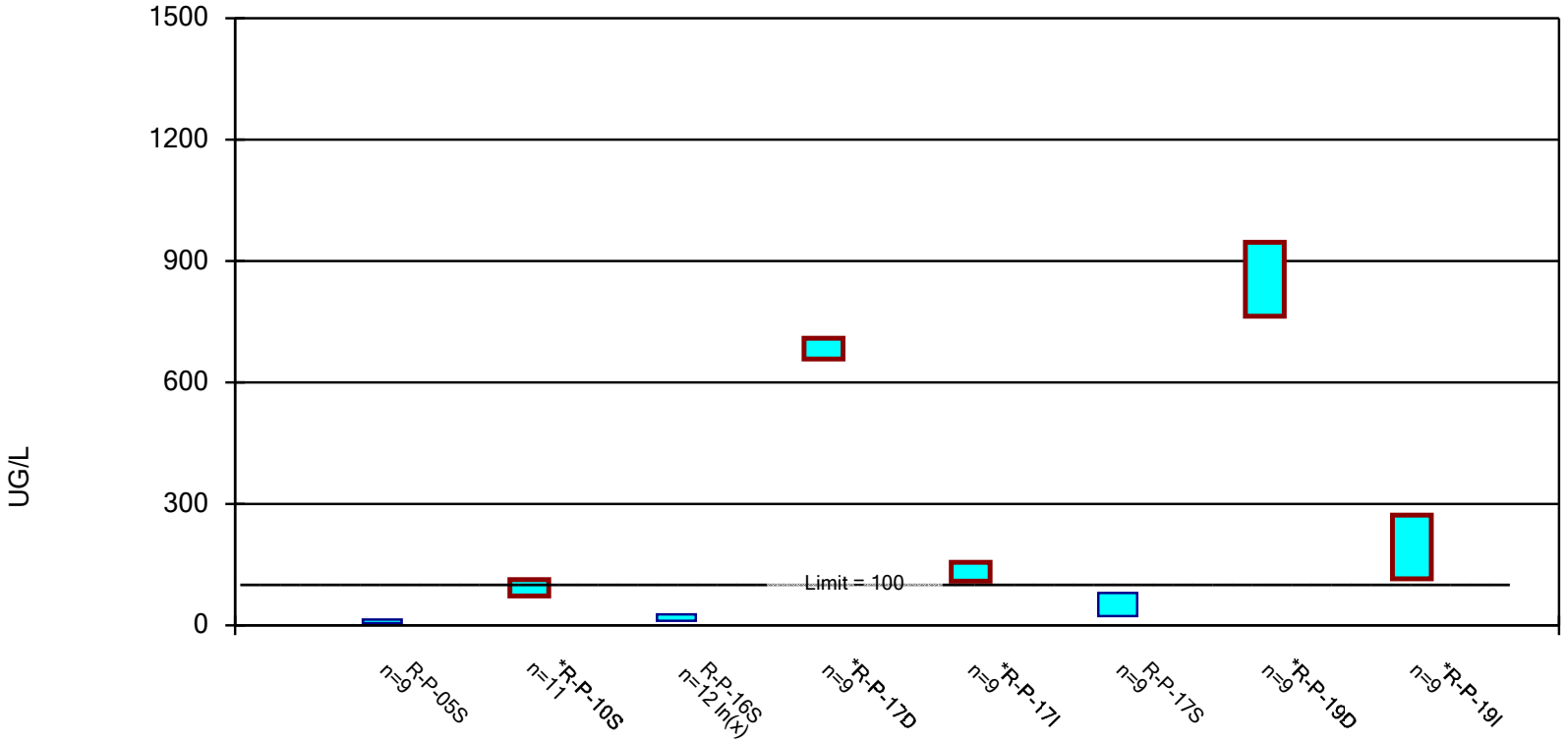
Constituent: MERCURY, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



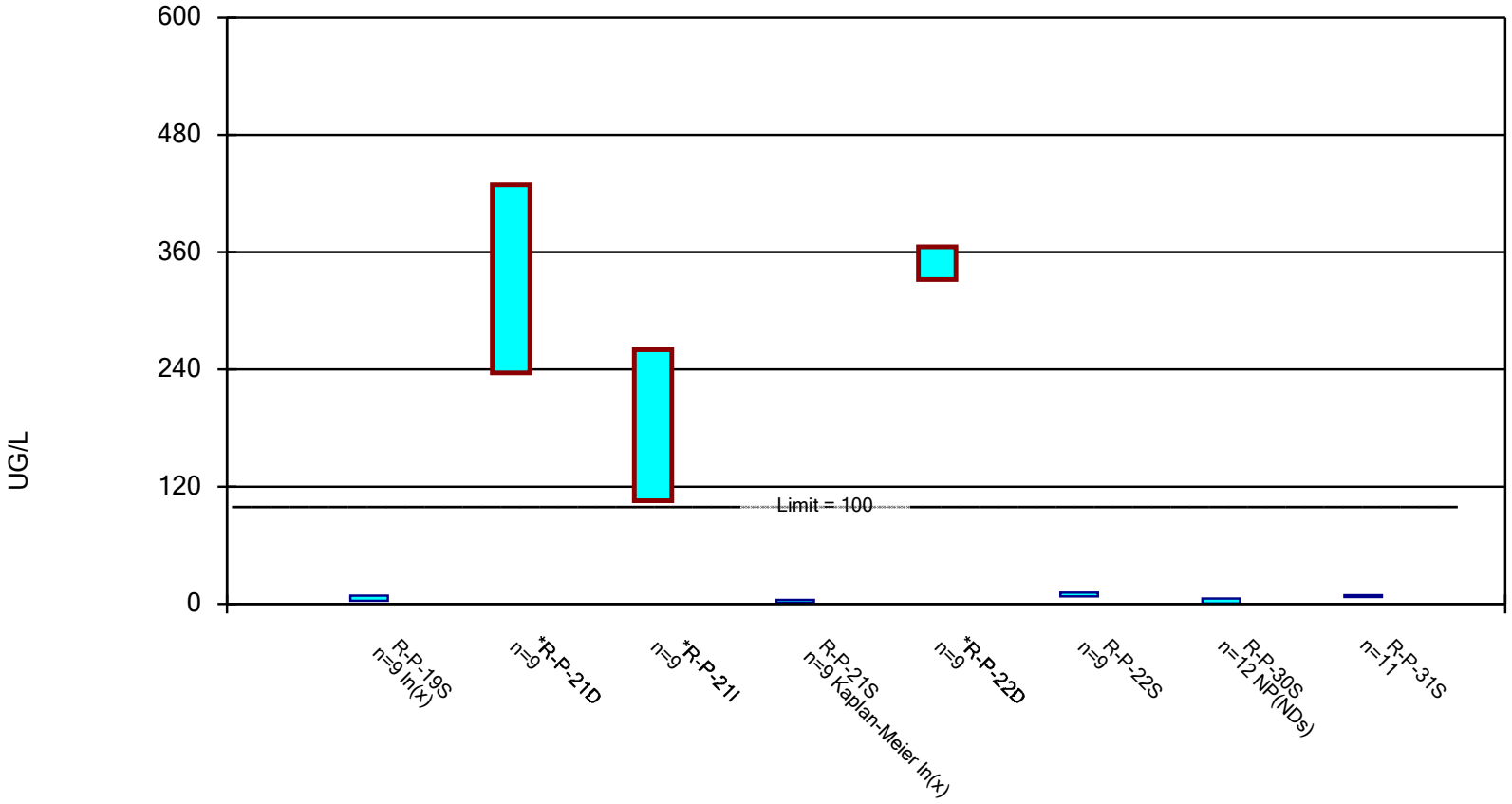
Constituent: MOLYBDENUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



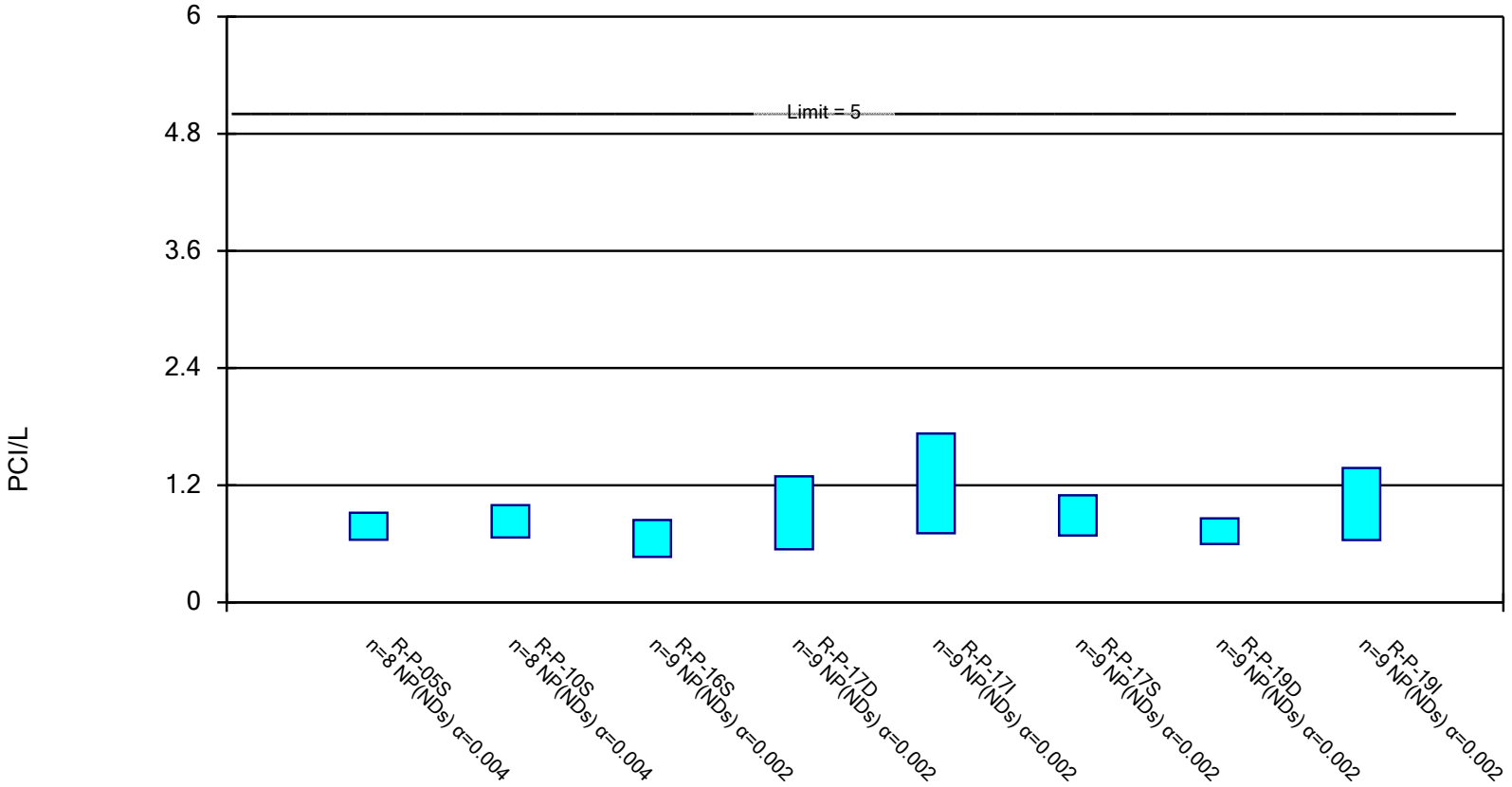
Constituent: MOLYBDENUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.

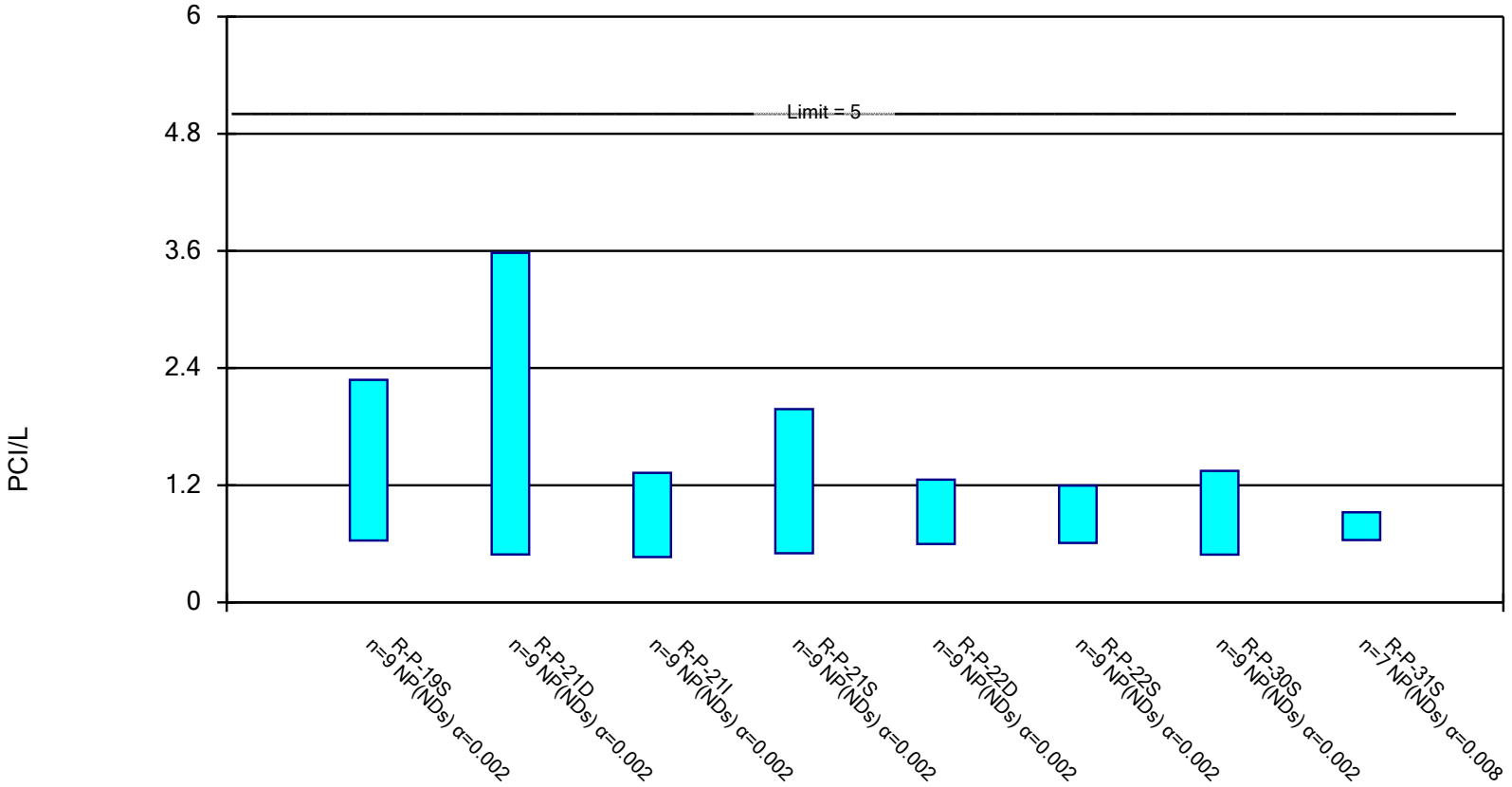


Constituent: RADIUM [226 + 228] Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



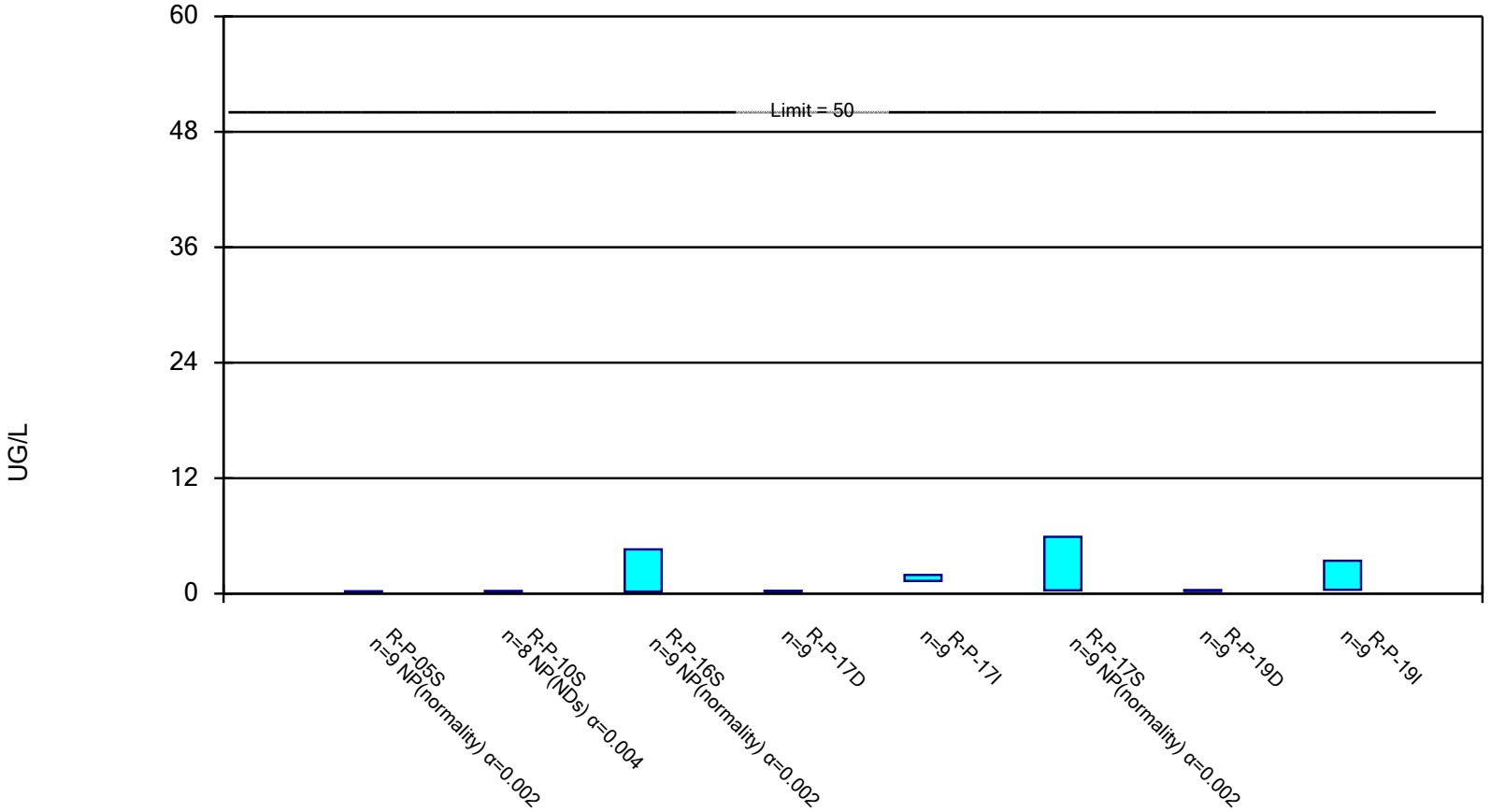
Constituent: RADIUM [226 + 228] Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



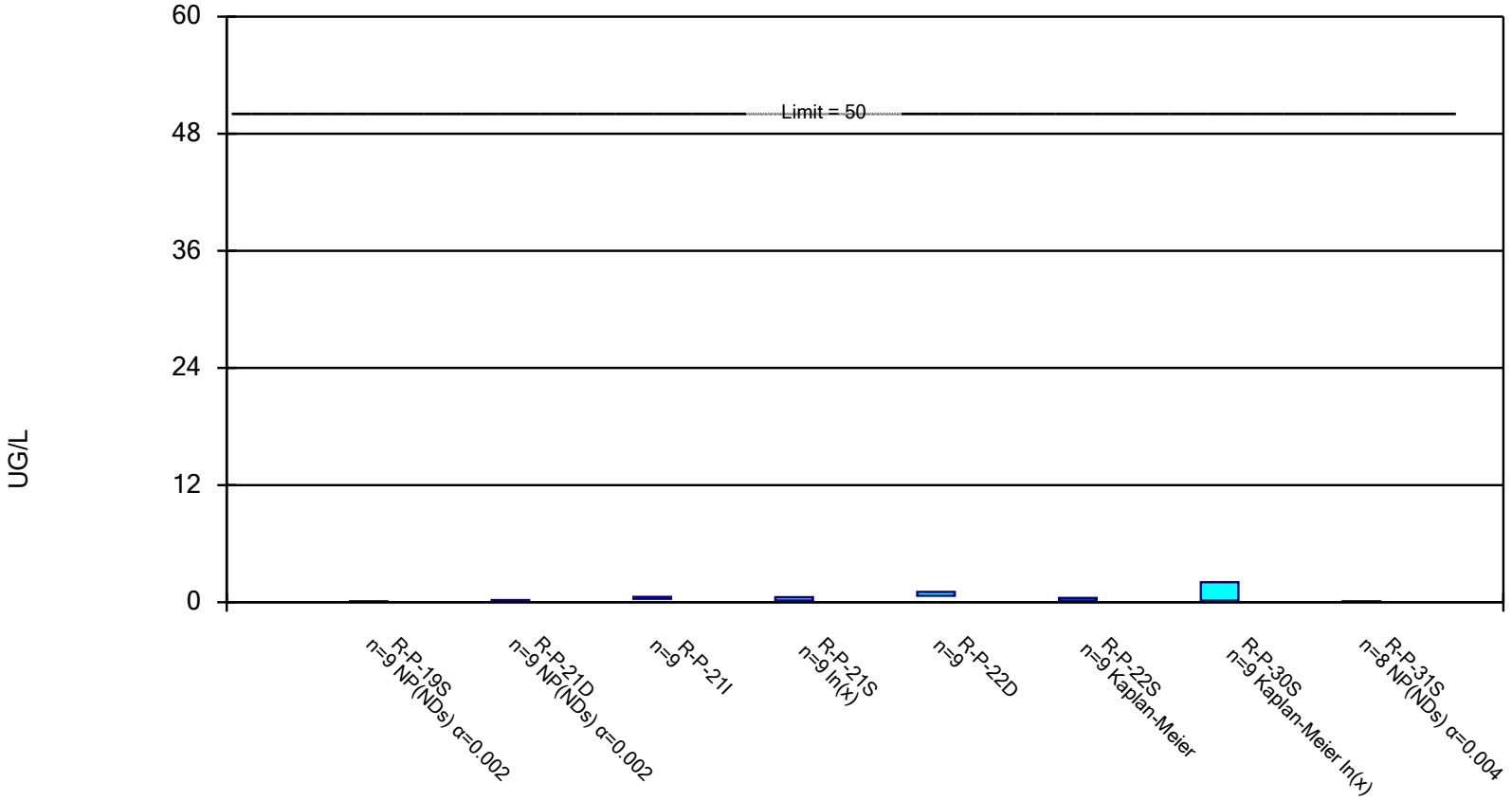
Constituent: SELENIUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



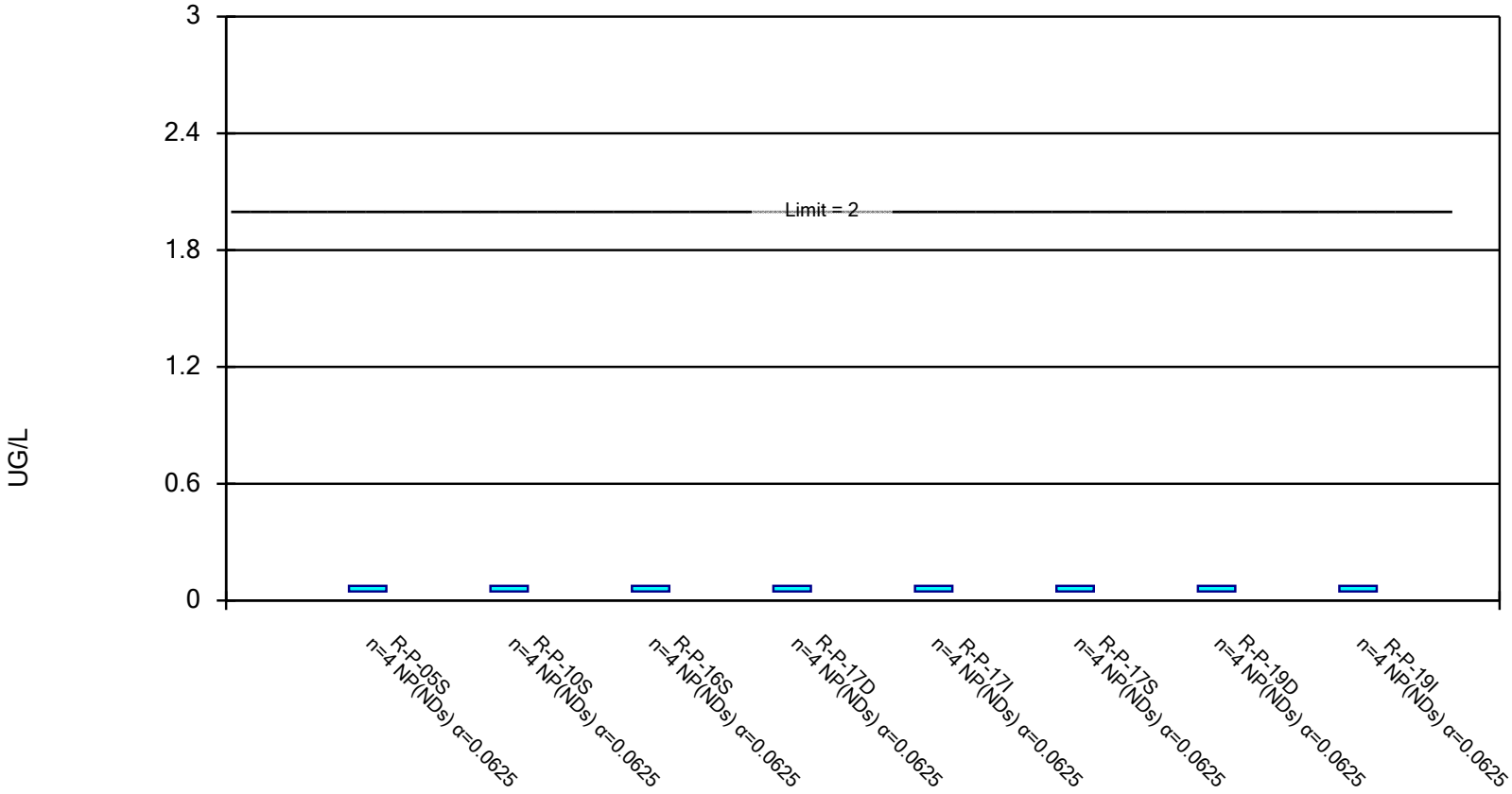
Constituent: SELENIUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



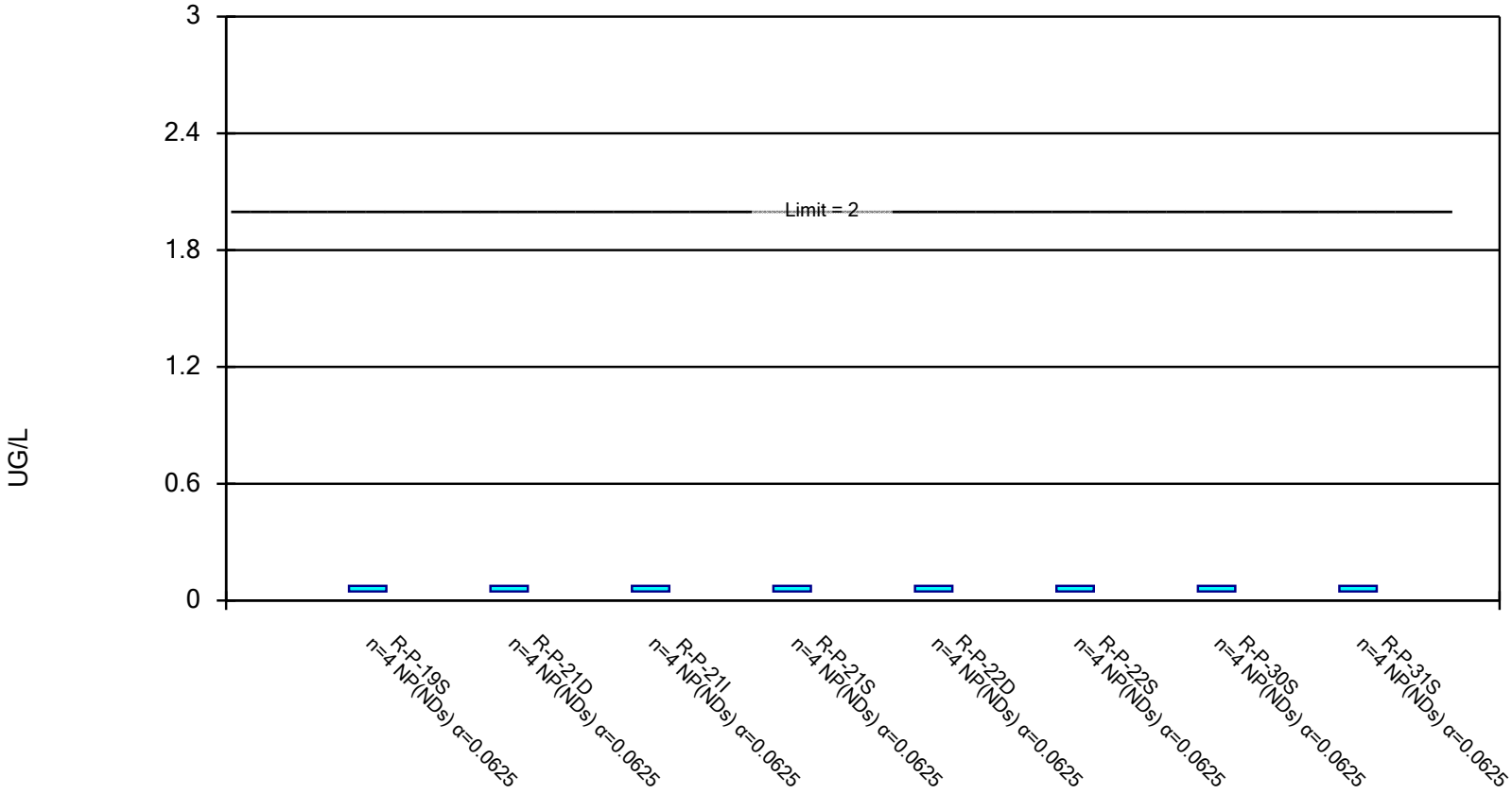
Constituent: THALLIUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



Constituent: THALLIUM, TOTAL Analysis Run 3/6/2024 5:08 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/6/2024, 5:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	R-P-05S	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-10S	0.14	0.0485	6	No	8	62.5	No	0.004	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-16S	0.14	0.0485	6	No	9	77.78	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-17D	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-17I	0.5244	0.2578	6	No	9	0	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-P-17S	0.46	0.0485	6	No	9	44.44	No	0.002	NP (normality)
ANTIMONY, TOTAL (UG/L)	R-P-19D	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-19I	5.4	0.16	6	No	9	0	No	0.002	NP (normality)
ANTIMONY, TOTAL (UG/L)	R-P-19S	0.15	0.0485	6	No	9	88.89	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-21D	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-21I	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-21S	0.19	0.0485	6	No	9	88.89	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-22D	0.1846	0.1039	6	No	9	33.33	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-P-22S	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-30S	0.06	0.0485	6	No	8	100	No	0.004	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-31S	0.06	0.0485	6	No	8	100	No	0.004	NP (NDs)
ARSENIC, TOTAL (UG/L)	**R-P-05S**	**192**	**149.7**	**30**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-P-10S	9.963	4.182	30	No	11	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-16S	2.023	1.16	30	No	12	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-17D	1.3	1.1	30	No	9	0	No	0.002	NP (normality)
ARSENIC, TOTAL (UG/L)	**R-P-17I**	**63.76**	**39.93**	**30**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	**R-P-17S**	**36.61**	**24.57**	**30**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-P-19D	0.7653	0.577	30	No	9	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	**R-P-19I**	**295**	**28.5**	**30**	**Yes**	**9**	**0**	**No**	**0.002**	**NP (normality)**
ARSENIC, TOTAL (UG/L)	R-P-19S	23	9.625	30	No	9	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-21D	0.5985	0.5104	30	No	9	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-21I	6	5	30	No	9	0	No	0.002	NP (normality)
ARSENIC, TOTAL (UG/L)	**R-P-21S**	**119.8**	**35.2**	**30**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-P-22D	10.58	8.617	30	No	9	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-22S	4.874	1.329	30	No	9	0	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-30S	1.918	1.034	30	No	12	0	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-31S	24.81	15.75	30	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-05S	203.8	163.7	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-10S	195.9	118.8	2000	No	8	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-16S	123.5	57.62	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-17D	105.2	98.47	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-17I	30.1	13.6	2000	No	9	0	No	0.002	NP (normality)
BARIUM, TOTAL (UG/L)	R-P-17S	155.8	81.21	2000	No	8	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-19D	110.5	69.86	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-19I	69.4	11	2000	No	9	0	No	0.002	NP (normality)
BARIUM, TOTAL (UG/L)	R-P-19S	503.8	196.4	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-21D	297	78.54	2000	No	9	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-21I	58.81	27.19	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-21S	508.2	250.7	2000	No	9	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-22D	73.99	65.61	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-22S	233	144	2000	No	9	0	No	0.002	NP (normality)
BARIUM, TOTAL (UG/L)	R-P-30S	109.1	89.14	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-31S	167.1	130	2000	No	7	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	R-P-05S	0.25	0.155	4	No	4	75	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-10S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/6/2024, 5:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
BERYLLIUM, TOTAL (UG/L)	R-P-16S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-17D	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-17I	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-17S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-19D	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-19I	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-19S	0.245	0.155	4	No	4	75	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-21D	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-21I	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-21S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-22D	0.245	0.12	4	No	4	75	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-22S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-30S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-31S	0.245	0.06	4	No	4	100	No	0.0625	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-P-05S	0.031	0.025	5	No	7	100	No	0.008	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-P-10S	0.2491	0.05517	5	No	7	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-16S	0.1404	0.04404	5	No	7	28.57	ln(x)	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-17D	0.2734	0.07576	5	No	7	28.57	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-17I	0.6599	0.2373	5	No	7	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-17S	0.1397	0.04306	5	No	7	42.86	ln(x)	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-19D	0.3603	0.076	5	No	7	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-19I	0.5784	0.1513	5	No	7	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-19S	0.031	0.025	5	No	6	100	No	0.0155	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-P-21D	0.1273	0.04613	5	No	7	42.86	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-21I	0.11	0.028	5	No	7	42.86	No	0.008	NP (normality)
CADMIUM, TOTAL (UG/L)	R-P-21S	0.1287	0.03706	5	No	7	42.86	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-22D	0.1716	0.08095	5	No	7	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-22S	0.1442	0.06553	5	No	7	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-30S	0.07927	0.04721	5	No	7	42.86	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-31S	0.031	0.025	5	No	7	100	No	0.008	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-05S	0.6261	0.3295	100	No	9	11.11	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-10S	0.676	0.2107	100	No	8	50	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-16S	0.5	0.11	100	No	9	88.89	No	0.002	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-17D	0.513	0.1959	100	No	9	44.44	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-17I	0.9994	0.7917	100	No	9	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-17S	0.5645	0.2455	100	No	9	22.22	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-19D	0.7811	0.3077	100	No	9	11.11	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-19I	0.7464	0.2803	100	No	9	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-19S	0.4442	0.258	100	No	9	22.22	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-21D	0.6	0.11	100	No	9	55.56	No	0.002	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-21I	0.5352	0.3293	100	No	9	11.11	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-21S	0.3727	0.2073	100	No	9	33.33	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-22D	1.928	1.092	100	No	9	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-22S	0.5	0.11	100	No	9	66.67	No	0.002	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-30S	0.5	0.11	100	No	9	55.56	No	0.002	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-31S	0.4213	0.1902	100	No	8	50	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-05S	0.75	0.39	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-10S	3.711	1.122	6	No	6	33.33	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-16S	0.75	0.475	6	No	5	100	No	0.031	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-17D	0.75	0.39	6	No	6	100	No	0.0155	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/6/2024, 5:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
COBALT, TOTAL (UG/L)	R-P-17I	0.75	0.39	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-17S	2.893	1.067	6	No	5	0	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-19D	0.79	0.475	6	No	6	83.33	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-19I	0.75	0.39	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-19S	3.631	0.556	6	No	6	50	ln(x)	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-21D	0.75	0.475	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-21I	0.75	0.39	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-21S	2.799	1.001	6	No	6	33.33	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-22D	0.75	0.475	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-22S	3.213	1.354	6	No	6	16.67	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-30S	0.75	0.475	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-31S	0.75	0.475	6	No	6	100	No	0.0155	NP (NDs)
FLUORIDE, TOTAL (MG/L)	R-P-05S	0.52	0.32	4	No	9	0	No	0.002	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-10S	0.58	0.06	4	No	8	25	No	0.004	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-16S	0.4551	0.1316	4	No	9	33.33	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-17D	0.73	0.32	4	No	9	0	No	0.002	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-17I	2.182	1.573	4	No	9	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-17S	0.8141	0.2304	4	No	9	22.22	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-19D	2.2	1.6	4	No	9	0	No	0.002	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-19I	1.668	0.532	4	No	9	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-19S	0.3695	0.2842	4	No	8	0	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-21D	1.336	0.7627	4	No	9	0	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-21I	1.102	0.8182	4	No	9	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-21S	0.3812	0.1642	4	No	9	22.22	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-22D	2.6	2	4	No	9	0	No	0.002	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-22S	0.46	0.043	4	No	9	55.56	No	0.002	NP (NDs)
FLUORIDE, TOTAL (MG/L)	R-P-30S	0.44	0.06	4	No	9	22.22	No	0.002	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-31S	0.4374	0.3476	4	No	8	0	No	0.01	Param.
LEAD, TOTAL (UG/L)	R-P-05S	4.3	1.9	15	No	9	88.89	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-10S	4.3	1.9	15	No	7	100	No	0.008	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-16S	4.3	1.9	15	No	9	100	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-17D	4.3	1.9	15	No	9	88.89	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	**R-P-17I**	**19.13**	**5.599**	**15**	**Yes**	**9**	**11.11**	**No**	**0.01**	**Param.**
LEAD, TOTAL (UG/L)	R-P-17S	4.5	1.9	15	No	9	88.89	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-19D	4.3	1.9	15	No	9	100	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	**R-P-19I**	**15.64**	**3.972**	**15**	**Yes**	**9**	**33.33**	**No**	**0.01**	**Param.**
LEAD, TOTAL (UG/L)	R-P-19S	6.3	1.9	15	No	9	88.89	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-21D	4.3	1.9	15	No	9	100	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-21I	4.3	1.9	15	No	9	100	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-21S	8.9	1.9	15	No	9	77.78	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-22D	6.4	1.9	15	No	9	77.78	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-22S	4.7	1.9	15	No	9	88.89	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-30S	3.05	1.9	15	No	8	100	No	0.004	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-31S	3.05	1.9	15	No	7	100	No	0.008	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-P-05S	18.13	13.91	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-10S	23.45	12.57	64.7	No	8	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-16S	47.62	20.43	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-17D	40.93	35.8	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-17I	5.7	1.85	64.7	No	9	66.67	No	0.002	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-P-17S	39.28	25.82	64.7	No	8	0	No	0.01	Param.

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
LITHIUM, TOTAL (UG/L)	R-P-19D	20.26	15.3	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	**R-P-19I**	**126**	**12.8**	**64.7**	**Yes**	**10**	**0**	**No**	**0.011**	**NP (normality)**
LITHIUM, TOTAL (UG/L)	R-P-19S	48.23	22.62	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	**R-P-21D**	**218.7**	**121.6**	**64.7**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
LITHIUM, TOTAL (UG/L)	R-P-21I	24.41	17.39	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-21S	19.73	14.87	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-22D	27.04	23.43	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-22S	64.61	49.75	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-30S	47.5	33.3	64.7	No	9	0	No	0.002	NP (normality)
LITHIUM, TOTAL (UG/L)	R-P-31S	10.28	5.746	64.7	No	8	25	No	0.01	Param.
MERCURY, TOTAL (UG/L)	R-P-05S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-10S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-16S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-17D	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-17I	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-17S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-19D	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-19I	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-19S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-21D	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-21I	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-21S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-22D	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-22S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-30S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-31S	0.06	0.029	2	No	4	100	No	0.0625	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-P-05S	14.33	5.266	100	No	9	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-10S**	**113.1**	**72.45**	**100**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-16S	27.22	11.29	100	No	12	0	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-17D**	**709.1**	**658**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-P-17I**	**155.8**	**109.1**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-17S	79.97	22.65	100	No	9	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-19D**	**946.2**	**763.8**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-P-19I**	**272.2**	**115**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-19S	8.568	3.22	100	No	9	0	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-21D**	**428.9**	**236.5**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-P-21I**	**260.1**	**105.7**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-21S	4.126	1.196	100	No	9	33.33	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-22D**	**365.5**	**332**	**100**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-22S	11.65	7.776	100	No	9	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	R-P-30S	5.6	0.5	100	No	12	58.33	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-P-31S	8.908	7.074	100	No	11	9.091	No	0.01	Param.
RADIUM [226 + 228] (PCI/L)	R-P-05S	0.9175	0.642	5	No	8	100	No	0.004	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-10S	0.995	0.664	5	No	8	100	No	0.004	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-16S	0.8435	0.4655	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-17D	1.291	0.544	5	No	9	88.89	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-17I	1.729	0.7075	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-17S	1.096	0.6855	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-19D	0.861	0.598	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-19I	1.377	0.639	5	No	9	100	No	0.002	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/6/2024, 5:09 PM

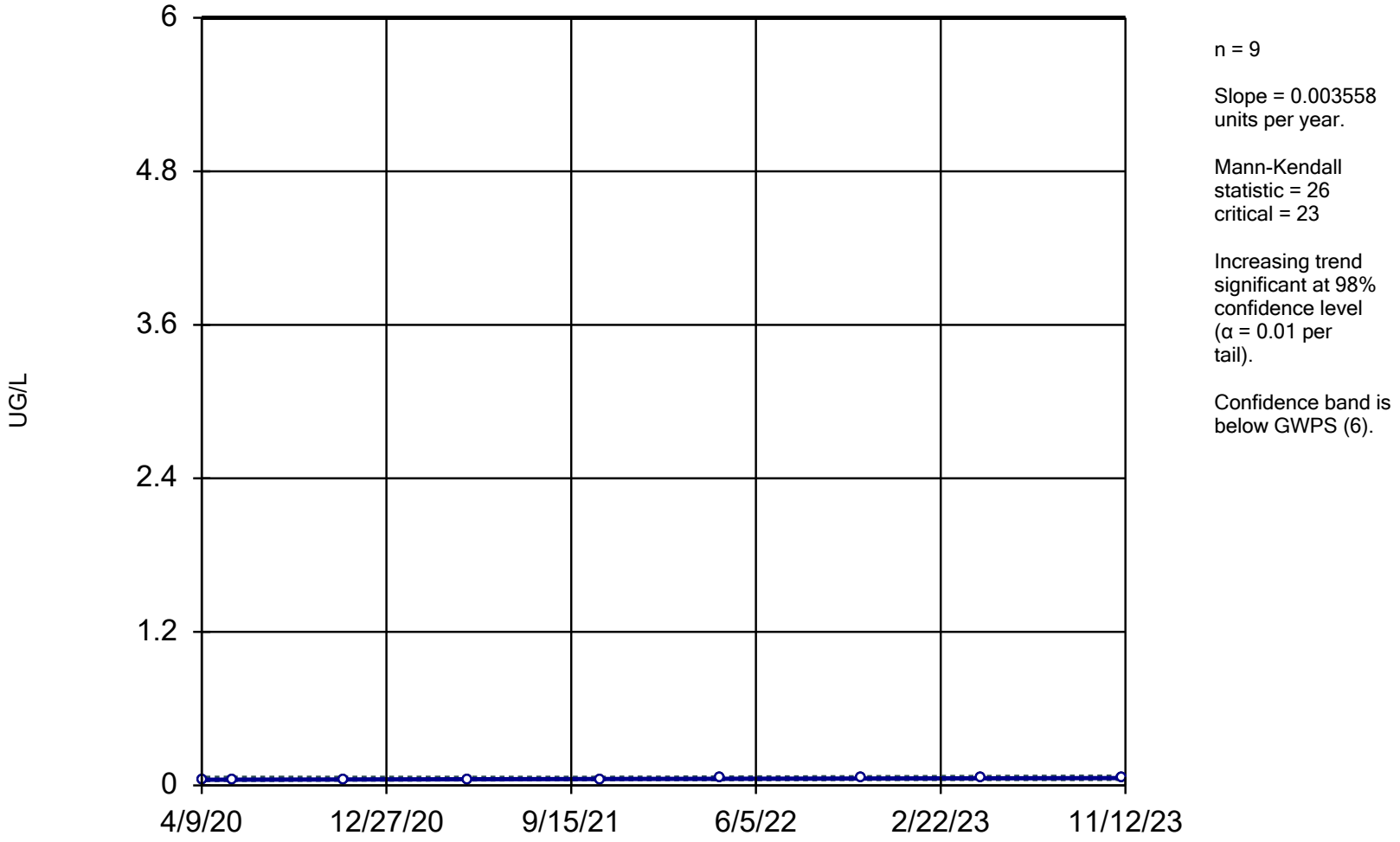
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
RADIUM [226 + 228] (PCI/L)	R-P-19S	2.279	0.633	5	No	9	66.67	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-21D	3.58	0.4905	5	No	9	55.56	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-21I	1.327	0.465	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-21S	1.98	0.5025	5	No	9	88.89	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-22D	1.257	0.5985	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-22S	1.196	0.609	5	No	9	88.89	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-30S	1.347	0.4895	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-31S	0.922	0.6385	5	No	7	100	No	0.008	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-05S	0.25	0.09	50	No	9	22.22	No	0.002	NP (normality)
SELENIUM, TOTAL (UG/L)	R-P-10S	0.28	0.09	50	No	8	62.5	No	0.004	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-16S	4.6	0.22	50	No	9	0	No	0.002	NP (normality)
SELENIUM, TOTAL (UG/L)	R-P-17D	0.2918	0.2237	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-17I	1.946	1.32	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-17S	5.9	0.34	50	No	9	0	No	0.002	NP (normality)
SELENIUM, TOTAL (UG/L)	R-P-19D	0.3687	0.2624	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-19I	3.415	0.3985	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-19S	0.09	0.09	50	No	9	100	No	0.002	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-21D	0.22	0.09	50	No	9	88.89	No	0.002	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-21I	0.543	0.357	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-21S	0.5067	0.1636	50	No	9	11.11	ln(x)	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-22D	1.057	0.6693	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-22S	0.4253	0.1698	50	No	9	33.33	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-30S	2.051	0.1451	50	No	9	33.33	ln(x)	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-31S	0.09	0.09	50	No	8	100	No	0.004	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-05S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-10S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-16S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-17D	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-17I	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-17S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-19D	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-19I	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-19S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-21D	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-21I	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-21S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-22D	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-22S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-30S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-31S	0.075	0.0465	2	No	4	100	No	0.0625	NP (NDs)

Appendix B
Sanitas Trending Confidence Bands Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-05S



n = 9

Slope = 0.003558 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

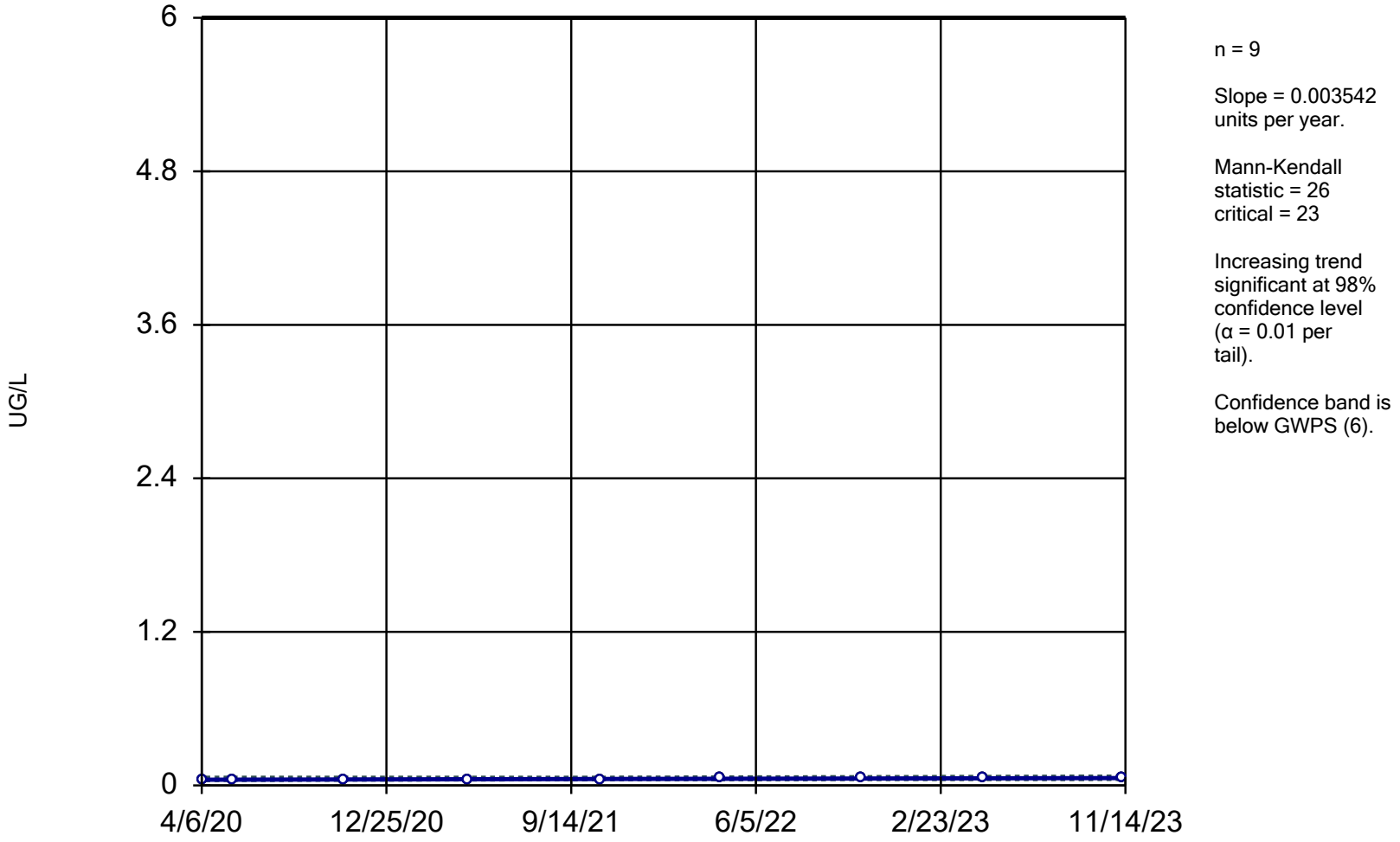
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-17D



n = 9

Slope = 0.003542 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

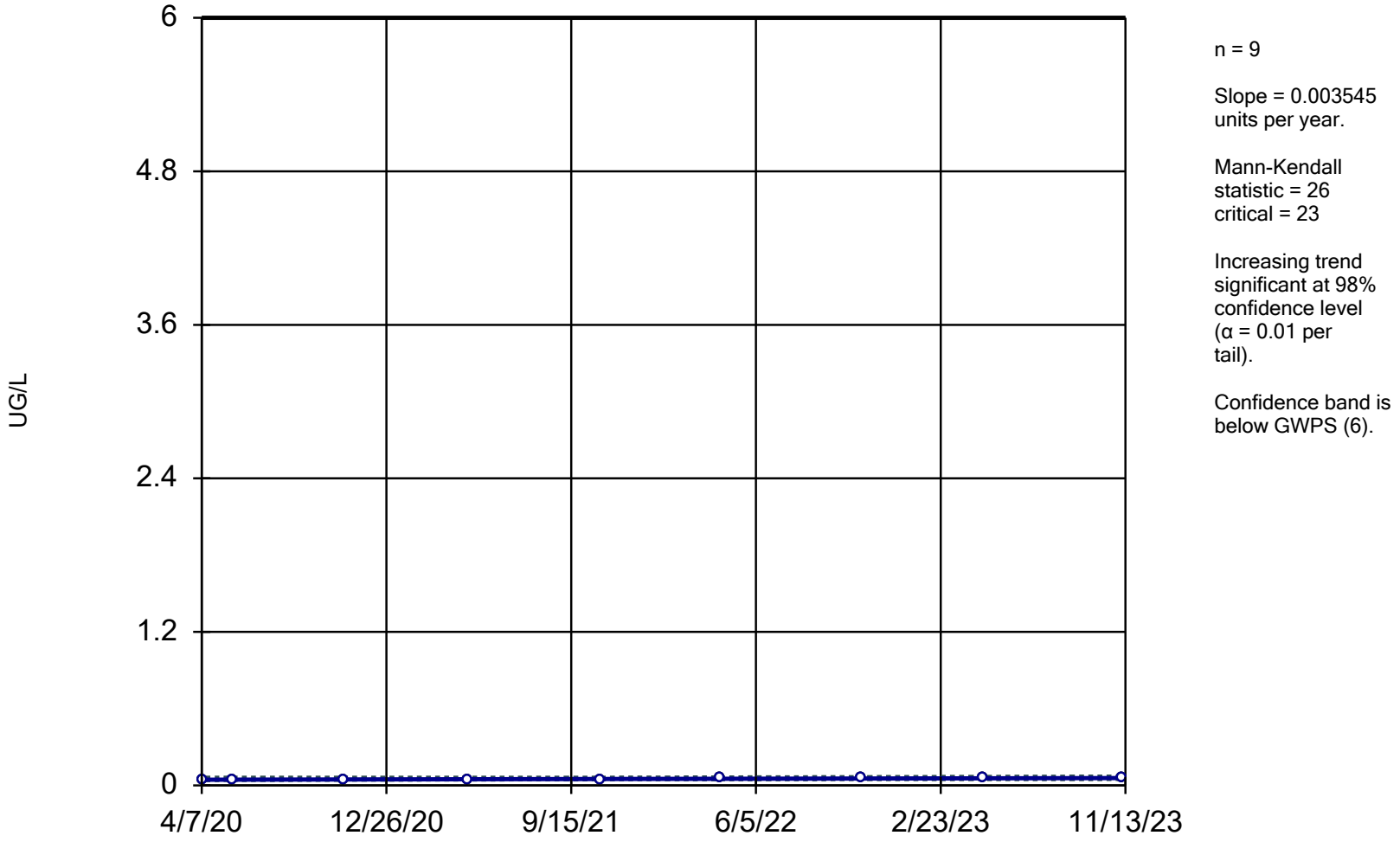
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-19D



n = 9

Slope = 0.003545 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

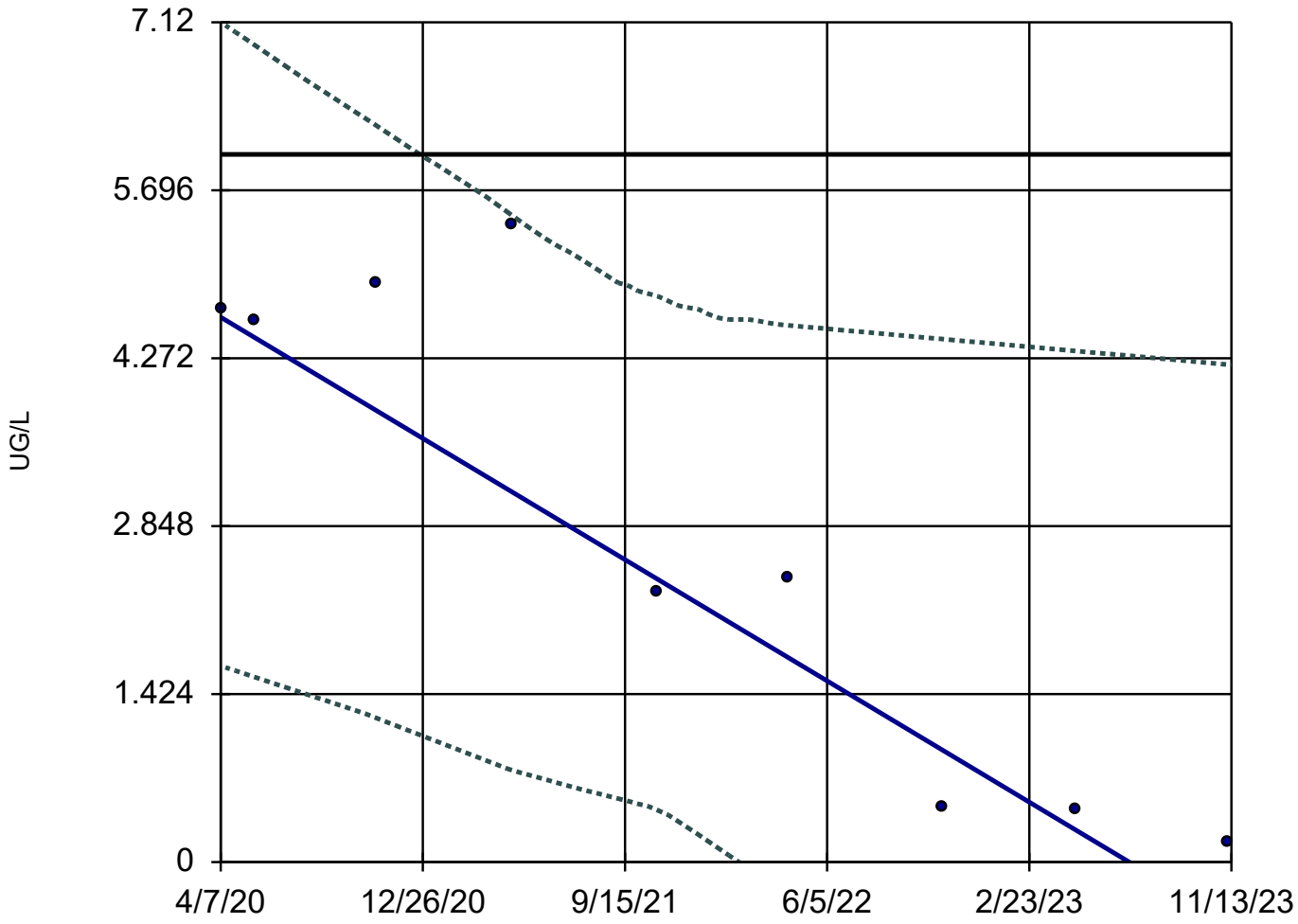
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 9

Slope = -1.426 units per year.

Mann-Kendall statistic = -24
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (6) on 12/31/20.

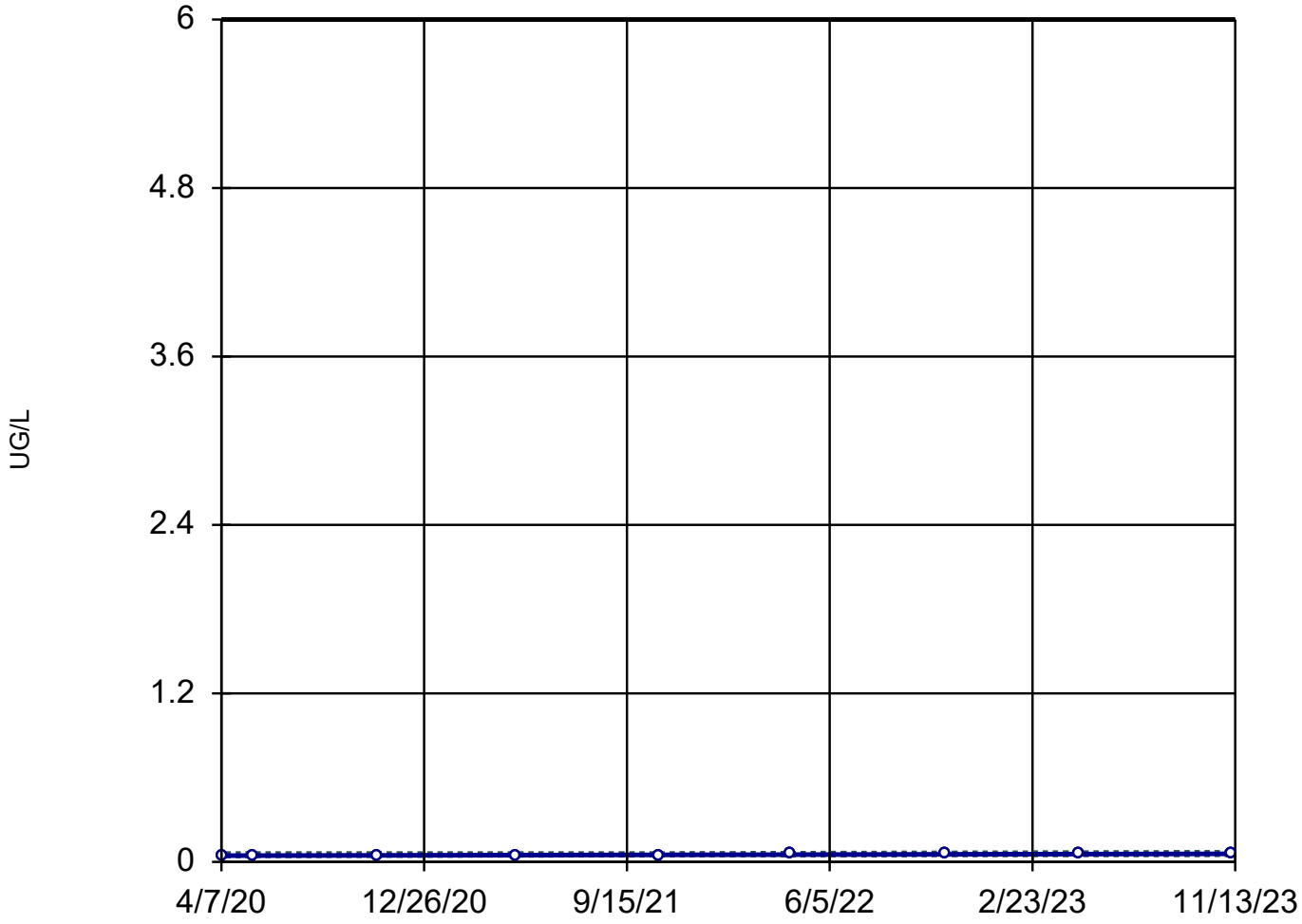
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-21D



n = 9

Slope = 0.003544 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

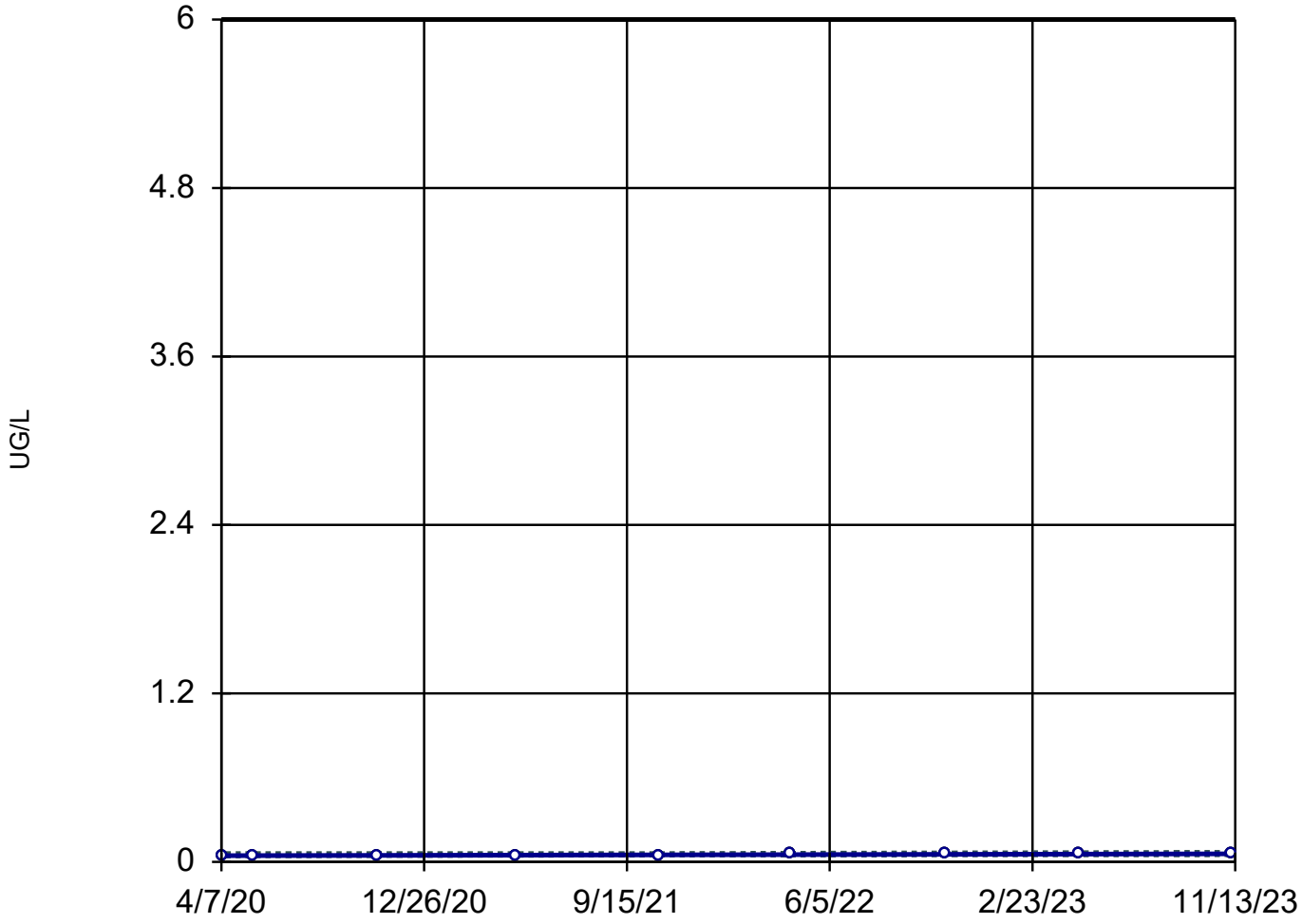
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-21I



n = 9

Slope = 0.003544 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

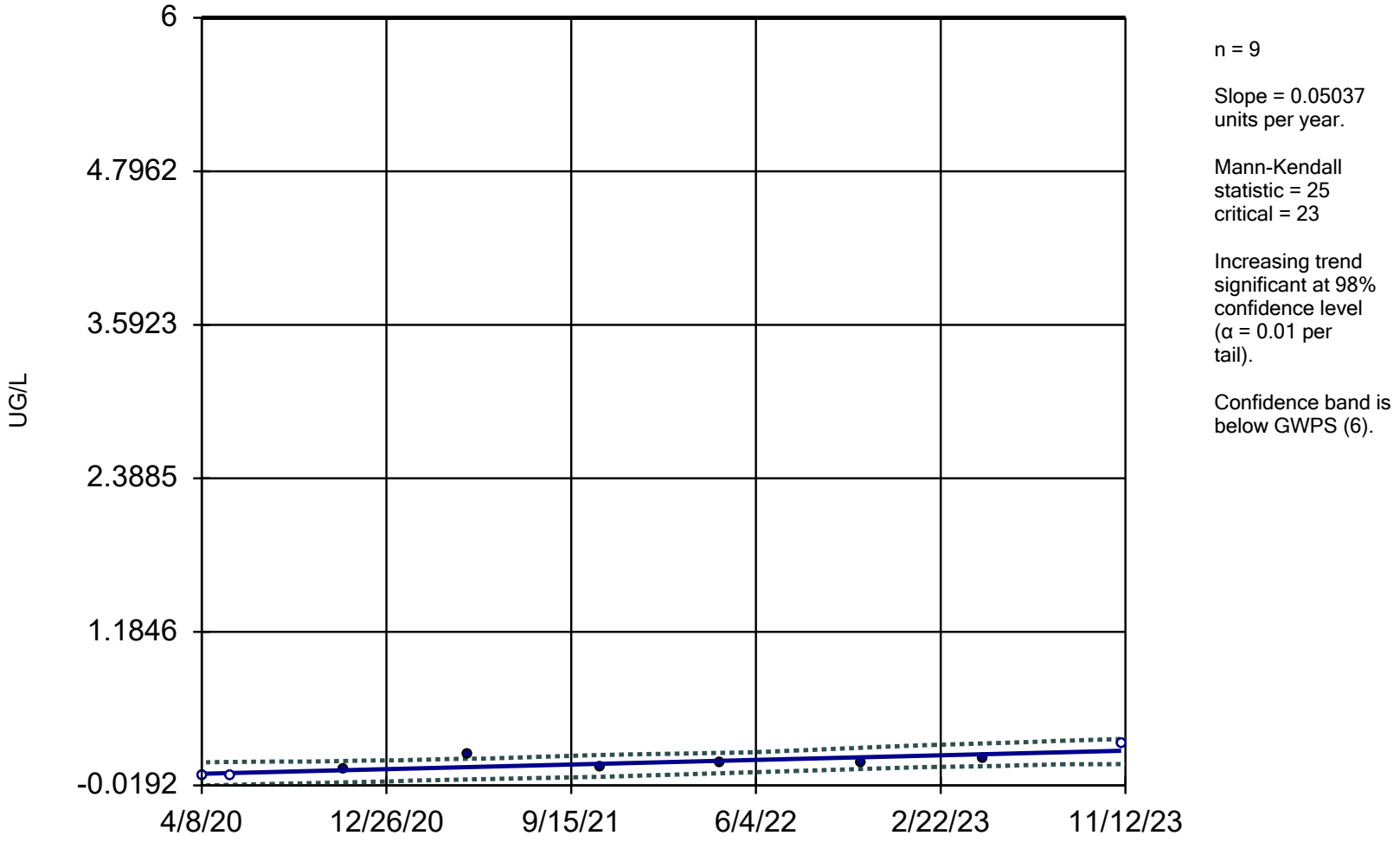
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-22D



n = 9

Slope = 0.05037 units per year.

Mann-Kendall statistic = 25
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

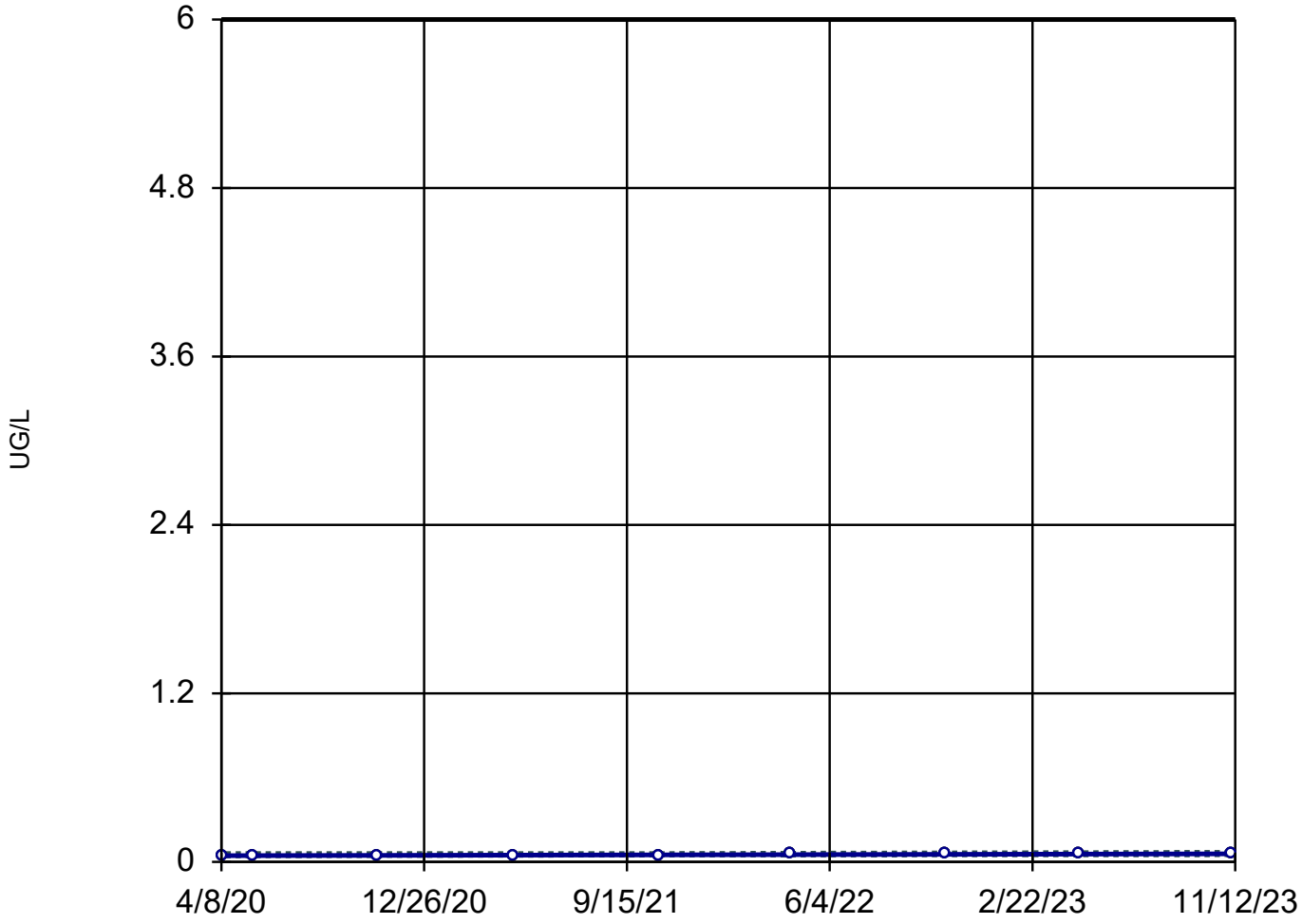
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-22S



n = 9

Slope = 0.003547 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

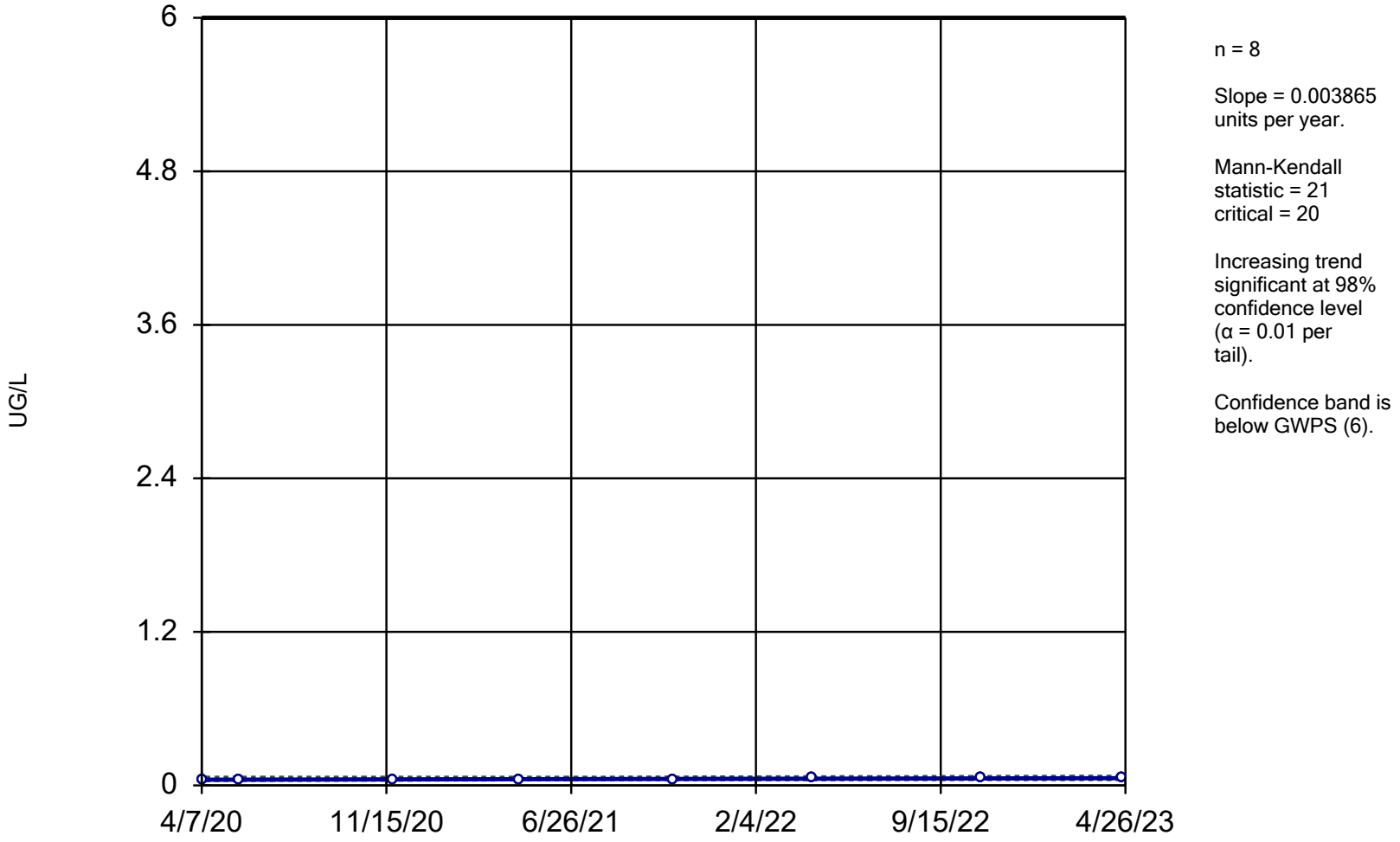
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-31S



n = 8

Slope = 0.003865 units per year.

Mann-Kendall statistic = 21
critical = 20

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

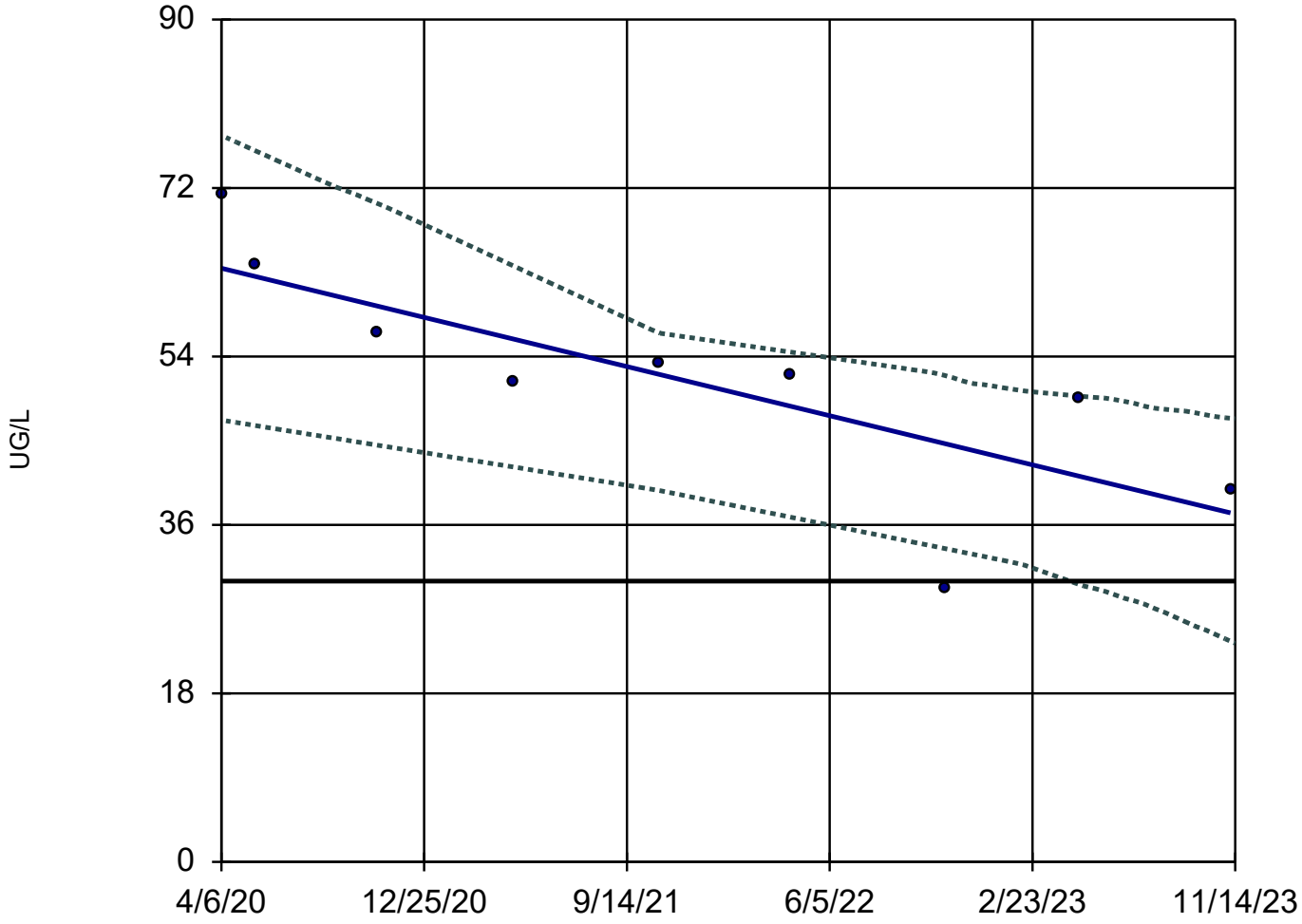
Constituent: ANTIMONY, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-17I



n = 9

Slope = -7.273 units per year.

Mann-Kendall statistic = -28
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (30) on 04/18/23.

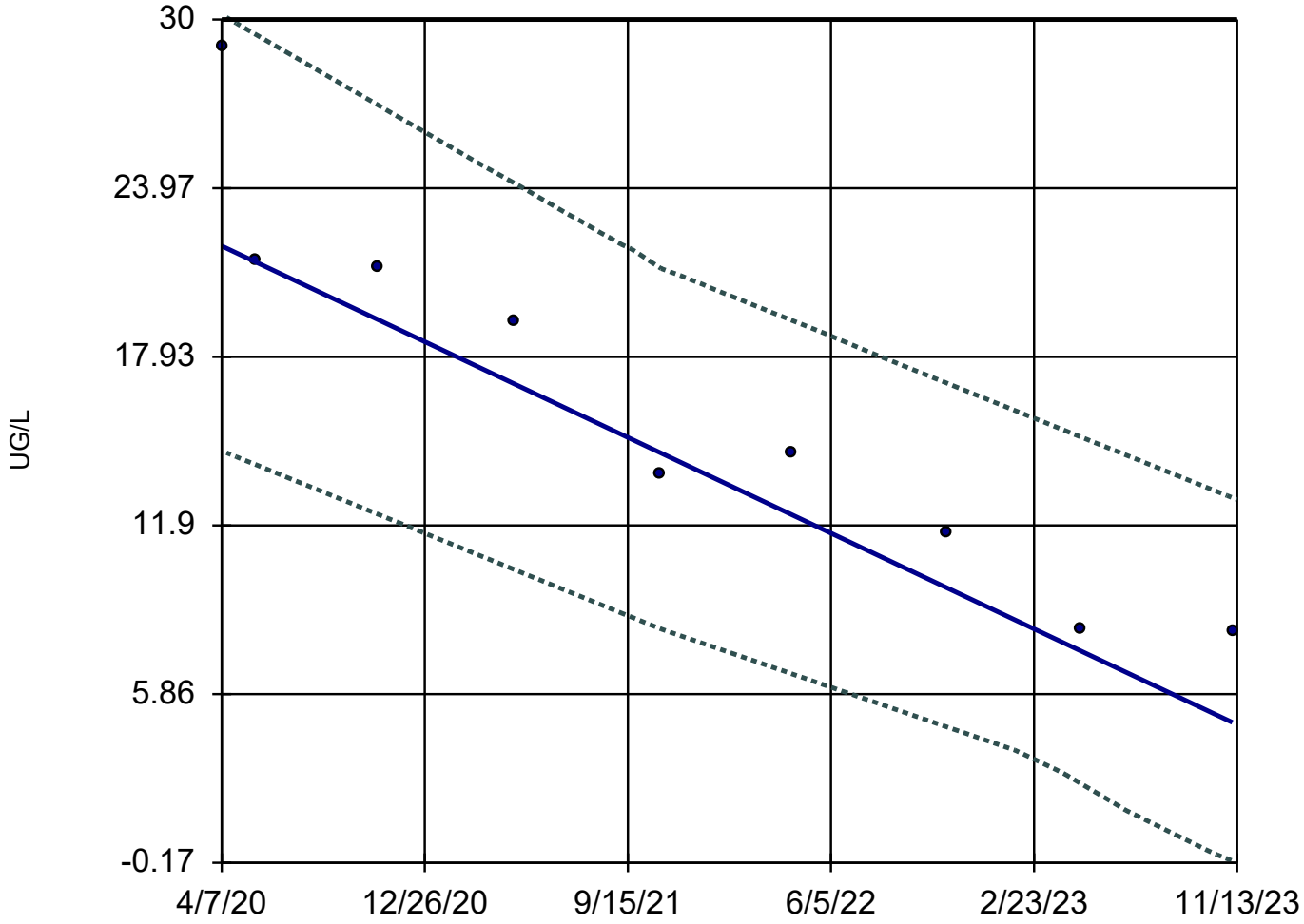
Constituent: ARSENIC, TOTAL Analysis Run 3/5/2024 9:41 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19S



n = 9

Slope = -4.752 units per year.

Mann-Kendall statistic = -34
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (30) on 04/26/20.

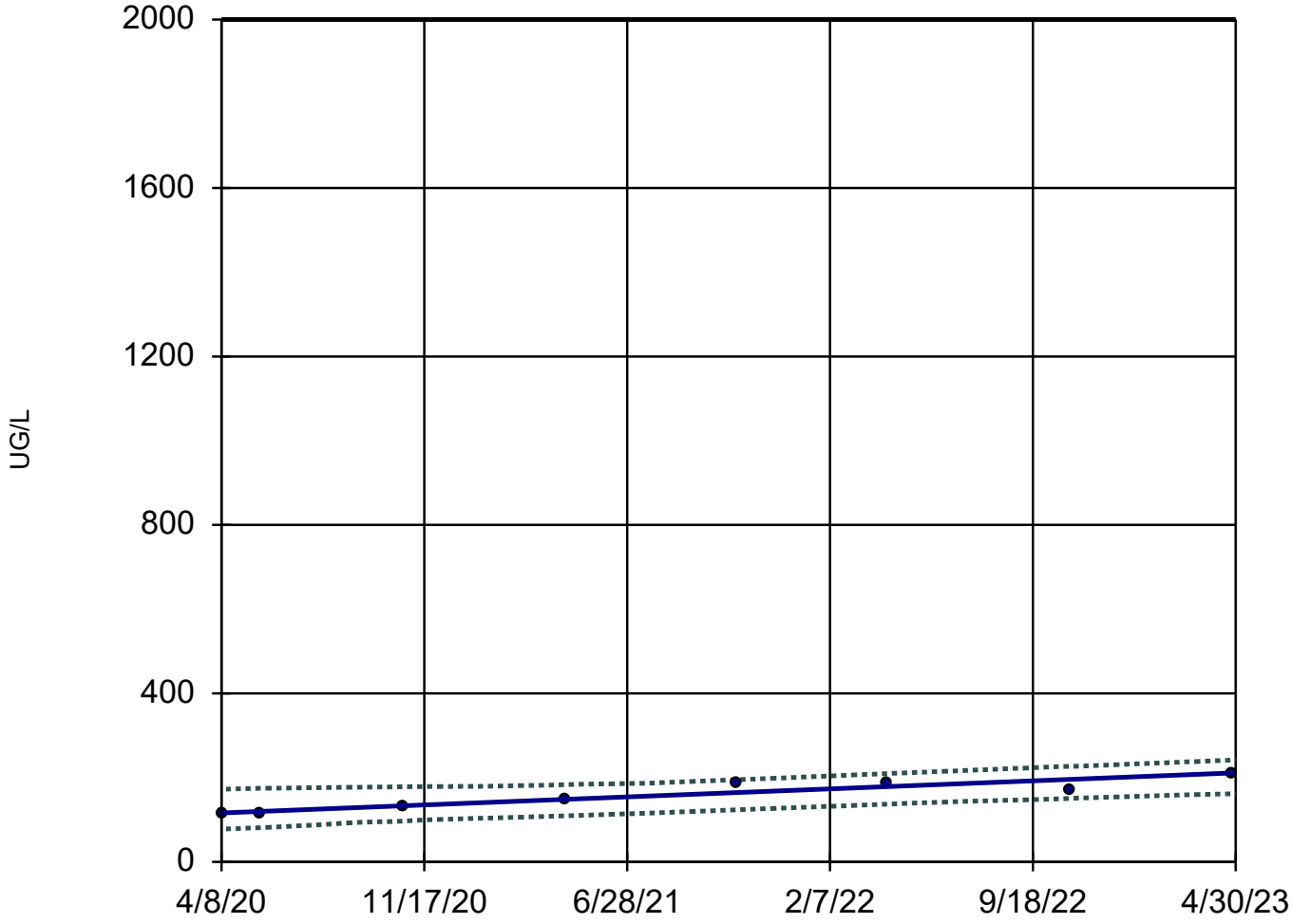
Constituent: ARSENIC, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-10S



n = 8

Slope = 31.22 units per year.

Mann-Kendall statistic = 22
critical = 20

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

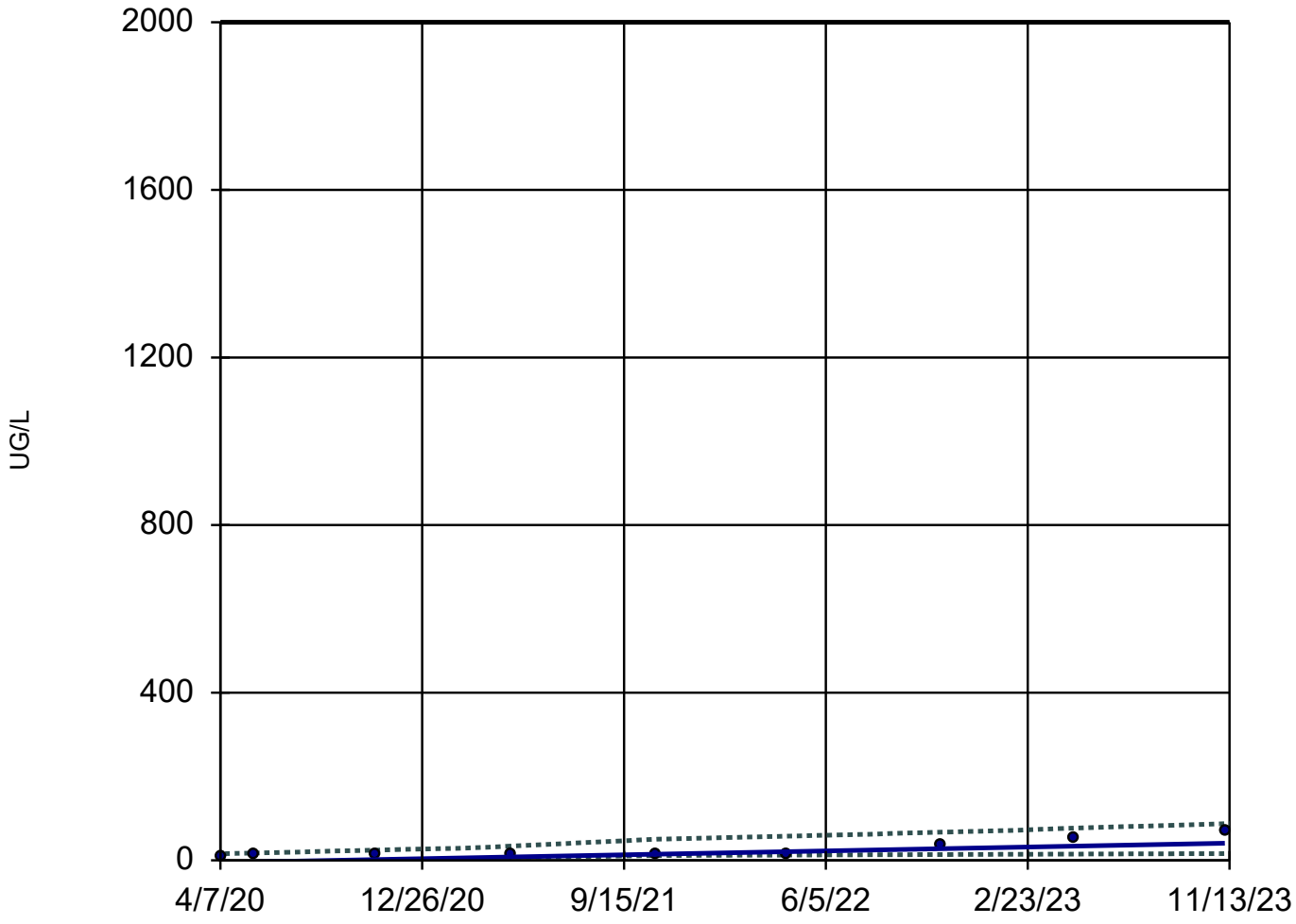
Constituent: BARIUM, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 9

Slope = 12.94 units per year.

Mann-Kendall statistic = 36
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

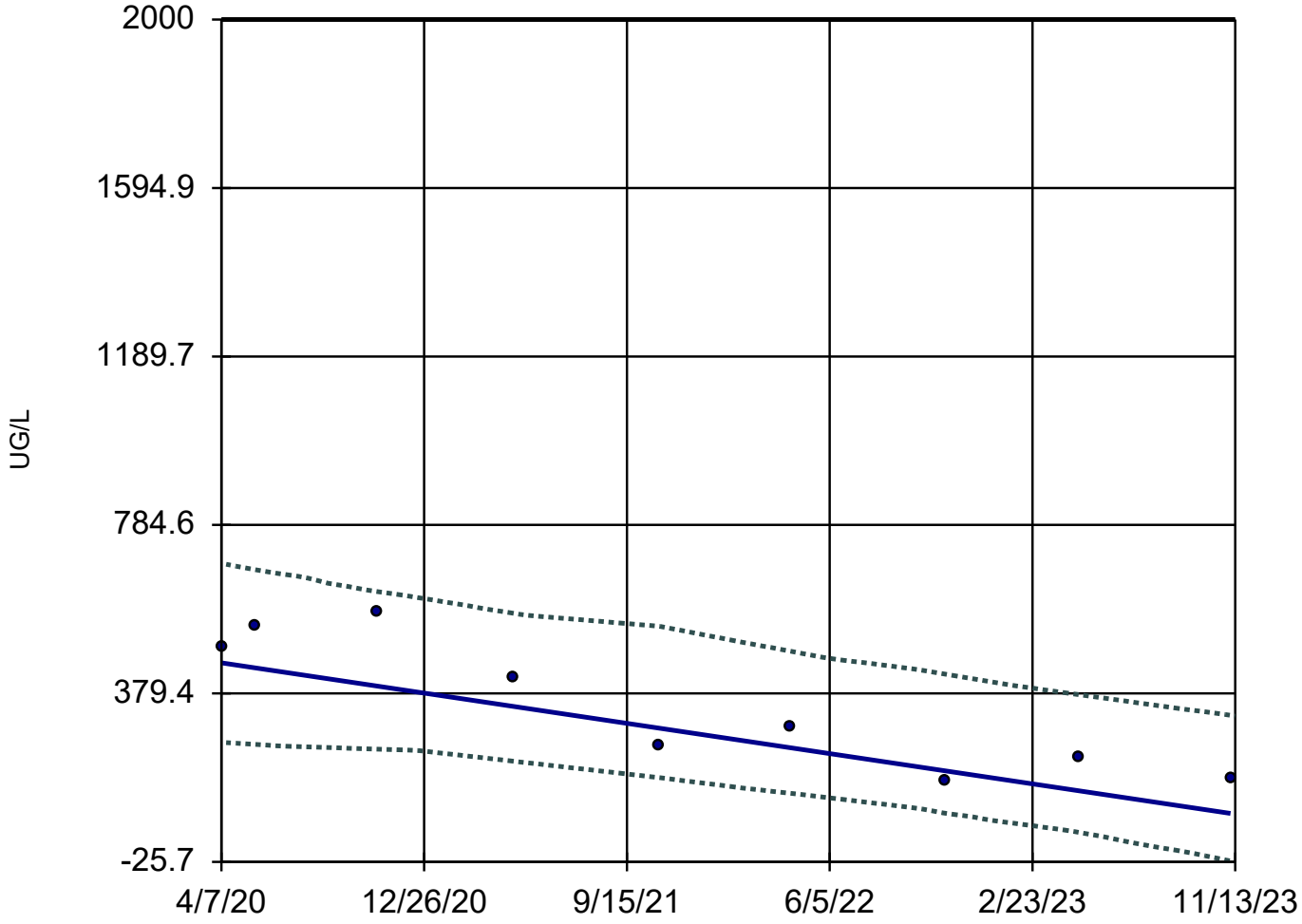
Constituent: BARIUM, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19S



n = 9

Slope = -100.9 units per year.

Mann-Kendall statistic = -24
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

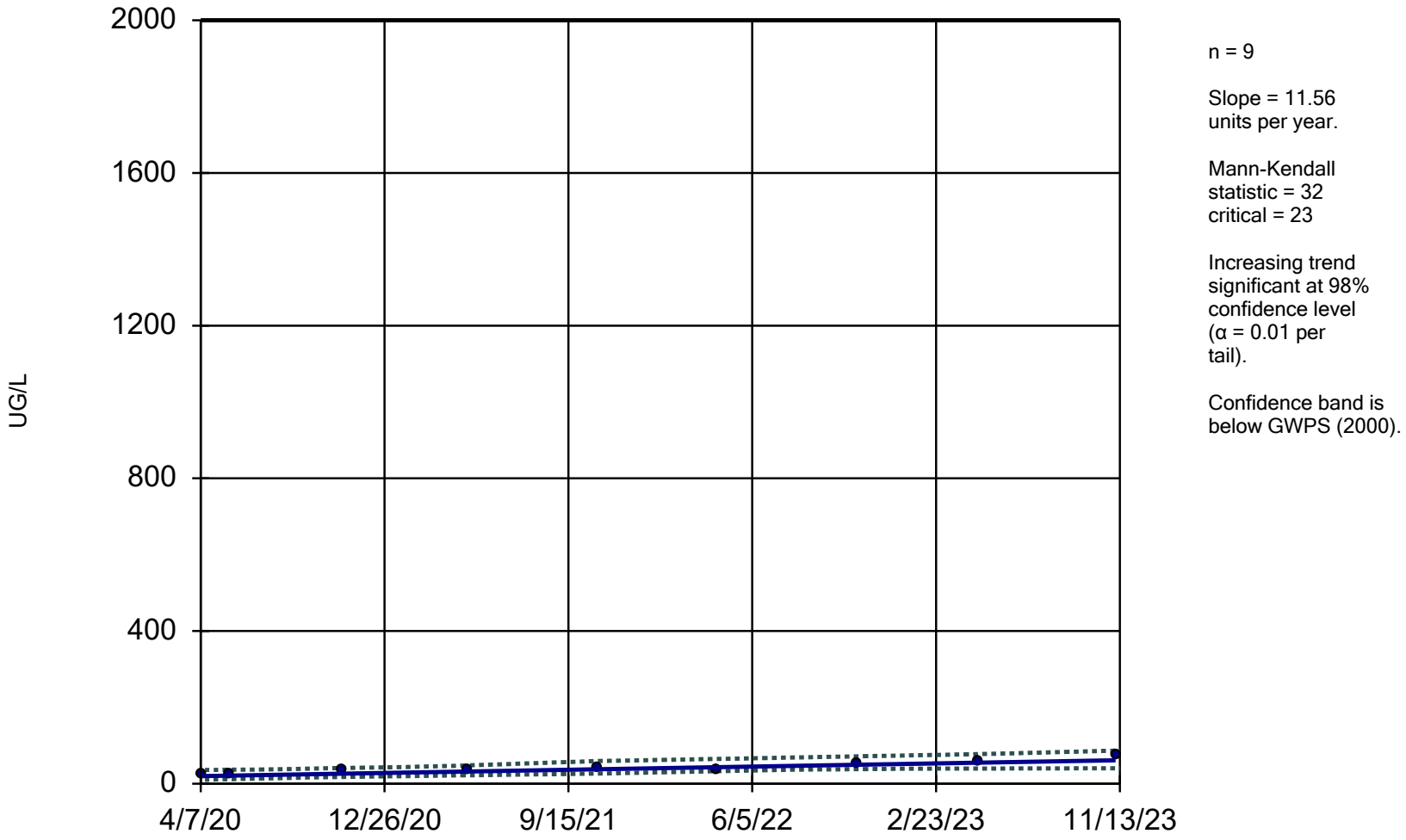
Confidence band is below GWPS (2000).

Constituent: BARIUM, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sen's Slope and 95% Confidence Band

R-P-21I



n = 9

Slope = 11.56 units per year.

Mann-Kendall statistic = 32
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

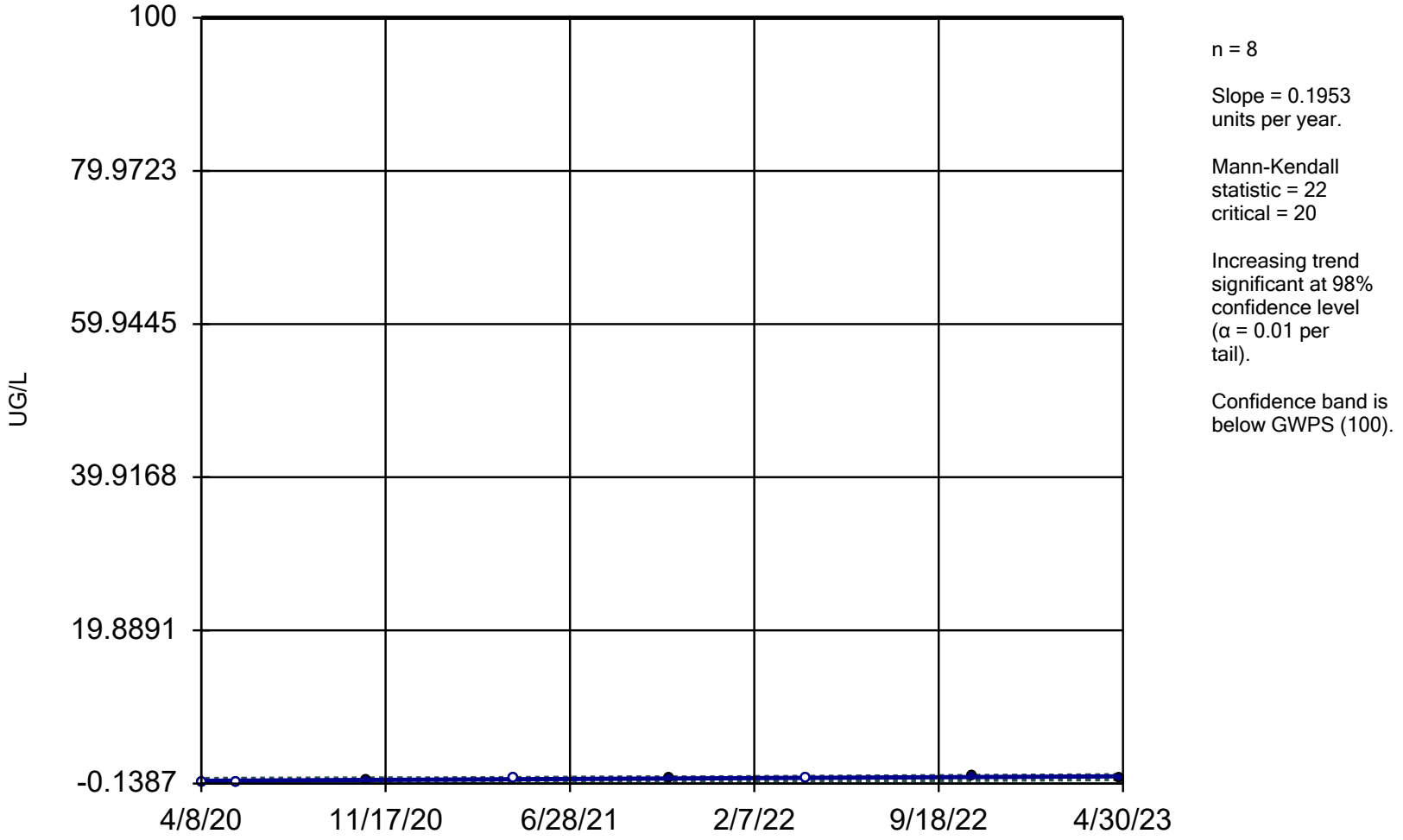
Constituent: BARIUM, TOTAL Analysis Run 3/5/2024 9:35 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-10S



n = 8

Slope = 0.1953 units per year.

Mann-Kendall statistic = 22
critical = 20

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (100).

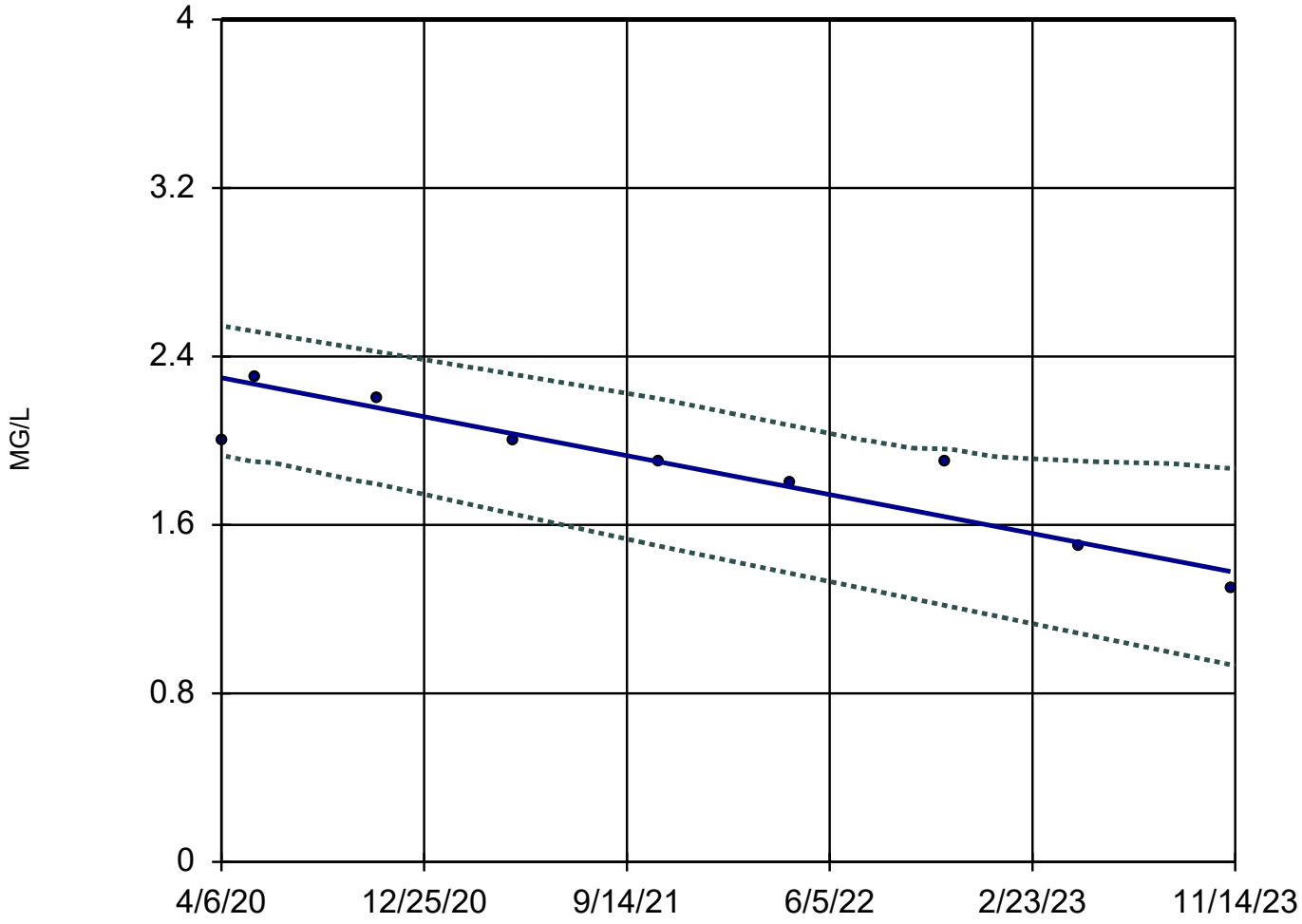
Constituent: CHROMIUM, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-17I



n = 9

Slope = -0.2561 units per year.

Mann-Kendall statistic = -28
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

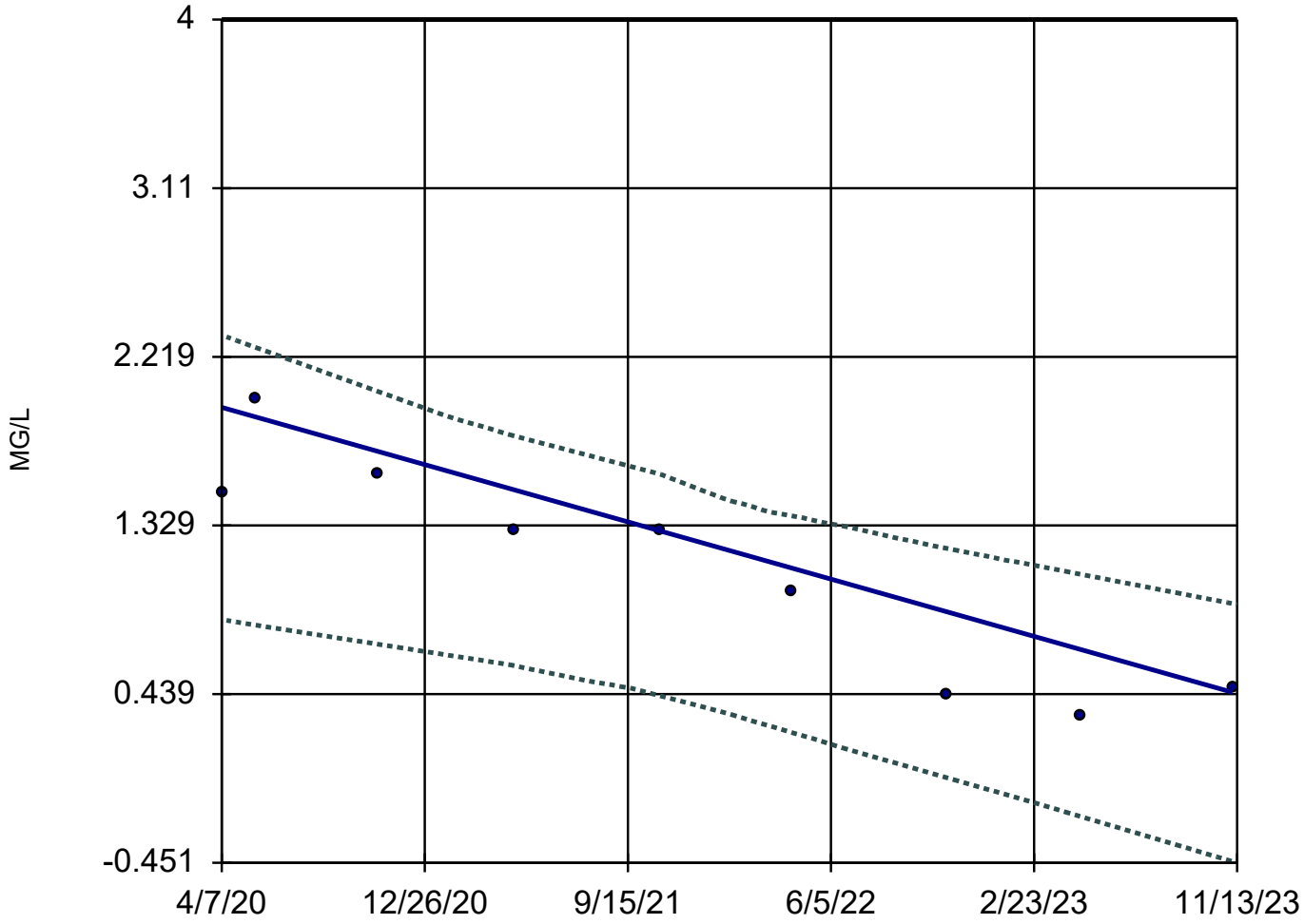
Constituent: FLUORIDE, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 9

Slope = -0.4195 units per year.

Mann-Kendall statistic = -27
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

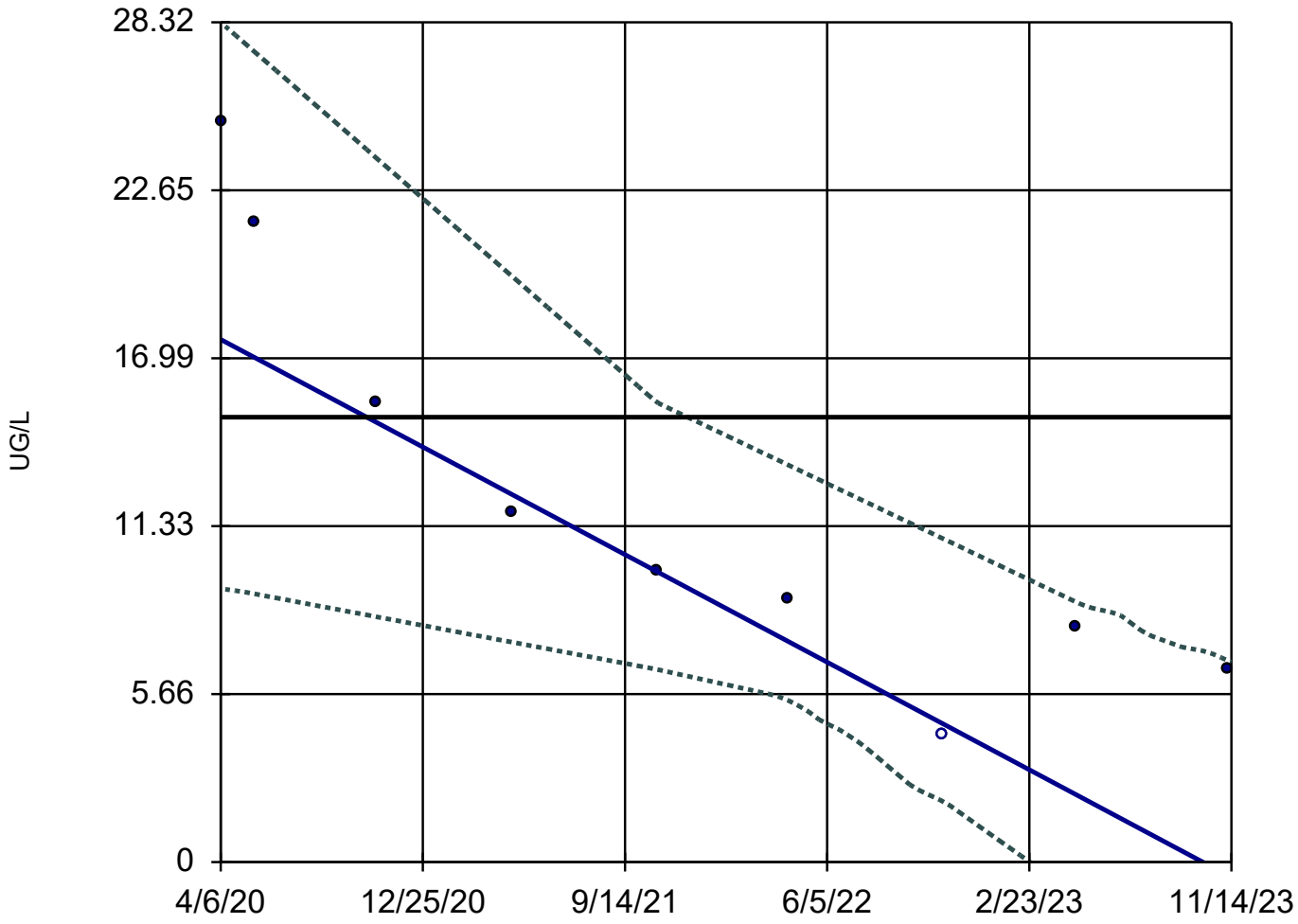
Constituent: FLUORIDE, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-17I



n = 9

Slope = -5.024 units per year.

Mann-Kendall statistic = -32
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (15) on 12/06/21.

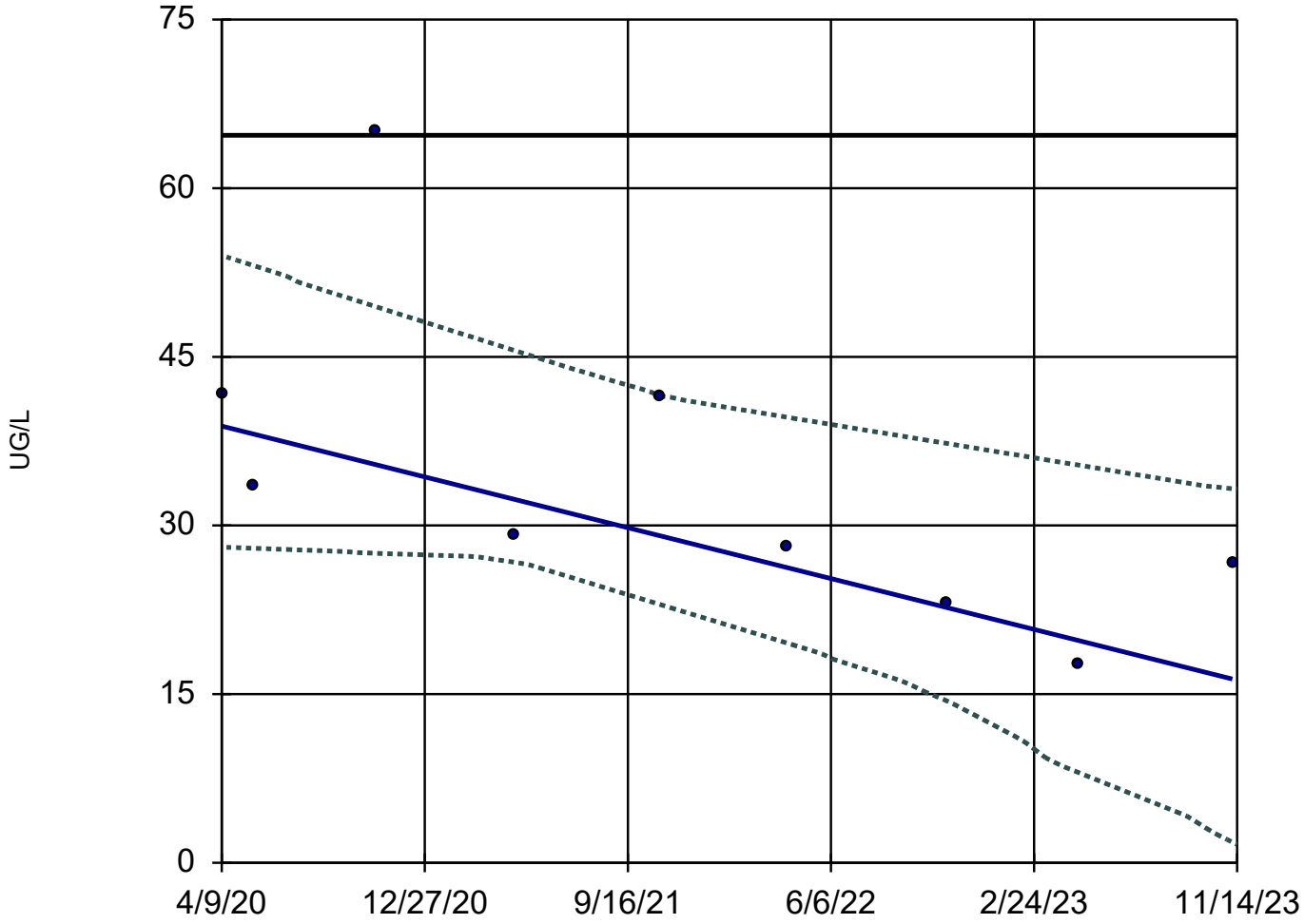
Constituent: LEAD, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-16S



n = 9

Slope = -6.278 units per year.

Mann-Kendall statistic = -24
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

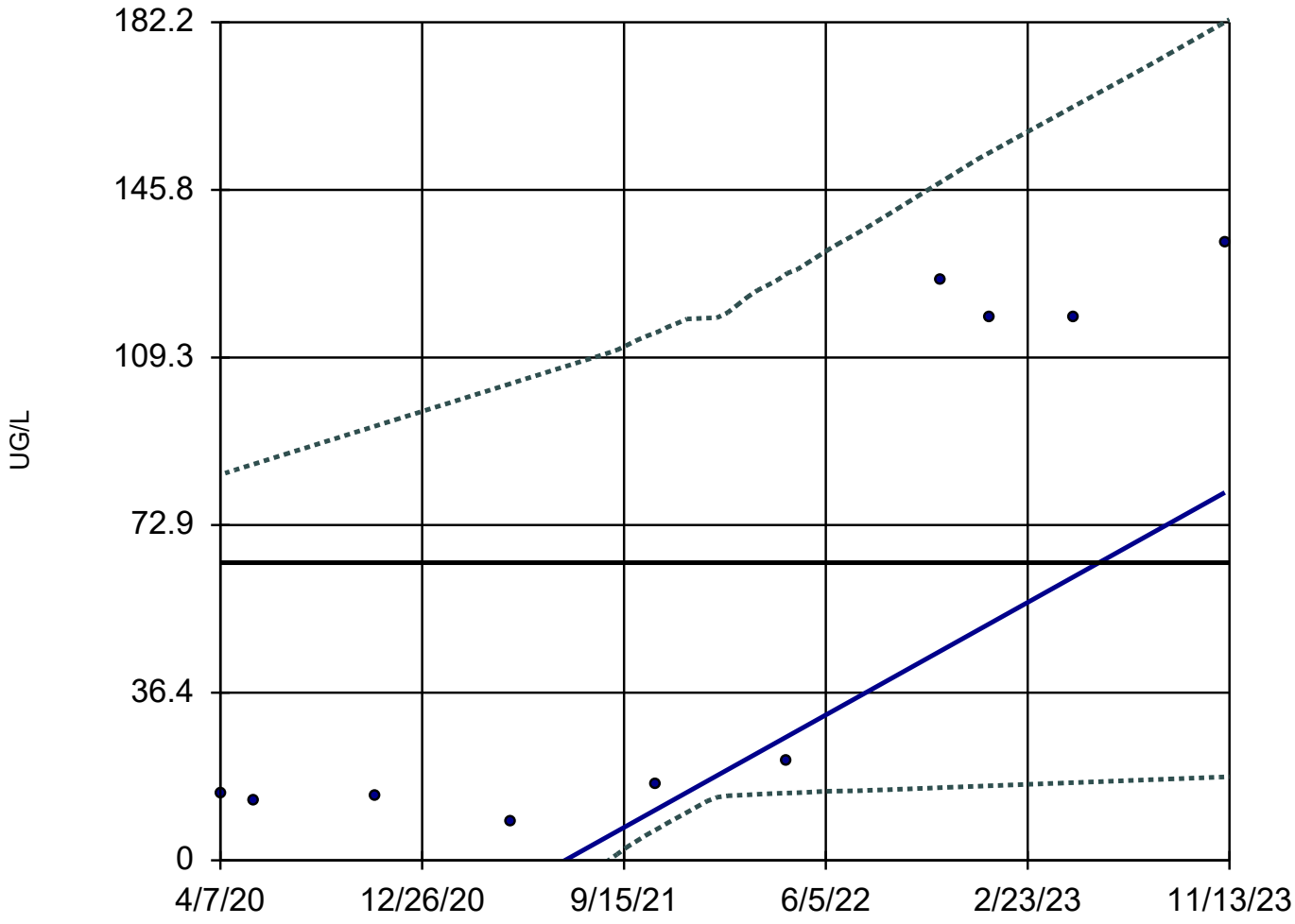
Constituent: LITHIUM, TOTAL Analysis Run 3/5/2024 9:44 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 10

Slope = 33.94 units per year.

Mann-Kendall statistic = 30
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS (64.7) is entirely within the confidence band.

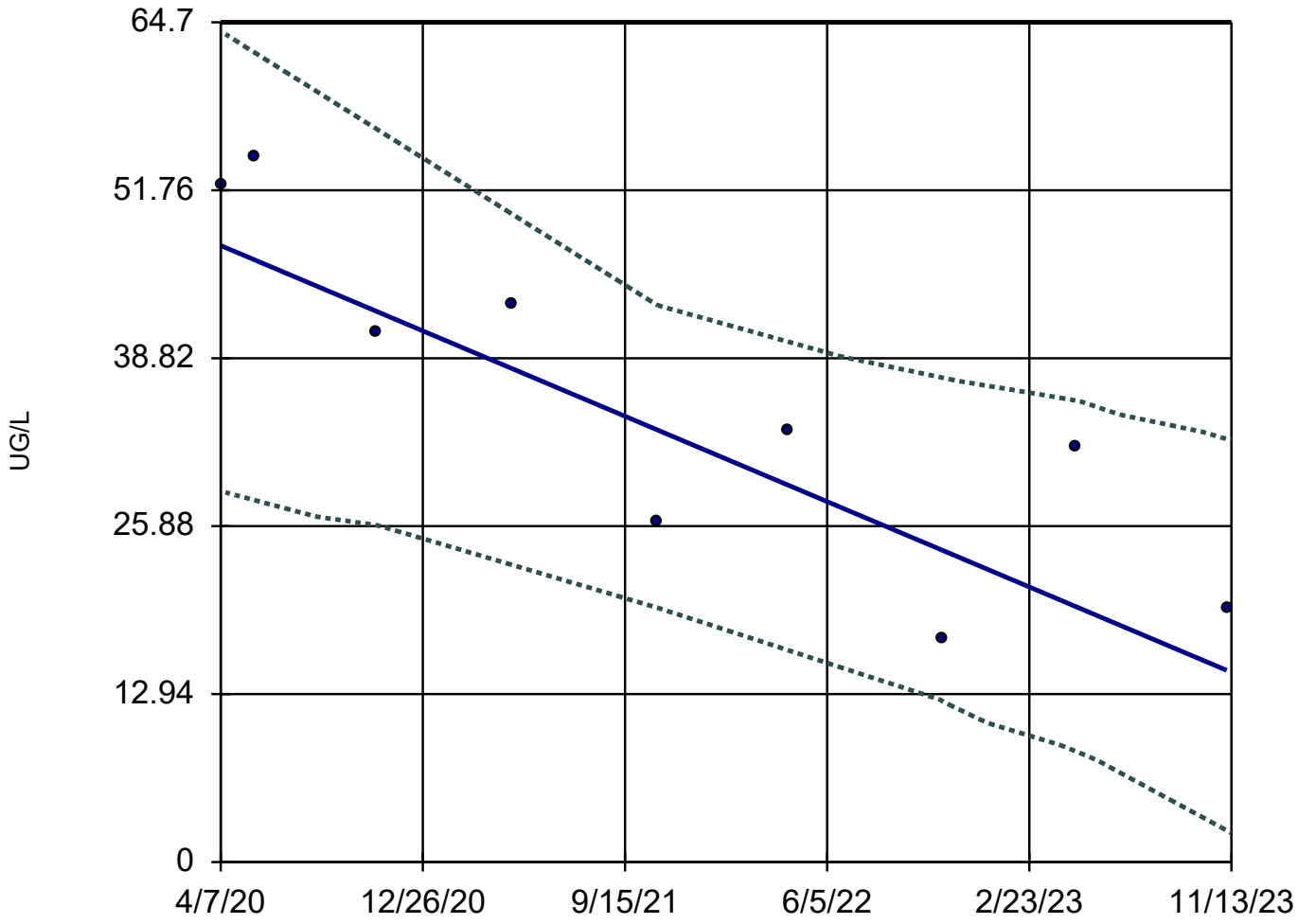
Constituent: LITHIUM, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19S



n = 9

Slope = -9.122 units per year.

Mann-Kendall statistic = -24
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

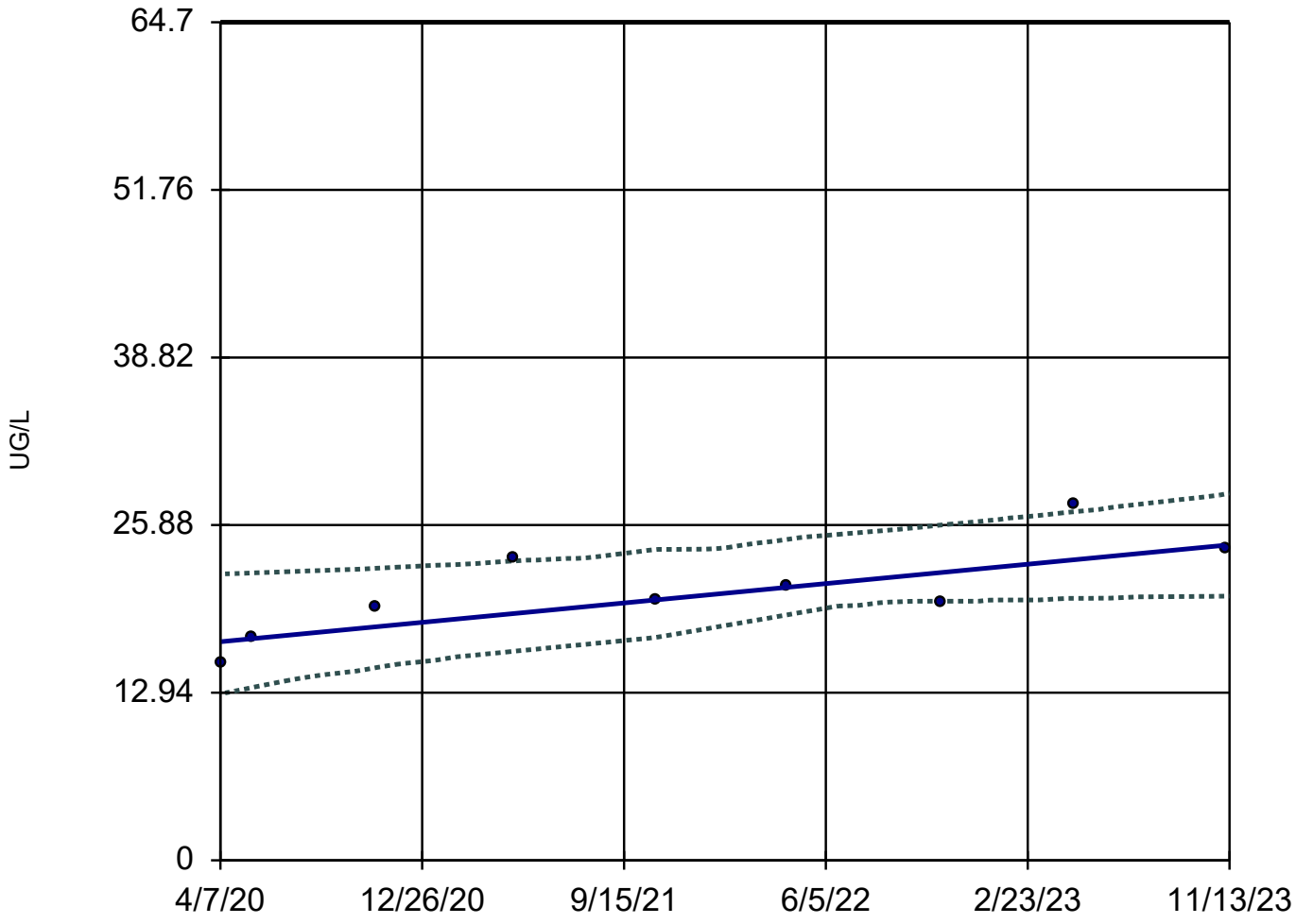
Constituent: LITHIUM, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-21I



n = 9

Slope = 2.074 units per year.

Mann-Kendall statistic = 24
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

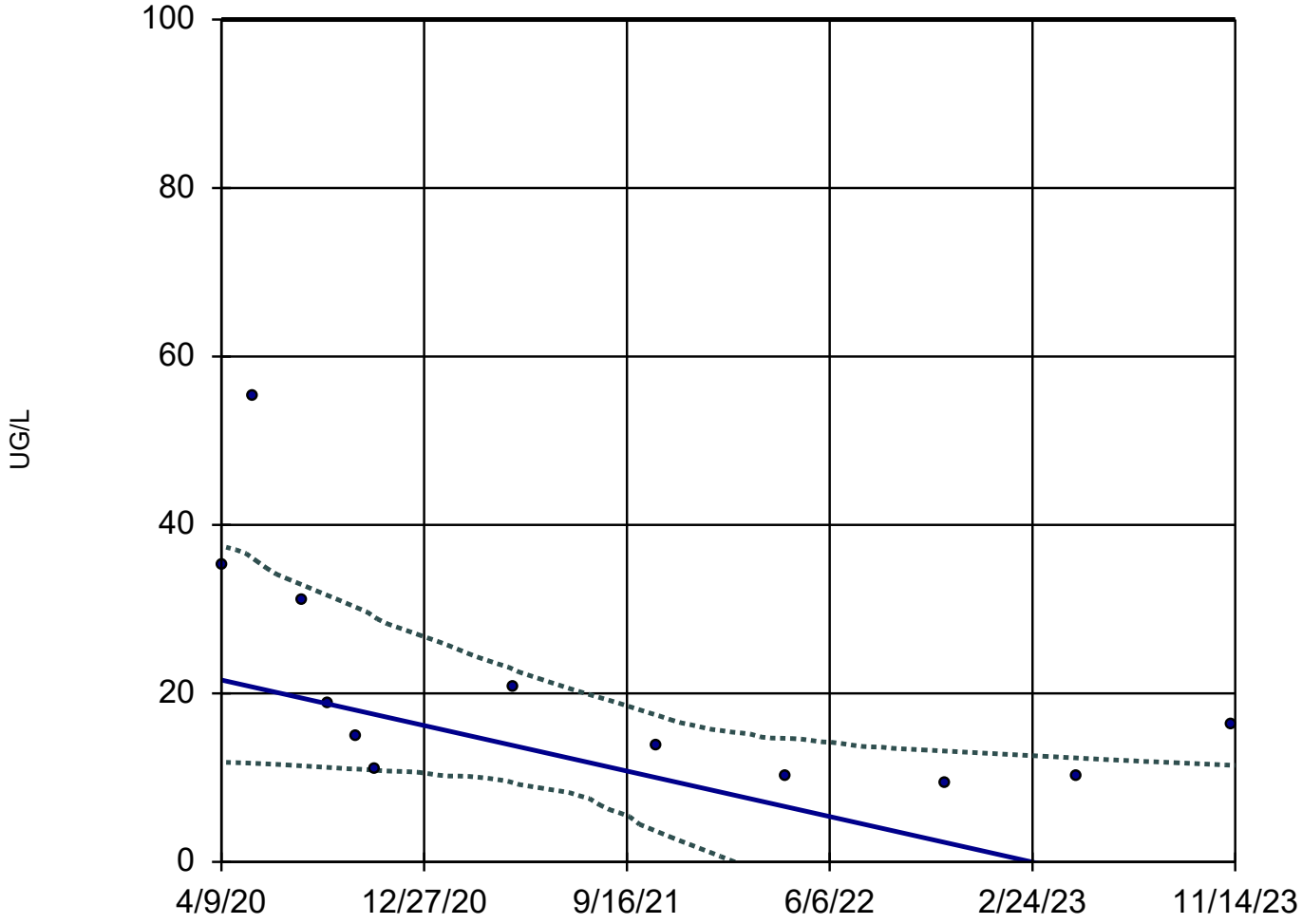
Constituent: LITHIUM, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-16S



n = 12

Slope = -7.507 units per year.

Mann-Kendall statistic = -42
critical = -35

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (100).

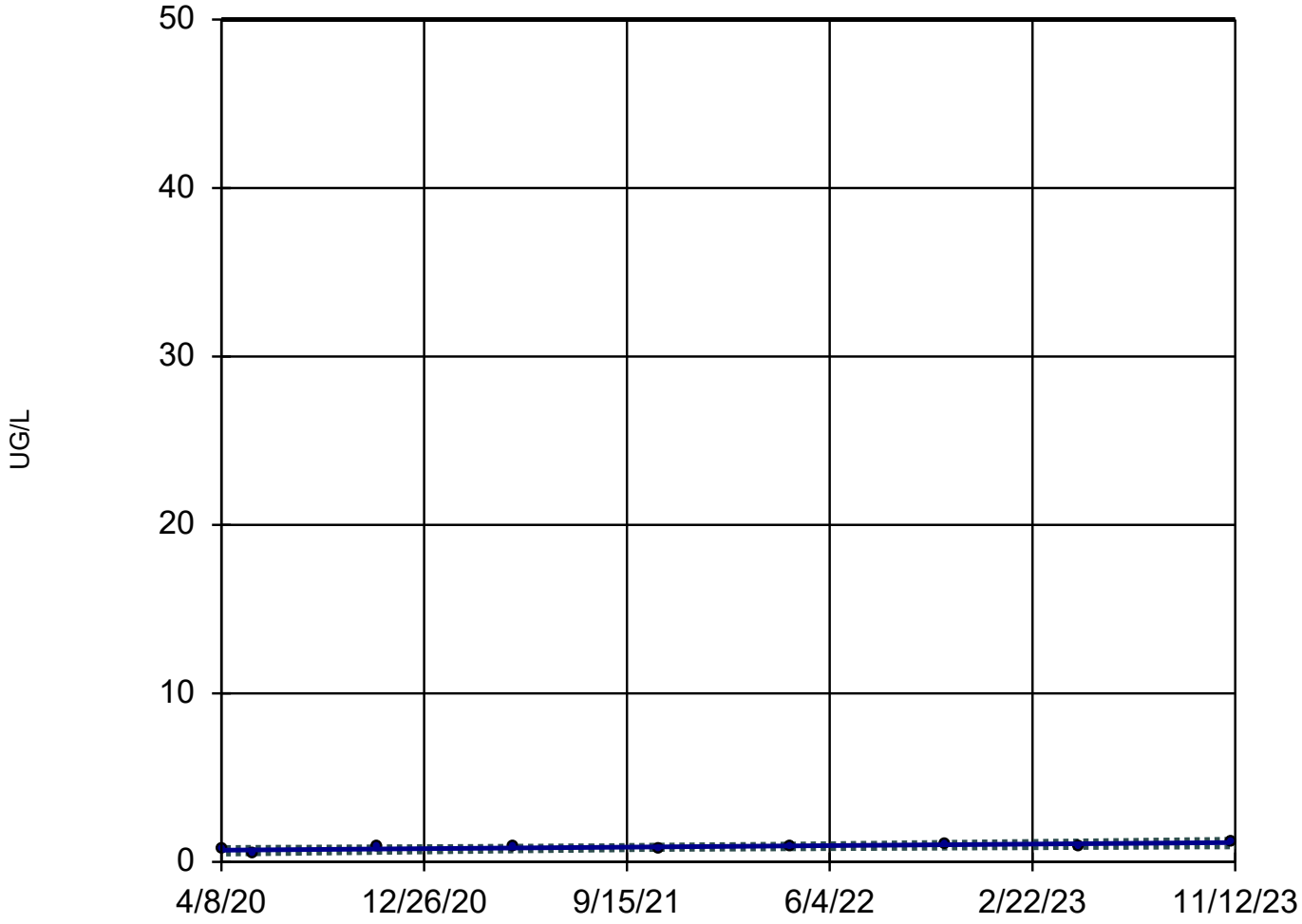
Constituent: MOLYBDENUM, TOTAL Analysis Run 3/5/2024 9:36 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-22D



n = 9

Slope = 0.1252 units per year.

Mann-Kendall statistic = 27
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (50).

Constituent: SELENIUM, TOTAL Analysis Run 3/5/2024 9:37 AM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/5/2024, 9:38 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	**R-P-05S**	**0.003558**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-10S	0.001205	4	20	No	8	62.5	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	R-P-16S	0.004833	22	23	No	9	77.78	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-17D**	**0.003542**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-17I	-0.1029	-22	-23	No	9	0	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	R-P-17S	0.07466	20	23	No	9	44.44	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-19D**	**0.003545**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-P-19I**	**-1.426**	**-24**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-19S	0.002416	16	23	No	9	88.89	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-21D**	**0.003544**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-P-21I**	**0.003544**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-21S	0.003544	19	23	No	9	88.89	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-22D**	**0.05037**	**25**	**23**	**Yes**	**9**	**33.33**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-P-22S**	**0.003547**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-30S	0.00354	19	20	No	8	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-31S**	**0.003865**	**21**	**20**	**Yes**	**8**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-P-05S	12.83	20	23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-10S	0.6952	5	31	No	11	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-16S	-0.2371	-25	-35	No	12	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-17D	0	-5	-23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-P-17I**	**-7.273**	**-28**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-P-17S	-1.994	-8	-23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-19D	-0.01581	-4	-23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-19I	-79.04	-23	-23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-P-19S**	**-4.752**	**-34**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-P-21D	-0.01908	-10	-23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-21I	0	1	23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-21S	-2.831	0	23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-22D	0.6392	17	23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-22S	0.4704	13	23	No	9	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-30S	-0.06009	-10	-35	No	12	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-31S	3.413	25	27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-05S	12.94	18	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-P-10S**	**31.22**	**22**	**20**	**Yes**	**8**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-P-16S	7.829	4	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-17D	-1.404	-16	-23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-17I	0.9232	16	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-17S	12.98	14	20	No	8	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-19D	7.333	10	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-P-19I**	**12.94**	**36**	**23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-P-19S**	**-100.9**	**-24**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-P-21D	-33.51	-10	-23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-P-21I**	**11.56**	**32**	**23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-P-21S	-99.18	-20	-23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-22D	-1.358	-8	-23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-22S	-11.31	-16	-23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-30S	5.314	16	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-31S	4.937	7	17	No	7	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-05S	0.01979	5	23	No	9	11.11	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	**R-P-10S**	**0.1953**	**22**	**20**	**Yes**	**8**	**50**	**n/a**	**n/a**	**0.02**	**NP**

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/5/2024, 9:38 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
CHROMIUM, TOTAL (UG/L)	R-P-16S	0.01235	10	23	No	9	88.89	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-17D	0.0891	15	23	No	9	44.44	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-17I	0.004818	0	23	No	9	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-17S	0.1127	18	23	No	9	22.22	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-19D	0.06844	4	23	No	9	11.11	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-19I	0.03173	5	23	No	9	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-19S	0.07278	17	23	No	9	22.22	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-21D	0.1013	14	23	No	9	55.56	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-21I	0.01602	7	23	No	9	11.11	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-21S	0.03041	9	23	No	9	33.33	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-22D	0.29	23	23	No	9	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-22S	0.02035	14	23	No	9	66.67	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-30S	0.05953	17	23	No	9	55.56	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-31S	0.08057	10	20	No	8	50	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-05S	-0.01329	-6	-23	No	9	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-10S	-0.08096	-17	-20	No	8	25	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-16S	-0.06075	-13	-23	No	9	33.33	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-17D	-0.07212	-16	-23	No	9	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-P-17I**	**-0.2561**	**-28**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-P-17S	-0.205	-17	-23	No	9	22.22	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-19D	-0.1437	-17	-23	No	9	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-P-19I**	**-0.4195**	**-27**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-P-19S	0	0	20	No	8	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-21D	0.003191	3	23	No	9	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-21I	-0.05452	-14	-23	No	9	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-21S	-0.05285	-14	-23	No	9	22.22	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-22D	0	-1	-23	No	9	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-22S	-0.09414	-13	-23	No	9	55.56	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-30S	-0.08635	-16	-23	No	9	22.22	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-31S	0	-1	-20	No	8	0	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-05S	-0.09077	-10	-23	No	9	88.89	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-10S	0	1	17	No	7	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-16S	0	-5	-23	No	9	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-17D	-0.09046	-10	-23	No	9	88.89	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-P-17I**	**-5.024**	**-32**	**-23**	**Yes**	**9**	**11.11**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-P-17S	-0.1068	-12	-23	No	9	88.89	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-19D	-0.07648	-11	-23	No	9	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-19I	-3.439	-21	-23	No	9	33.33	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-19S	-0.1069	-12	-23	No	9	88.89	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-21D	0	-5	-23	No	9	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-21I	-0.07653	-11	-23	No	9	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-21S	-0.1459	-14	-23	No	9	77.78	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-22D	0.3829	6	23	No	9	77.78	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-22S	-0.05585	-6	-23	No	9	88.89	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-30S	-0.05573	-9	-20	No	8	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-31S	0	-5	-17	No	7	100	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-05S	-1.087	-16	-23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-10S	2.771	6	20	No	8	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-P-16S**	**-6.278**	**-24**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-P-17D	-1.72	-16	-23	No	9	0	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/5/2024, 9:38 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
LITHIUM, TOTAL (UG/L)	R-P-17I	-0.1534	-4	-23	No	9	66.67	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-17S	2.399	10	20	No	8	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-19D	0.9041	8	23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-P-19I**	**33.94**	**30**	**27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	**R-P-19S**	**-9.122**	**-24**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-P-21D	-20.32	-6	-23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-P-21I**	**2.074**	**24**	**23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-P-21S	-1.623	-16	-23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-22D	-0.6955	-13	-23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-22S	-3.495	-13	-23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-30S	1.428	13	23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-31S	-0.596	-4	-20	No	8	25	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-05S	-1.632	-18	-23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-10S	-12.14	-20	-31	No	11	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**R-P-16S**	**-7.507**	**-42**	**-35**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	R-P-17D	-0.05422	0	23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-17I	10.9	18	23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-17S	-10.63	-10	-23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-19D	-48.19	-16	-23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-19I	-40.24	-18	-23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-19S	-0.1165	-2	-23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-21D	36.71	12	23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-21I	51.22	22	23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-21S	-0.4357	-7	-23	No	9	33.33	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-22D	-8.632	-12	-23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-22S	0.1589	2	23	No	9	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-30S	0.9244	25	35	No	12	58.33	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-31S	0.7278	19	31	No	11	9.091	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-05S	0.01718	2	20	No	8	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-10S	0.04558	8	20	No	8	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-16S	-0.00...	0	23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-17D	-0.05993	-8	-23	No	9	88.89	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-17I	-0.08119	-8	-23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-17S	-0.00...	0	23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-19D	-0.01991	-14	-23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-19I	-0.0685	-14	-23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-19S	-0.2067	-12	-23	No	9	66.67	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-21D	-0.5832	-20	-23	No	9	55.56	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-21I	-0.07659	-12	-23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-21S	-0.06442	-2	-23	No	9	88.89	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-22D	0.03074	4	23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-22S	-0.04446	-8	-23	No	9	88.89	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-30S	-0.02965	-4	-23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-31S	-0.01978	-1	-17	No	7	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-05S	0.009858	9	23	No	9	22.22	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-10S	0	0	20	No	8	62.5	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-16S	0.01498	2	23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-17D	-0.01381	-13	-23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-17I	-0.138	-17	-23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-17S	0.2517	18	23	No	9	0	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 3/5/2024, 9:38 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
SELENIUM, TOTAL (UG/L)	R-P-19D	-0.03833	-22	-23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-19I	-0.6299	-18	-23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-19S	0	0	23	No	9	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-21D	0	4	23	No	9	88.89	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-21I	-0.03925	-17	-23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-21S	-0.05696	-21	-23	No	9	11.11	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	**R-P-22D**	**0.1252**	**27**	**23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
SELENIUM, TOTAL (UG/L)	R-P-22S	0.05108	10	23	No	9	33.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-30S	0.1147	7	23	No	9	33.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-31S	0	0	20	No	8	100	n/a	n/a	0.02	NP

Appendix E

June 2024 Corrective Action Statistical Evaluation

Memorandum
October 18, 2024

To:	Lisa Meyer – Ameren Missouri	**Project Number:**	23008-24
CC:	Ameren Missouri - Susan Knowles, Craig Giesmann, Charlie Henderson, Bill Kutosky		
From:	Rocksmith Geoengineering - Mark Haddock, P.E., Jeff Ingram, R.G., Grant Morey	**Email:**	jeff.ingram@rocksmithgeo.com
RE:	**Corrective Action Statistical Evaluation, RCPA Surface Impoundment, Rush Island Energy Center, Jefferson County, Missouri**		

1.0 INTRODUCTION

This Technical Memorandum provides the results of the Corrective Action Monitoring statistical analyses from the June 2024 sampling event for the RCPA Surface Impoundment at the Rush Island Energy Center (RIEC) located in Jefferson County, Missouri. As outlined in the remedy selection report for the RCPA, Corrective Action at the RCPA consists of two phases, as follows:

1) Source control, stabilization, and containment of CCR by installation of a low-permeability geomembrane cap.
2) Once source control is achieved, monitor the natural attenuation (MNA) of groundwater concentrations to address limited and localized CCR-related impacts. Ongoing monitoring and modeling evaluations to document concentration trends following Corrective Action.

In addition to MNA as a Corrective Measure, Ameren has also initiated a supplemental corrective measure consisting of groundwater extraction, treatment, and re-injection using ex-situ treatment technologies with chemical precipitation and selective ion exchange. This treatment system became fully operational in February 2022 and began achieving target flow rates in January 2023. In May 2024, Haley & Aldrich produced a Supplemental Remedy Selection Report for the RIEC, documenting that these corrective measures are effectively contributing to constituent mass reductions in groundwater near the RCPA. These corrective measures are ongoing.

Phase 1 of Corrective Action commenced in August 2019, and was substantially completed on December 15, 2020, with the installation of a low permeability cover system. Included in this memorandum is a summary of constituents that are currently in exceedance of the groundwater protection standard (GWPS), a list of site-specific Groundwater Protection Standards (**Table 1**), and the Sanitas Technologies™ (Sanitas) statistical software output for each of the Appendix IV parameters (**Appendix A** and **Appendix B**).

The initial Corrective Action sampling event was completed in April 2020, and a total of 10 sampling events have been completed for the Corrective Action Program at the RIEC to date. This analysis uses results collected since the beginning of Corrective Action monitoring (April 2020) for the determination of constituents exceeding the GWPS. Data collected prior to this time were collected during active conditions of the RCPA, prior to the

cessation of CCR disposal in the RCPA, and are not representative of groundwater conditions since the initiation of closure.

Trend tests using the Sen's Slope/Mann Kendall method require a minimum of eight independent results, as outlined in the USEPA Unified Guidance. Therefore, trend tests were completed for the following Appendix IV constituents: antimony, arsenic, barium, cadmium, chromium, fluoride, lead, lithium, molybdenum, radium 226 + 228, and selenium.

Several constituents were reported at concentrations below the Practical Quantitation Limit (PQL) during the April 2020, 2021, 2022, 2023, and/or 2024 sampling events, including beryllium, cadmium, cobalt, mercury, and thallium. When these constituents were not detected during the initial Corrective Action sampling event, they were not re-sampled/tested during the subsequent semi-annual sampling events in each calendar year. As a result, there are fewer results available for these constituents. This is the first Corrective Action statistical evaluation where Sen's Slope/Mann-Kendall analyses were completed for cadmium, which now has eight results at each monitoring well.

2.0 STATISTICAL EVALUATION

The Appendix IV constituents were evaluated for exceedances above the GWPS using the methods and procedures outlined in the Corrective Action Groundwater Monitoring Plan's (CAGMP's) Statistical Analysis Plan (SAP). An outlier analysis was completed as the first step of the statistical evaluation. The outlier analysis was performed only on the results collected as a part of the Corrective Action Monitoring Program. In addition to outliers noted in previous Corrective Action evaluations, the following outliers were removed prior to the calculation of confidence limits:

- Barium
    - R-P-17I at 30.1 micrograms per liter (µg/L) on 11/2/2022: result is statistically higher than other barium results at the same monitoring well. This high result is not consistent with previous or subsequent barium results at the well and is an outlier.
- Lead
    - R-P-19S at 6.3 J µg/L on 4/22/2021: result is statistically higher than other lead results at the same monitoring well. This high result is not consistent with previous or subsequent lead results at the well and is an outlier.
    - R-P-21S at 8.9 J µg/L on 4/23/2021: result is statistically higher than other lead results at the same monitoring well. This high result is not consistent with previous or subsequent lead results at the well and is an outlier.
- Lithium
    - R-P-30S at 47.5 µg/L on 11/8/2023: result is statistically higher than other lithium results at the same monitoring well. This high result is not consistent with previous or subsequent lithium results at the well and is an outlier.

- Selenium
    - R-P-17S at 5.9 µg/L on 11/8/2023: result is statistically higher than other selenium results at the same monitoring well. This high result is not consistent with previous or subsequent selenium results at the well and is an outlier.
    - R-P-30S at 10.2 µg/L on 11/8/2023: result is statistically higher than other selenium results at the same monitoring well. This high result is not consistent with previous or subsequent selenium results at the well and is an outlier.

An analysis of the outliers removed to date was completed. An analysis of the outliers removed to-date was completed and one statistical outlier that was previously removed was added back into the dataset prior to the calculation of confidence limits:

- Fluoride
    - R-P-19S at non-detect (<0.12 µg/L) on 4/24/2023: removed during the statistical evaluation for the November 2023 sampling event because the result was statistically lower than other fluoride results at the same monitoring well. Based on subsequent sampling results, the low result was confirmed, and the result is no longer an outlier.

Following the outlier analysis, the second step in the statistical analysis was to calculate confidence intervals and compare those to the site-specific GWPS (**Appendix A**). Confidence interval evaluation was supplemented with Sen's Slope/Mann Kendall Analyses on constituents that have eight independent sampling results at a given well, per the USEPA Unified Guidance (**Appendix B**). The Sen's Slope/Mann-Kendall Analysis identifies well-analyte pairs that have statistically significant trends and calculates confidence bands that vary with time. The upper confidence band, in relation to the GWPS for a given constituent, is used to determine exceedances, as outlined in the site CAGMP. As discussed previously, beryllium, cobalt, mercury, and thallium do not have the requisite quantity of results to perform Sen's Slope/Mann Kendall Analyses, so only confidence intervals were produced for those constituents.

Using these corrective action statistical methods, as of June 2024, the wells with constituents exceeding the GWPS are as follows:

- Arsenic at R-P-05S, R-P-17I[1], R-P-17S[2], R-P-19I[2], and R-P-21S[2]
- Lithium at R-P-19I and R-P-21D
- Molybdenum at R-P-10S[2], R-P-17D, R-P-17I, R-P-19D[2], R-P-19I[2], P-P-21D, R-P-21I, and R-P-22D[2]

Lead at R-P-19I is no longer an exceedance as of this statistical evaluation, as the upper confidence interval limit and upper confidence band are now below the GWPS. All other arsenic, lithium, and molybdenum exceedances previously identified in the statistical evaluation of the November 2023 sampling event currently remain. Variability in the initial groundwater sampling results after the closure of the RCPA is expected, especially at wells nearest the CCR unit, where closure grading and disturbance activities were greatest. The groundwater concentrations in

[1] Arsenic results at R-P-17I are trending downward in a statistically significant manner and the upper limit of the confidence band is approaching the GWPS.

[2]These results display an overall downward trend since April 2020 that is not statistically significant at the 98% confidence level.

many of these wells with exceedances are trending downward, as indicated. The concentrations reported in these results following closure are expected to be variable but are expected to decrease over time as stabilization occurs and supplemental corrective measures are put into service, such as the groundwater treatment system.

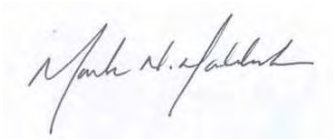
3.0 CLOSING

Rocksmith appreciates this opportunity to provide hydrogeological and engineering support services to Ameren. If you have any questions or comments regarding the information provided, please contact the undersigned.

Sincerely,

Rocksmith Geoengineering, LLC





Jeff Ingram, R.G.
Senior Geologist, Partner

Mark Haddock, P.E., R.G.
Principal Engineer, Senior Partner

Attachments

Tables

Table 1 – RCPA Groundwater Protection Standards

Appendices

Appendix A – Sanitas Confidence Interval Statistical Output

Appendix B – Sanitas Trending Confidence Bands Statistical Output

Tables

Table 1 - RCPA Groundwater Protection Standards
RCPA Surface Impoundment
Rush Island Energy Center

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring[6]
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	30	30
Barium	µg/L	2000	2000	548.6
Beryllium	µg/L	4	4	DQR
Cadmium	µg/L	5	5	DQR
Chromium	µg/L	100	100	2.363
Cobalt	µg/L	6	6	DQR
Fluoride	mg/L	4	4	0.2896
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	64.7	64.7
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	2.297
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter
2. mg/L - milligrams per liter
3. pCi/L - picocuries per liter
4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Updated January 9, 2023 at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.
5. Health Based Groundwater Protection Standards (GWPS) were adoped for Appendix IV parameters without an MCL (i.e. cobalt, lithium, molybdenum, and lead). Information available at https://www.epa.gov/coalash/coal-ash-rule.
6. Values were calculated using statistical methods outlined for Detection Monitoring and are used for returning to Detection Monitoring based on available data to date.
7. DQR - Double Quantification Rule. If all baseline data are less than the Practical Quantitation Limit (PQL), then the DQR will be used. More information on the DQR is provided in the Statistical Analysis Plan.
8. Site GWPS is either the MCL/Health Based GWPS or based on background levels (calculated as described in the Statistical Analysis Plan for Assessment Monitoring), whichever is higher.
9. GWPS and background values calculated using results up through April 2023 from monitoring wells MW-B1 and MW-B2.

Prepared by: GTM
Checked by: JSI
Reviewed by: MNH

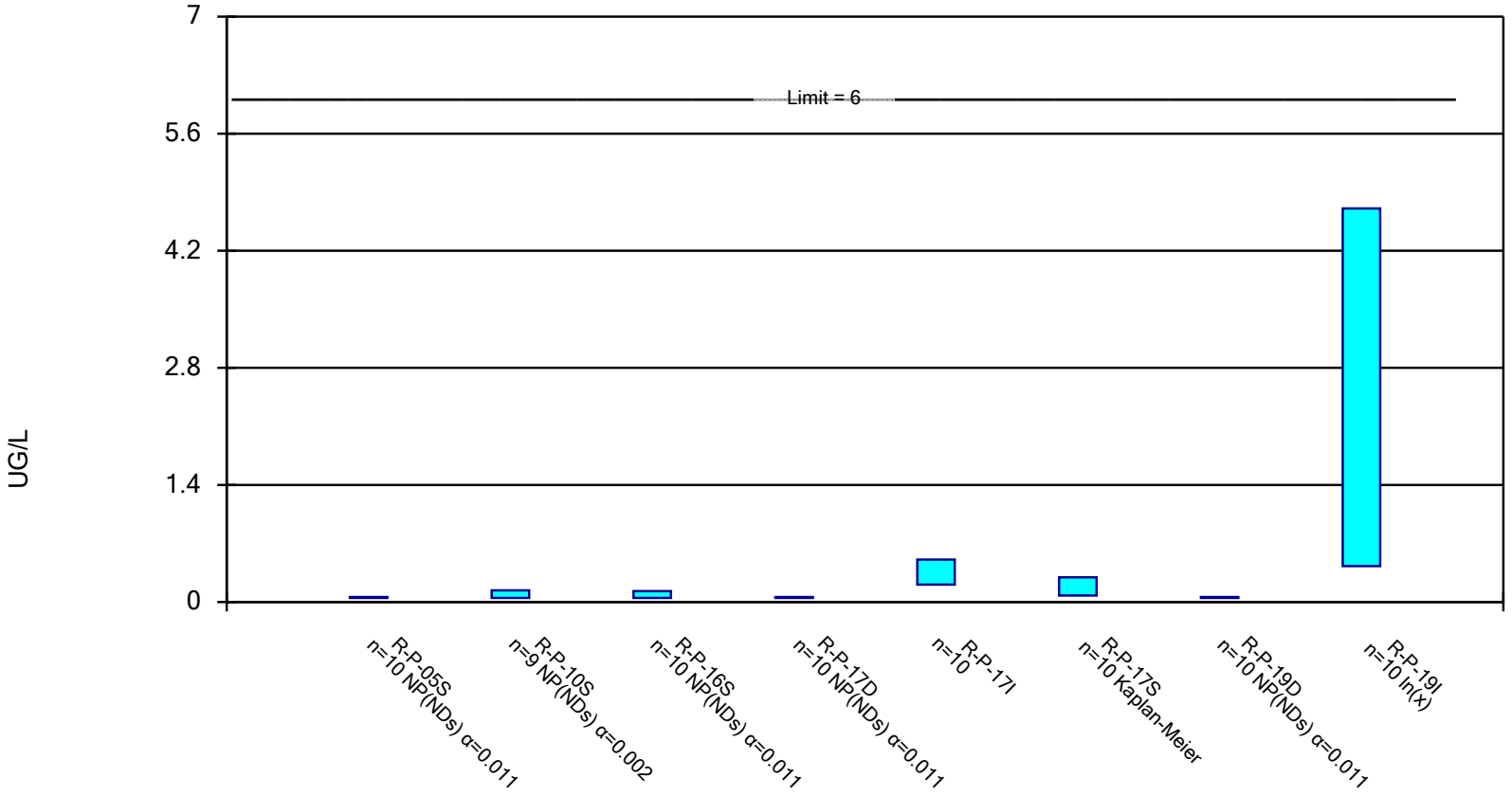
ROCKSMITH GEOENGINEERING

Appendix A
Sanitas Confidence Interval Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

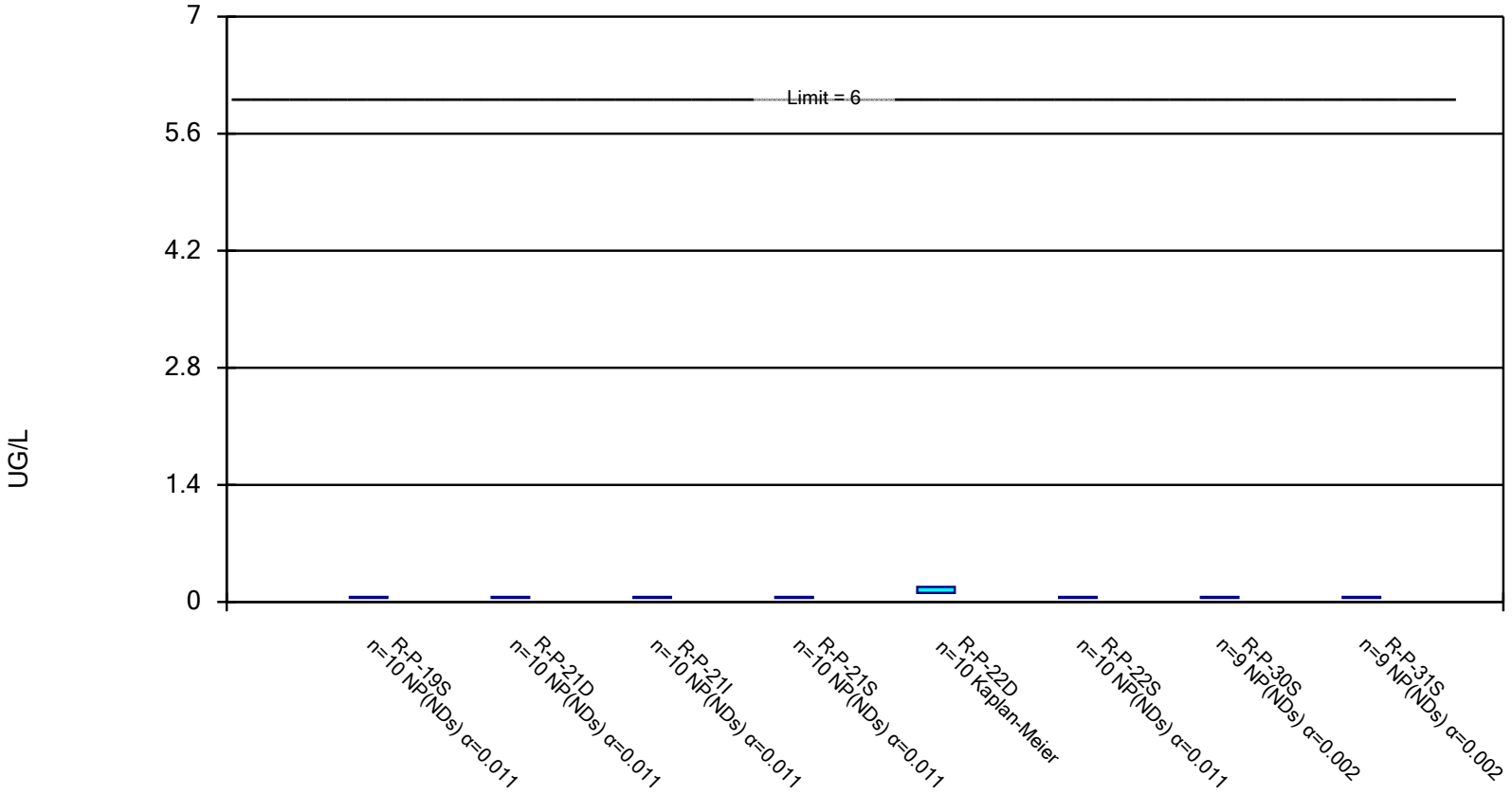


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Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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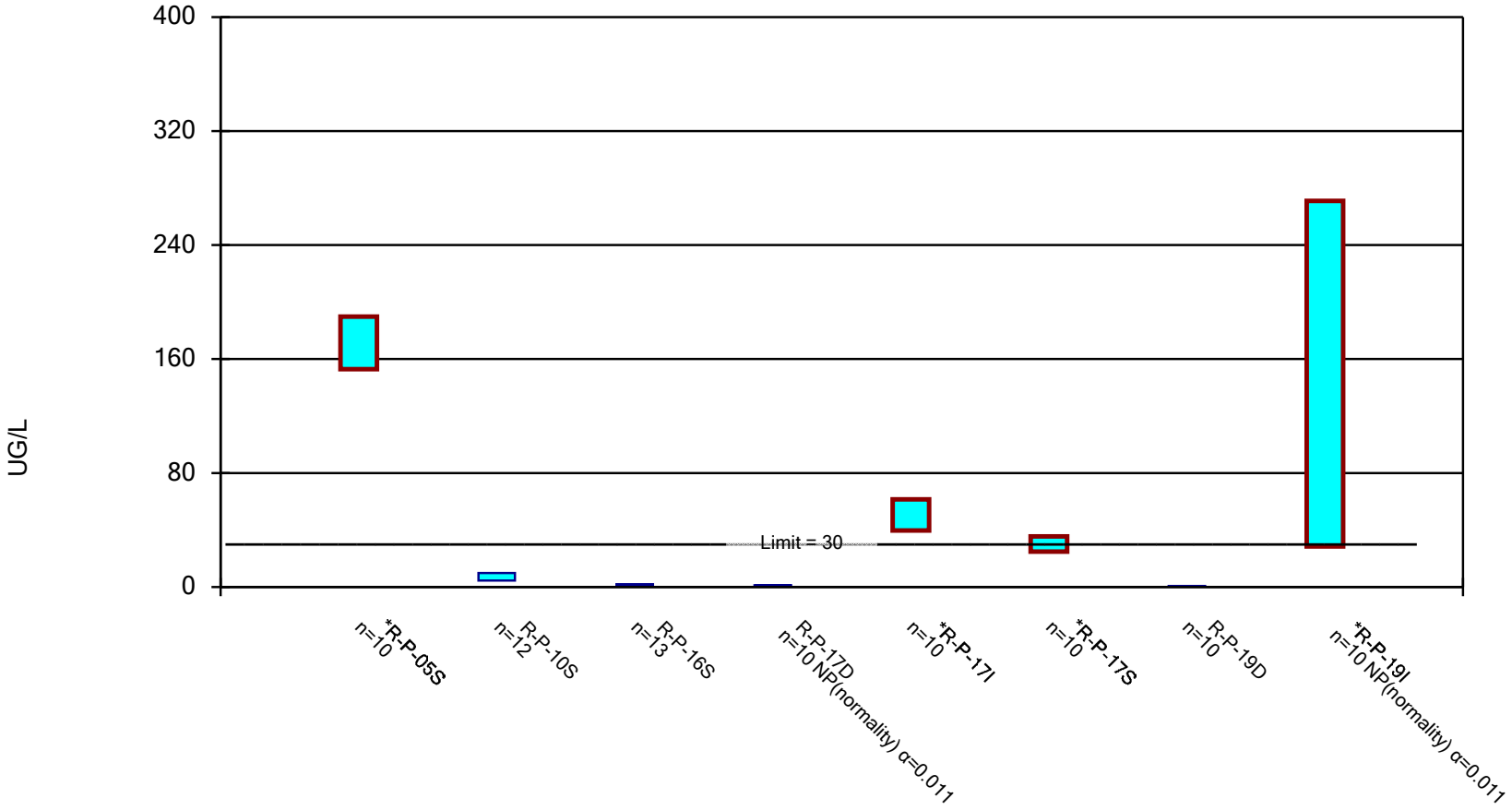
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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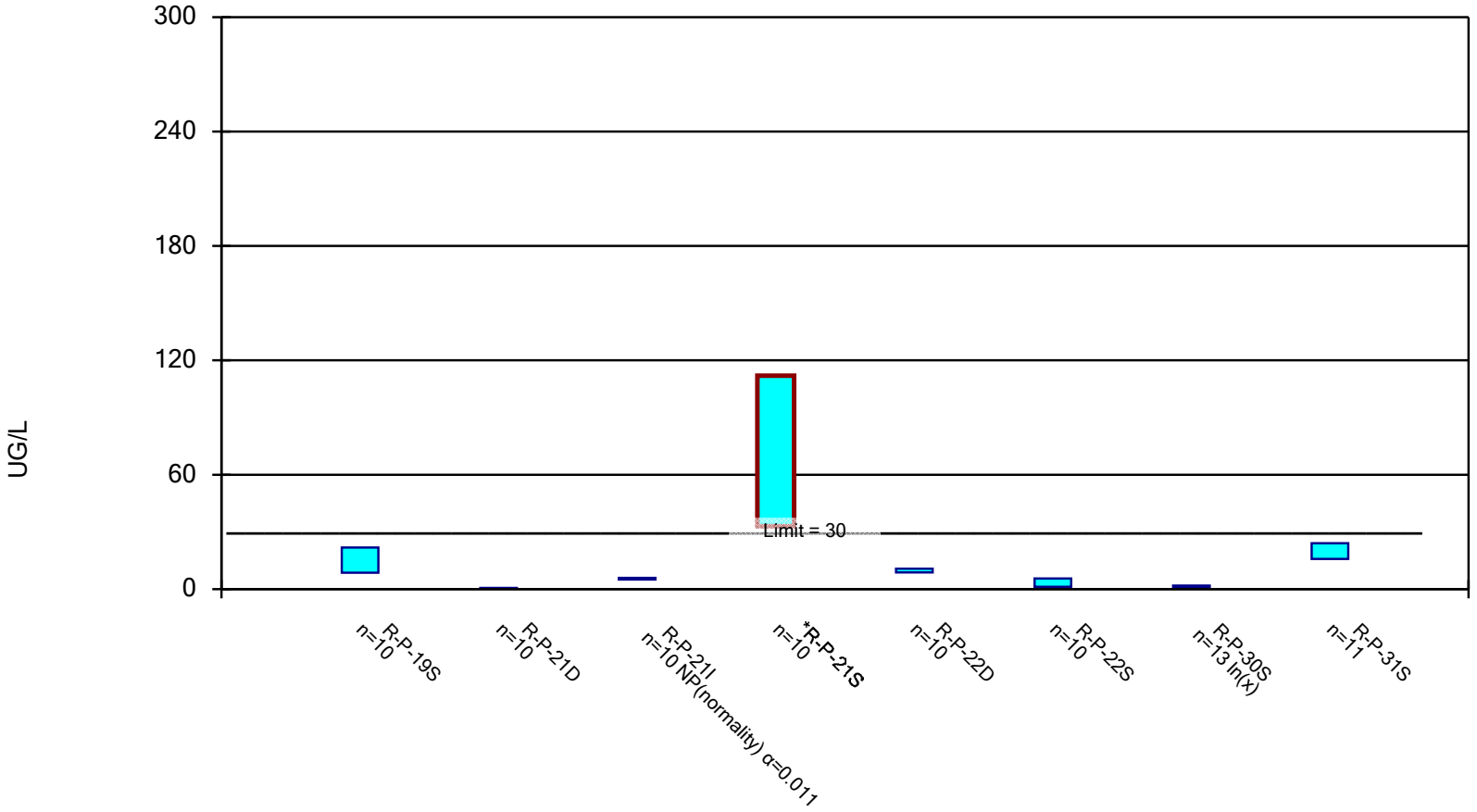
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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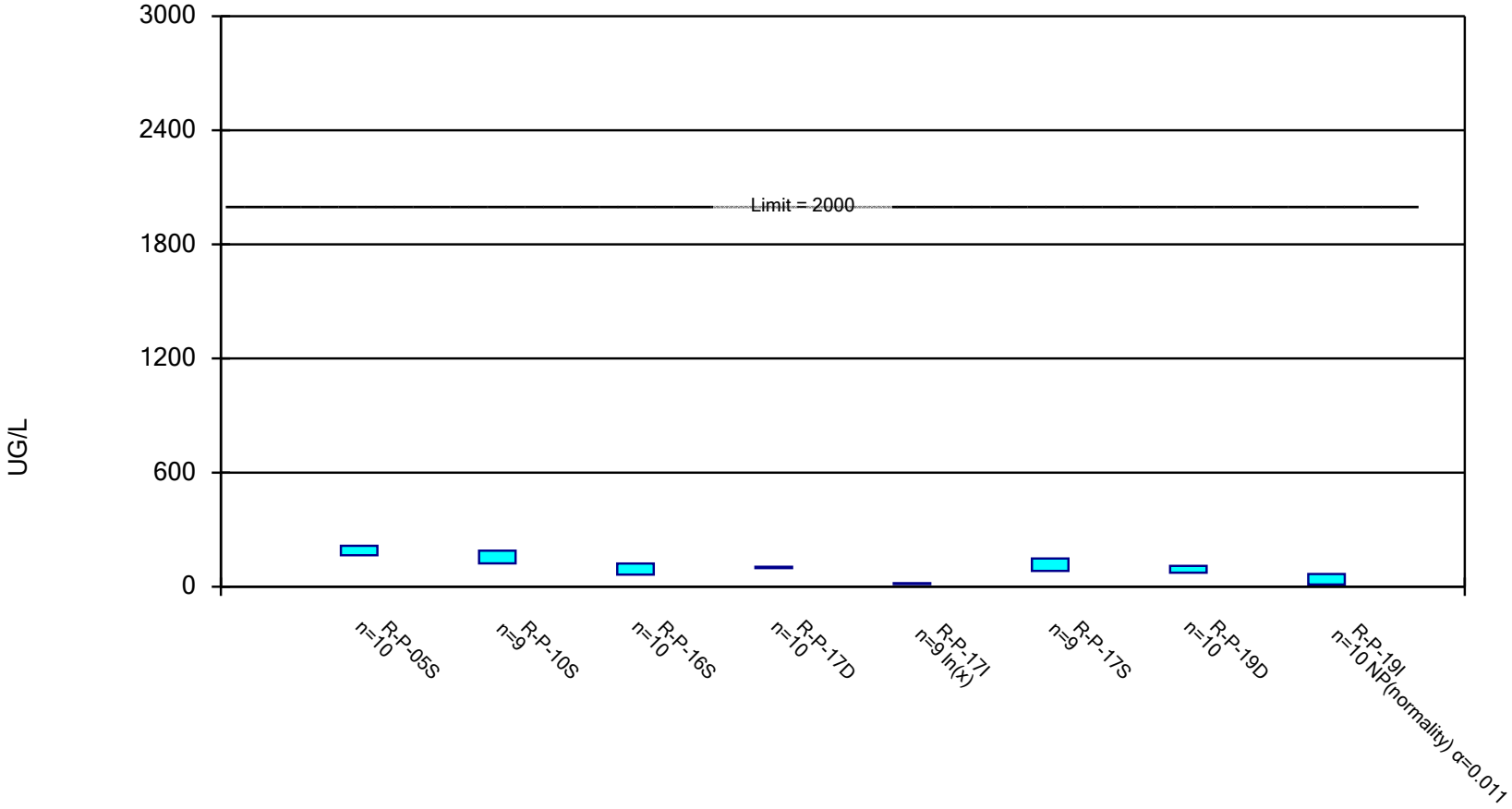


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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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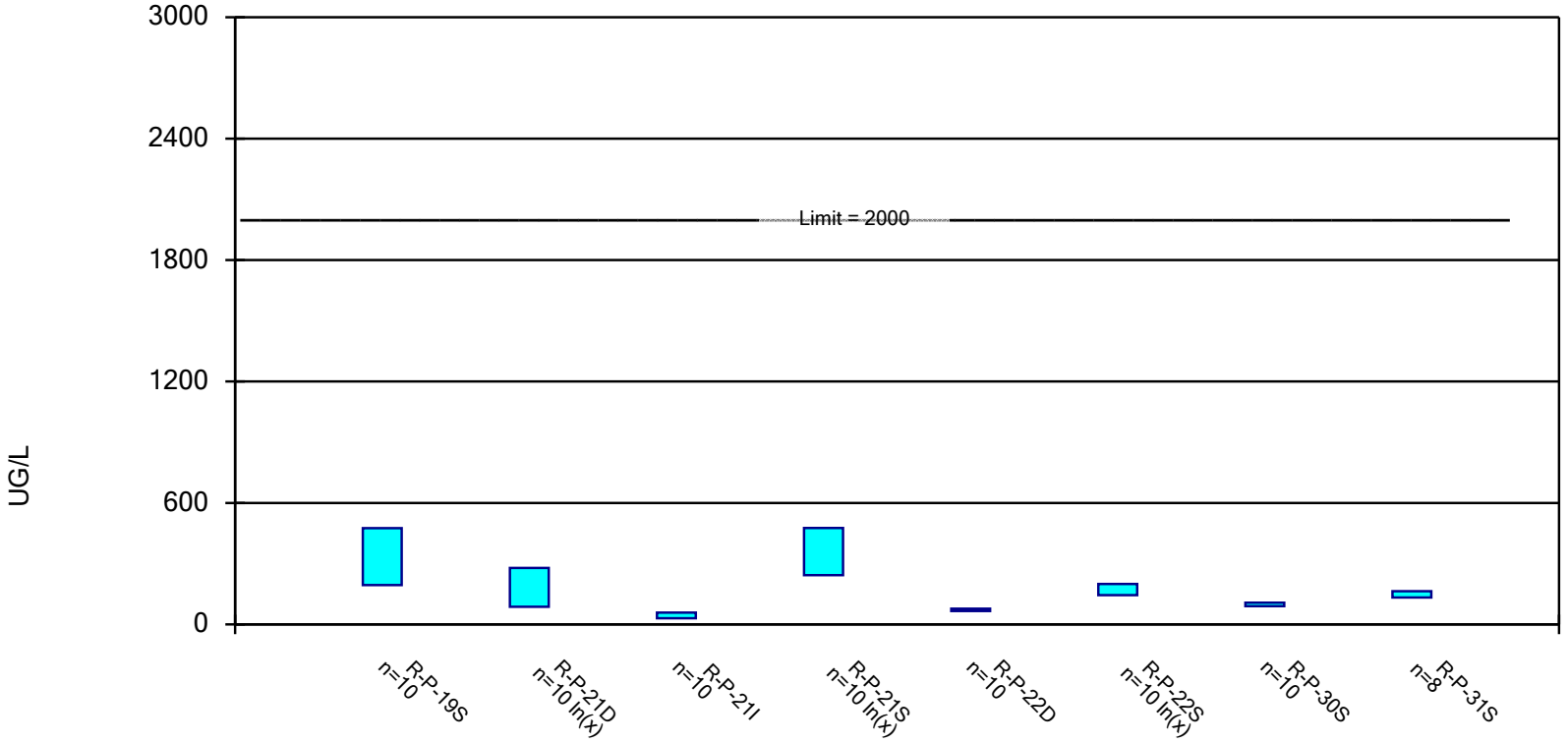
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric Confidence Interval, Corrective Action Mode

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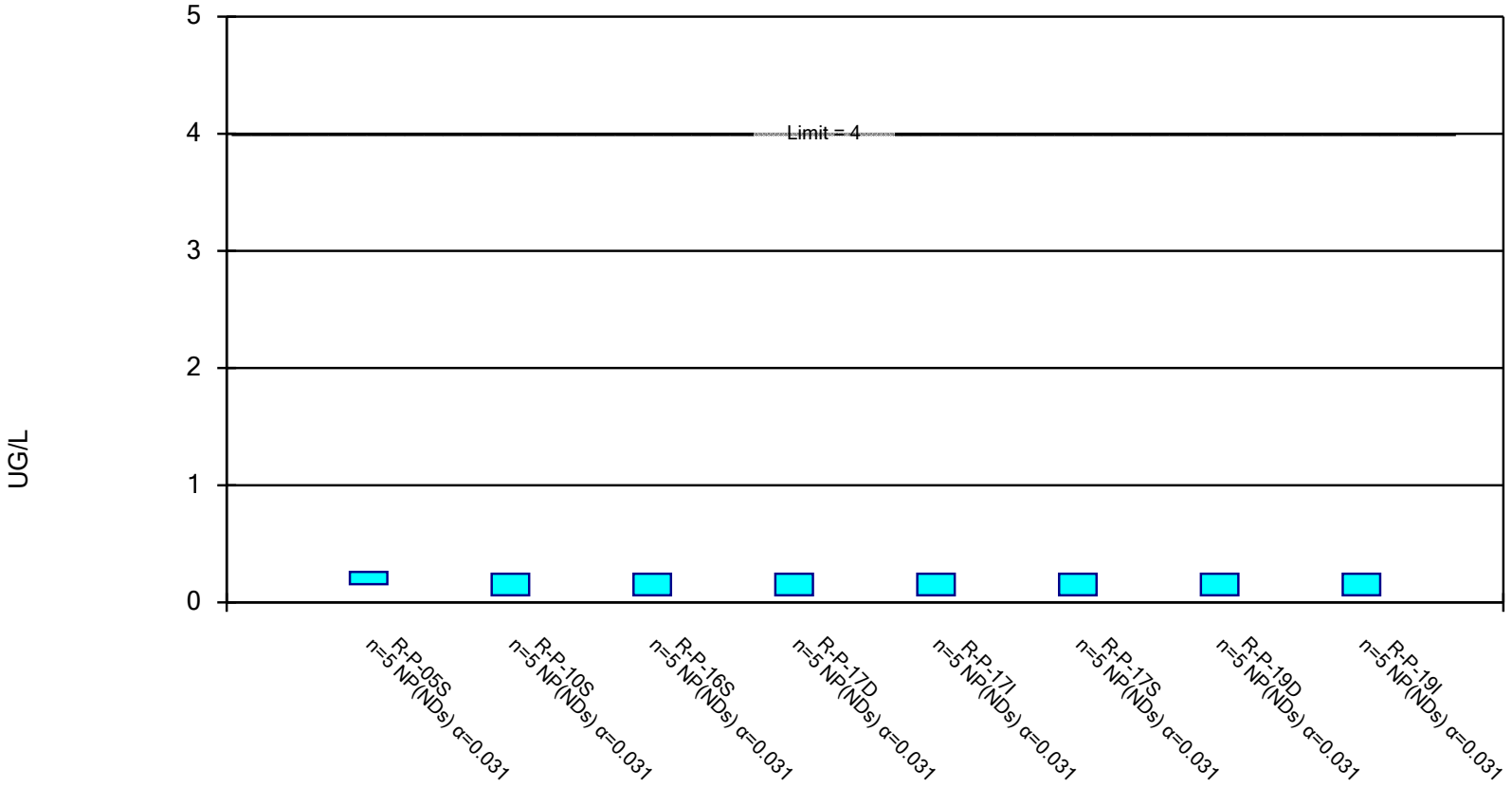
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

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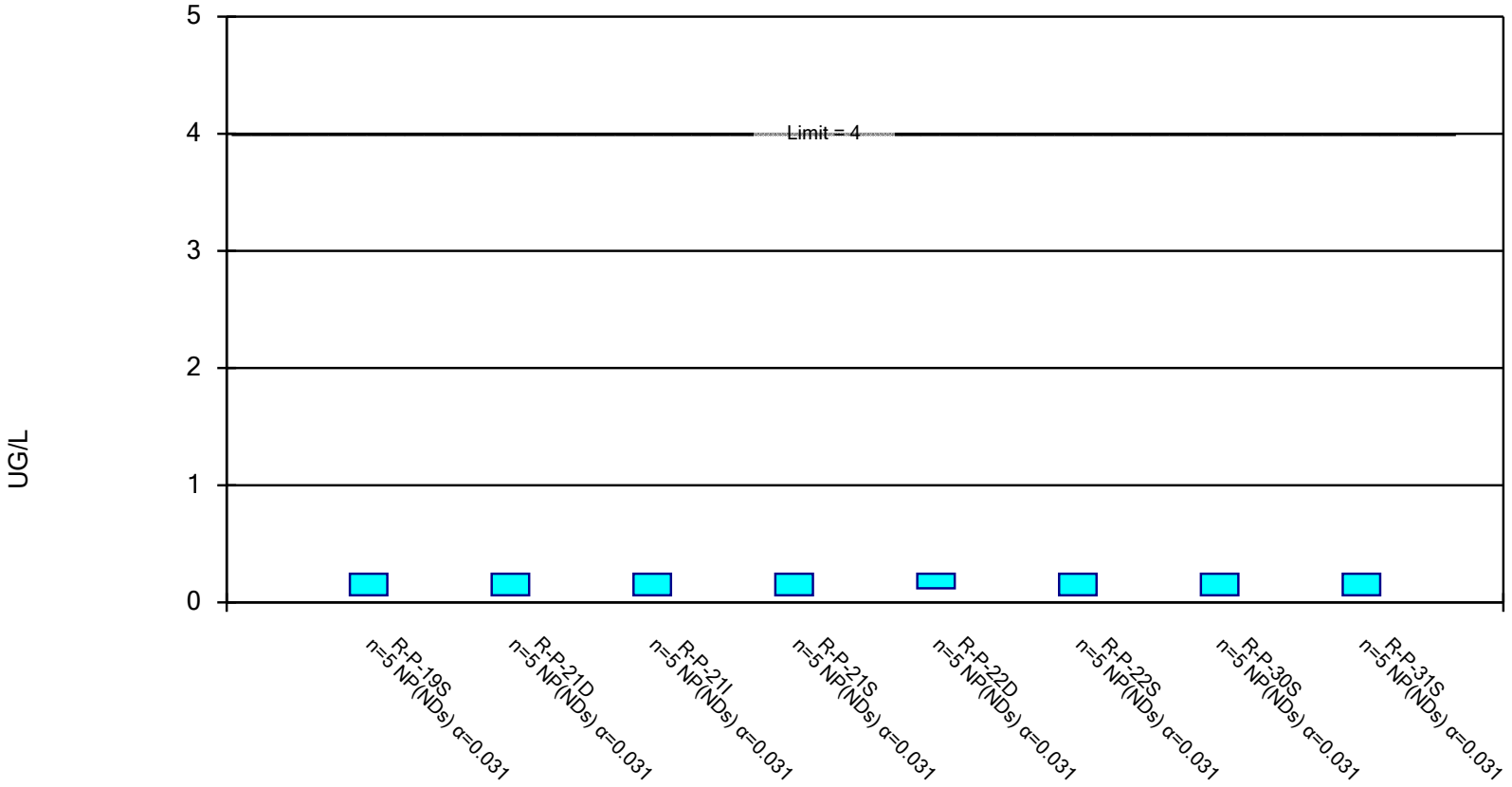
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

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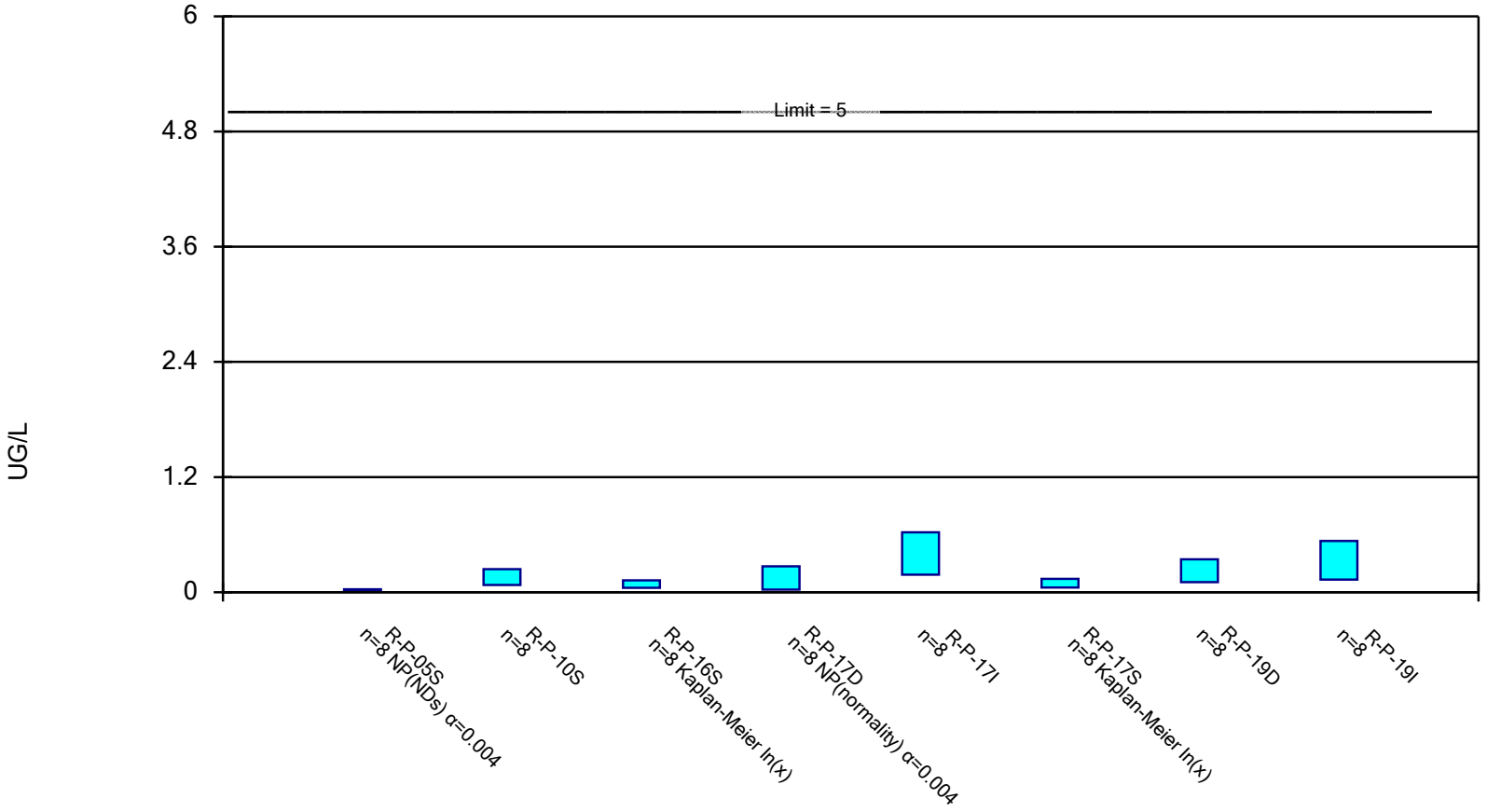
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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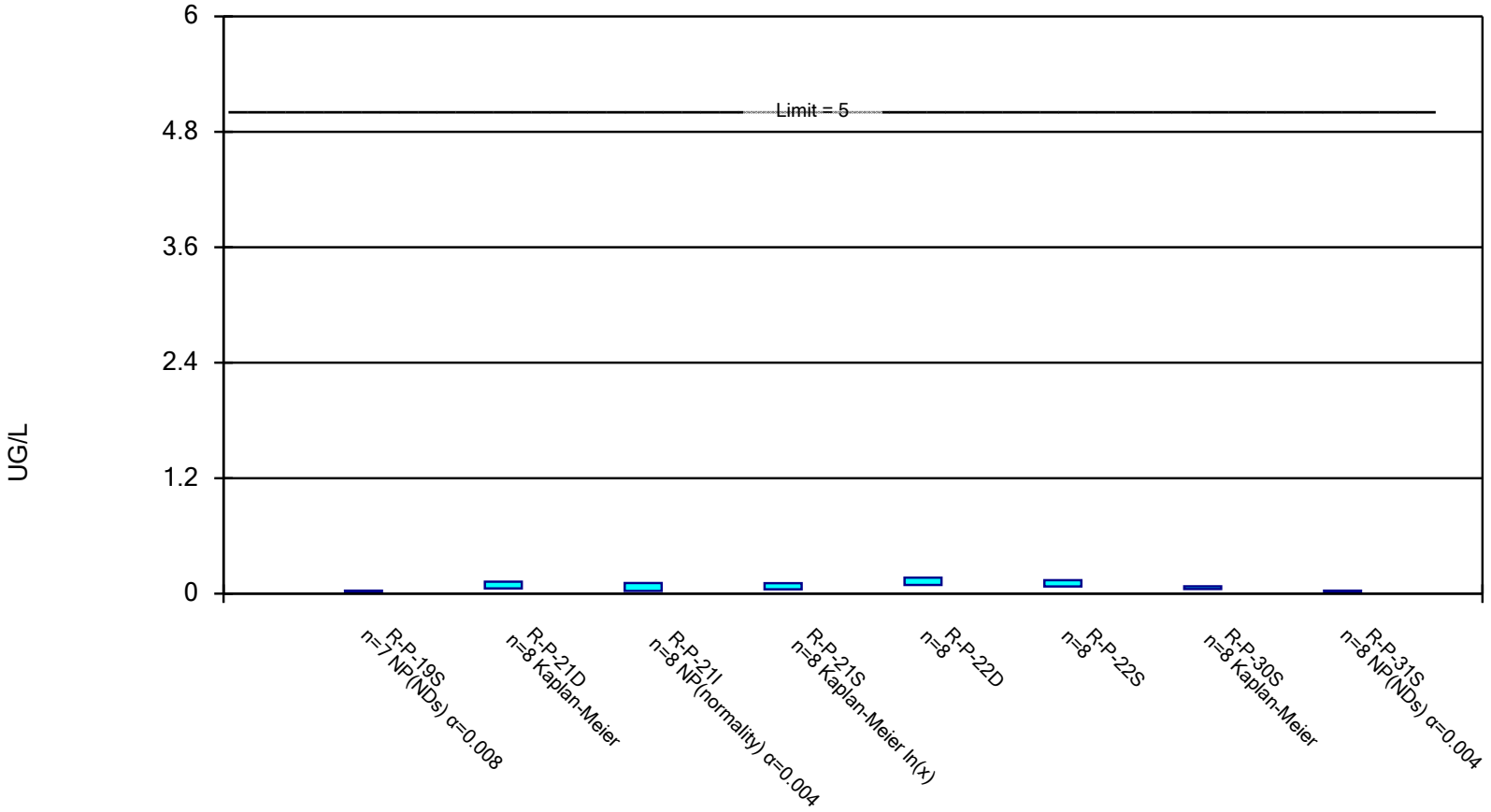
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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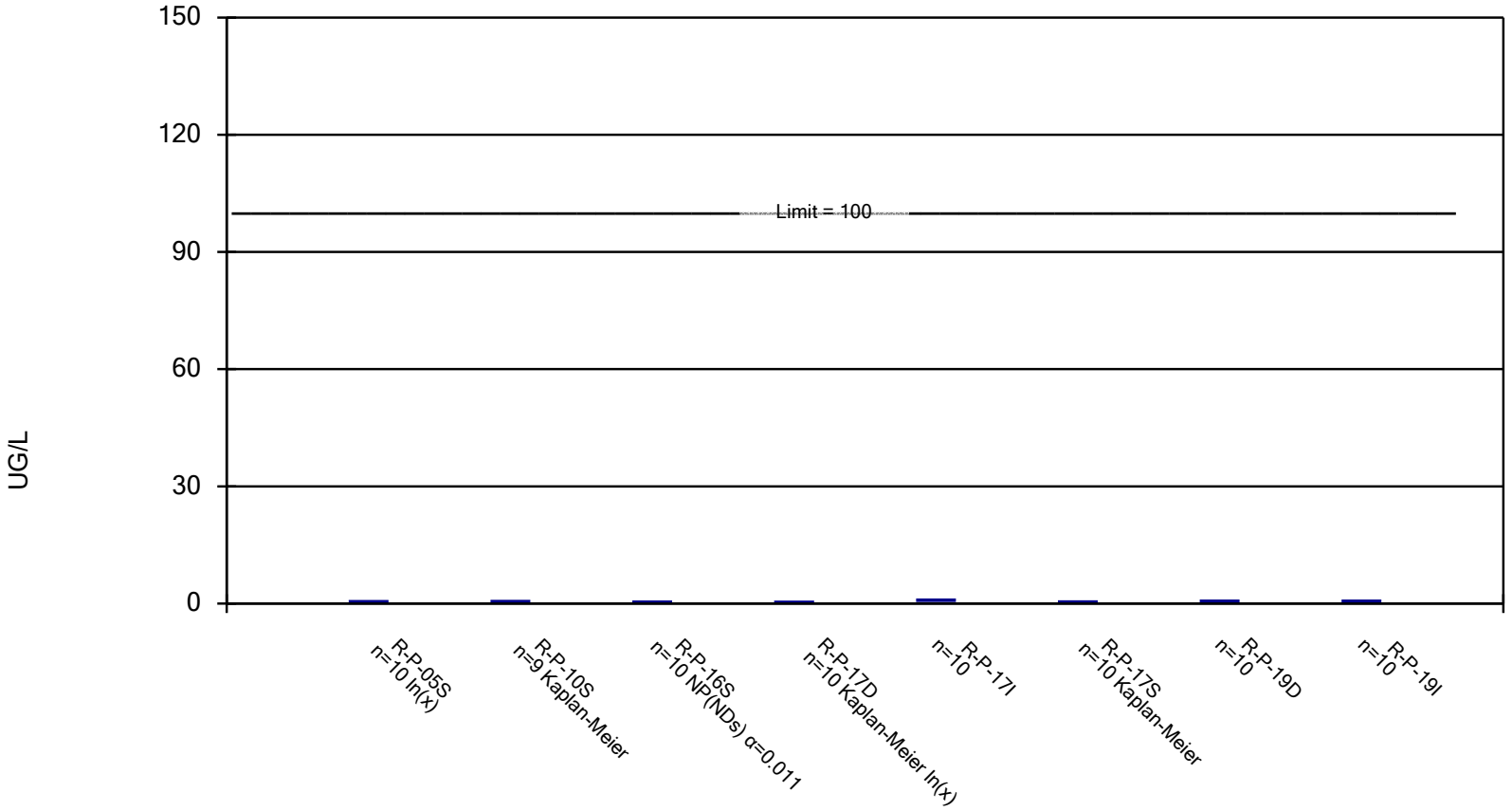


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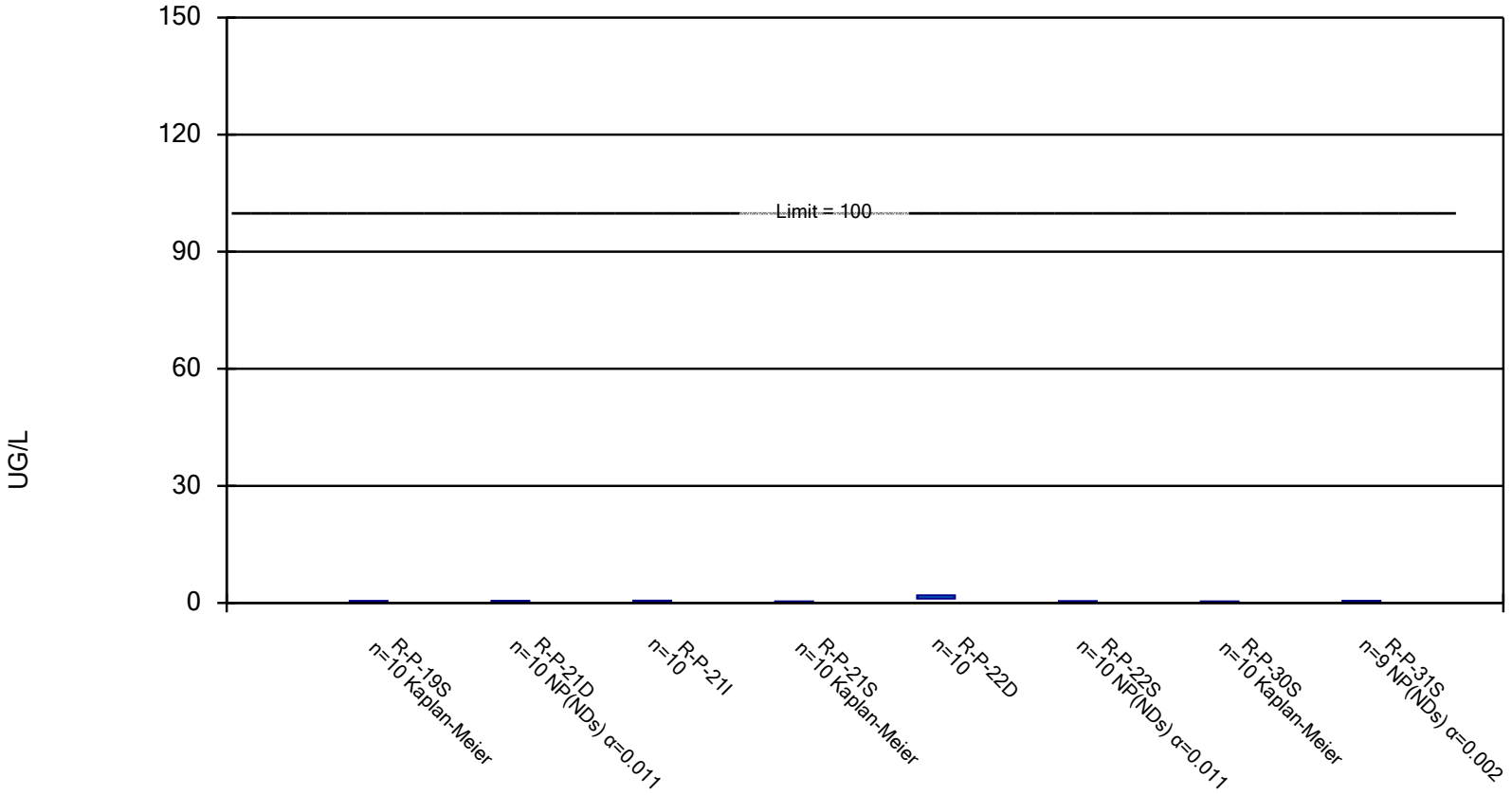
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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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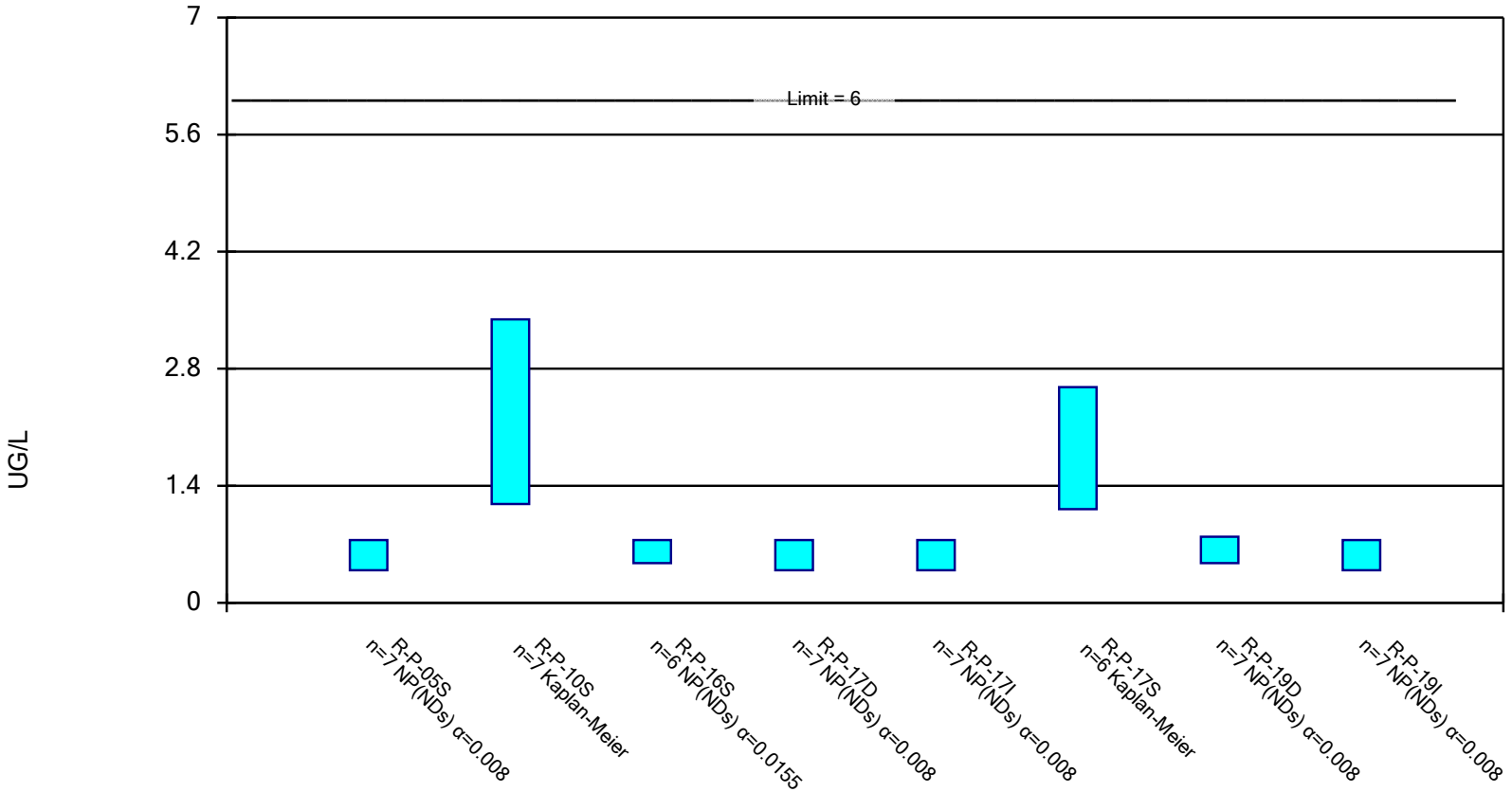
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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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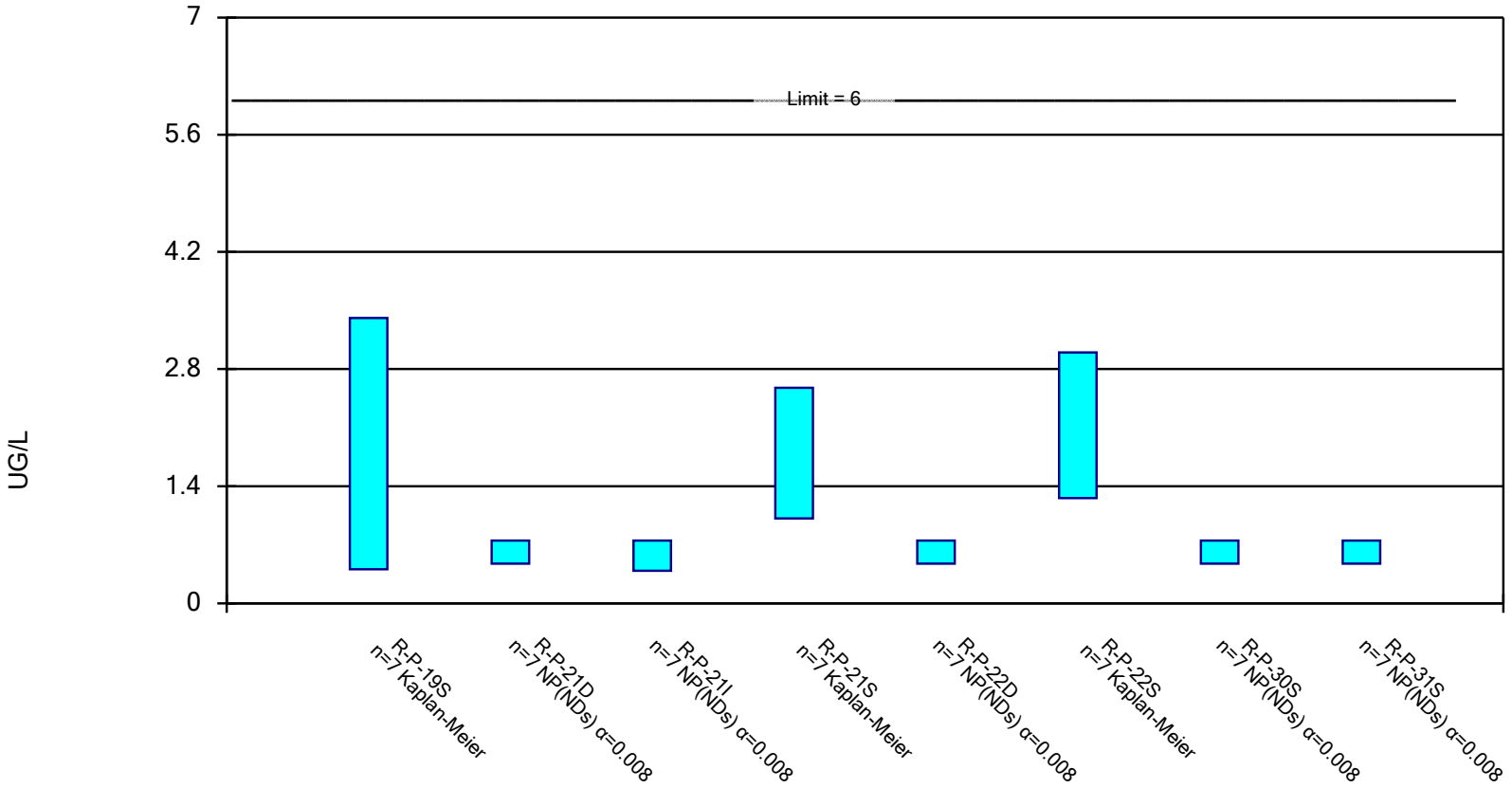
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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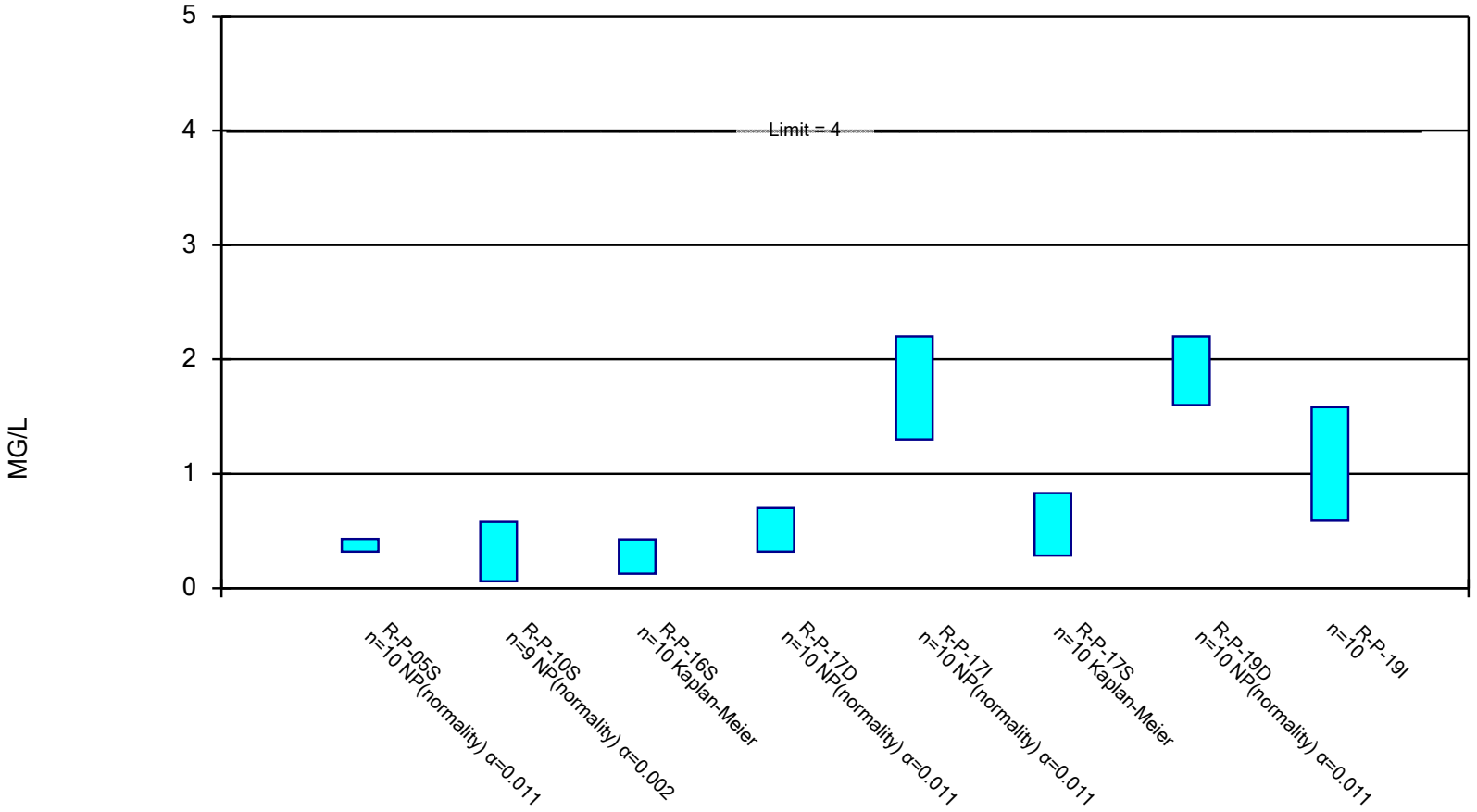
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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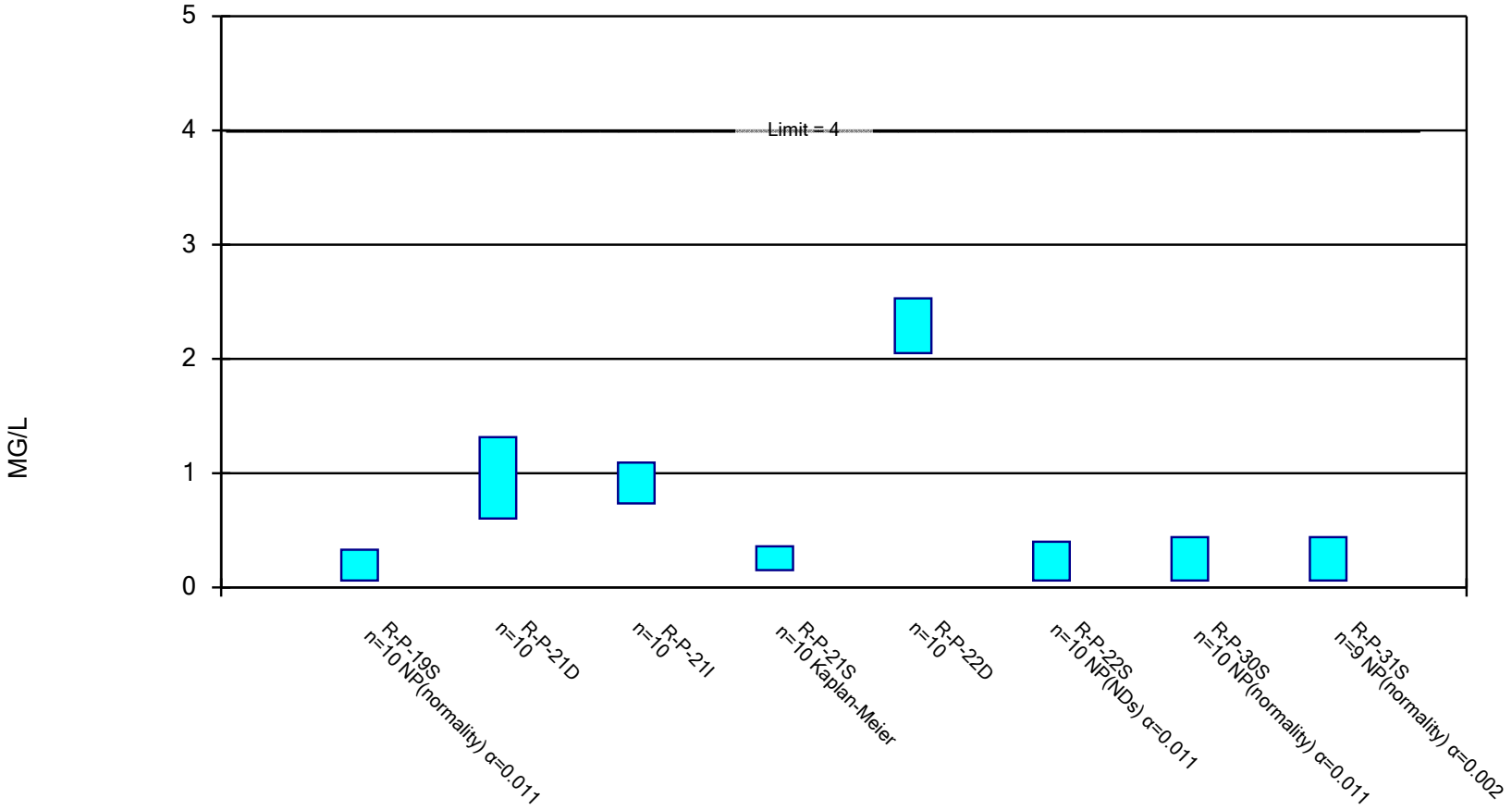
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Rush Island E.C. Client: Ameren Data: RIEC Data

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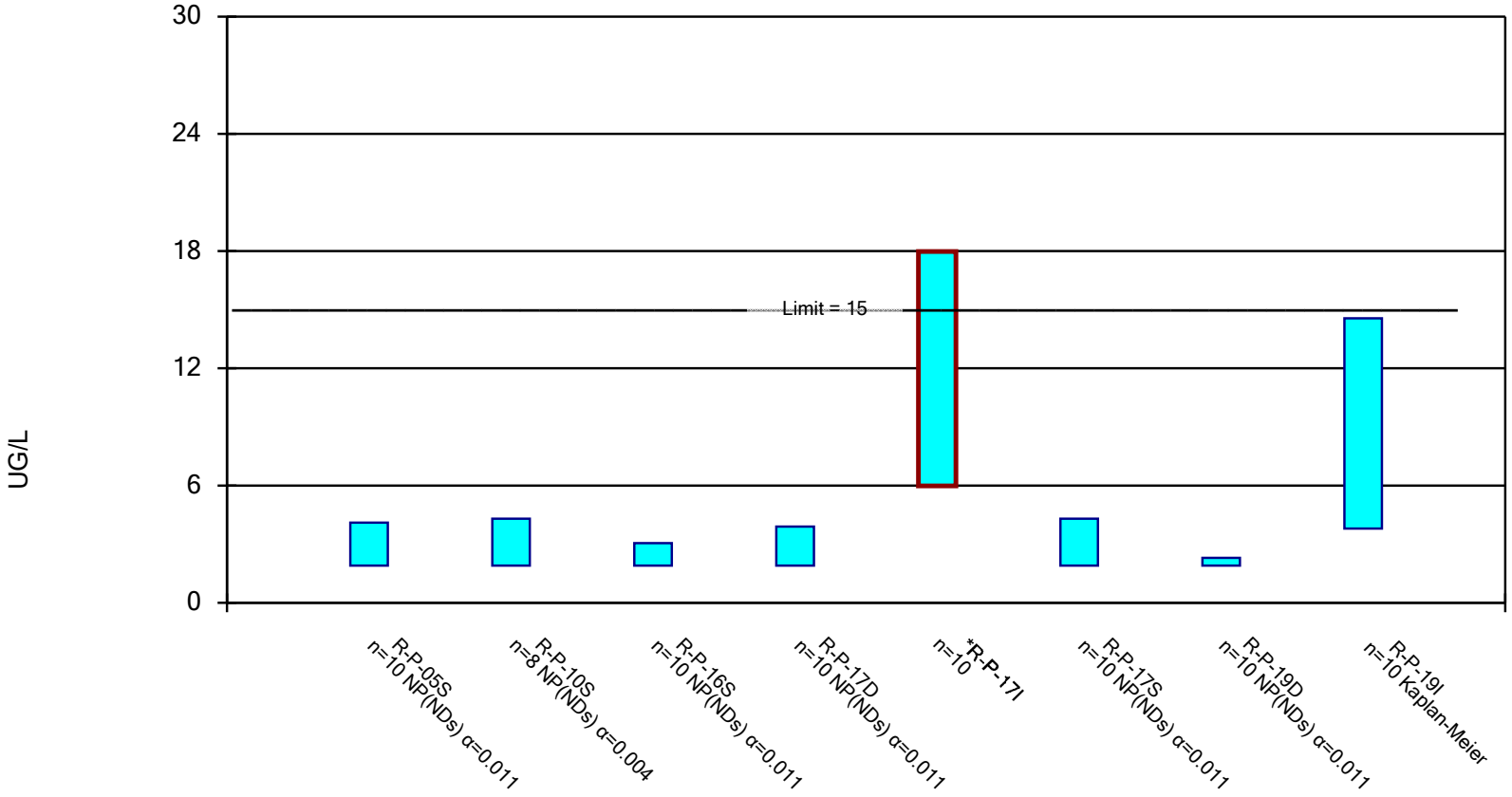


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Rush Island E.C. Client: Ameren Data: RIEC Data

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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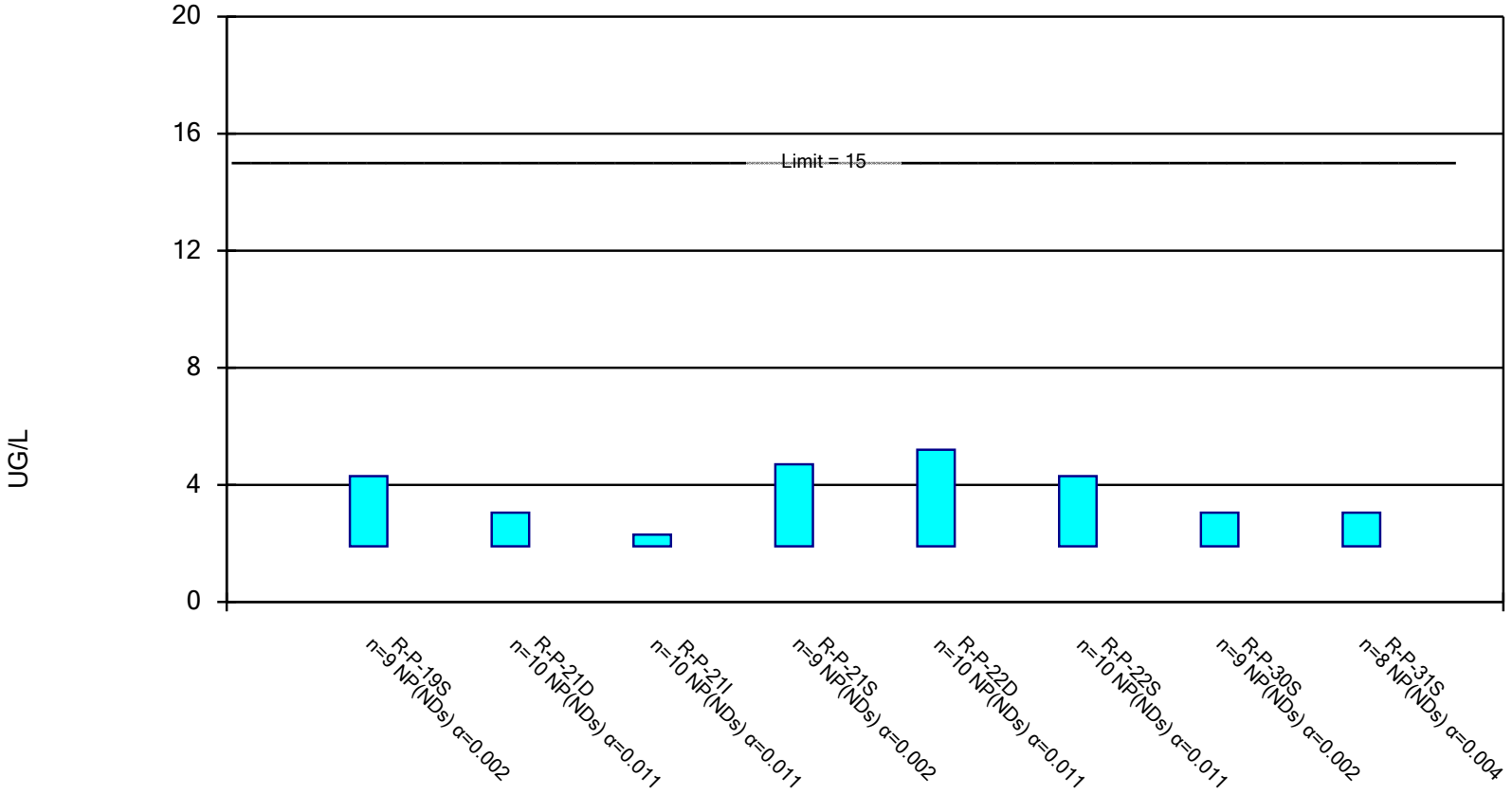
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

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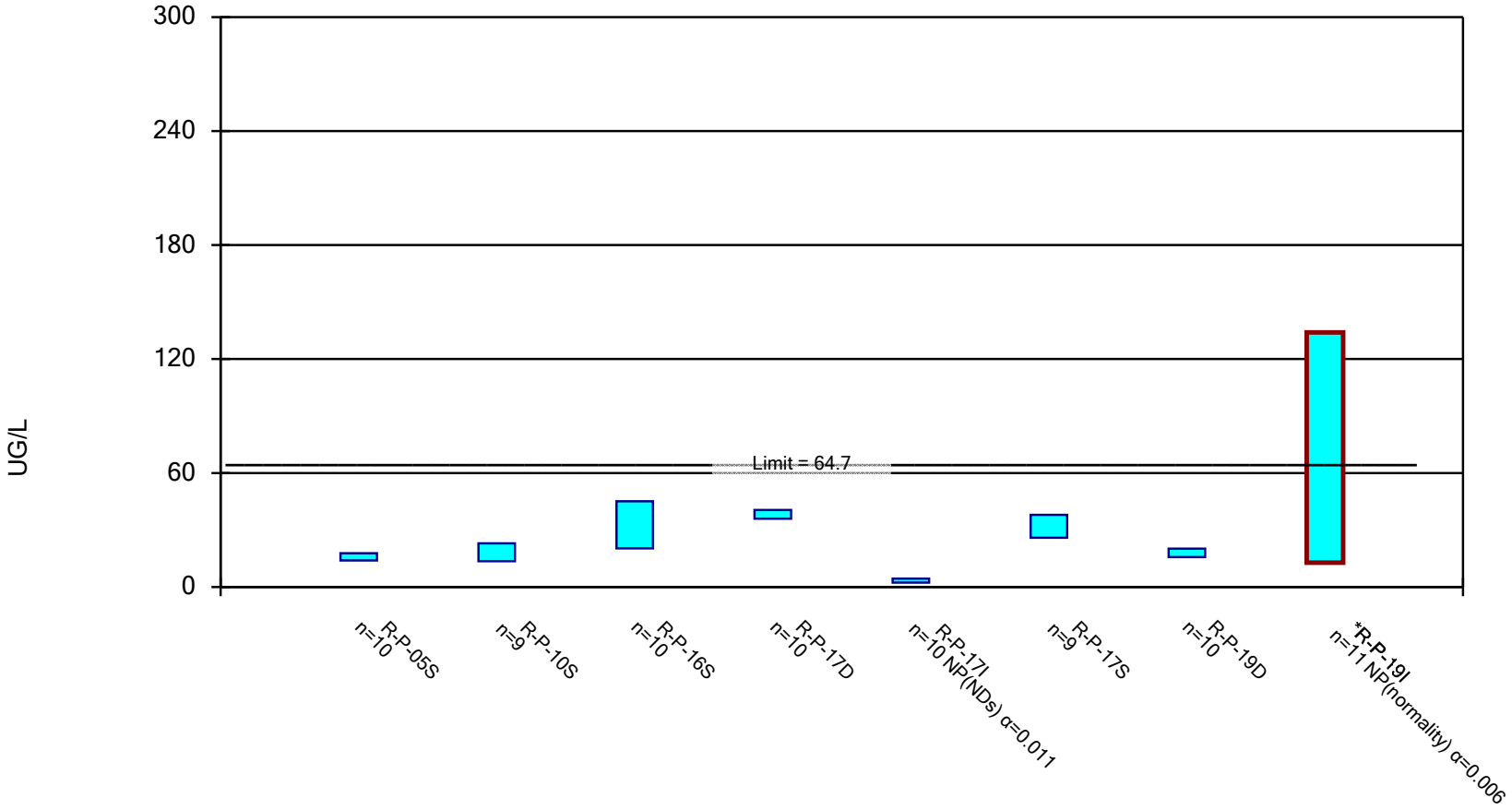
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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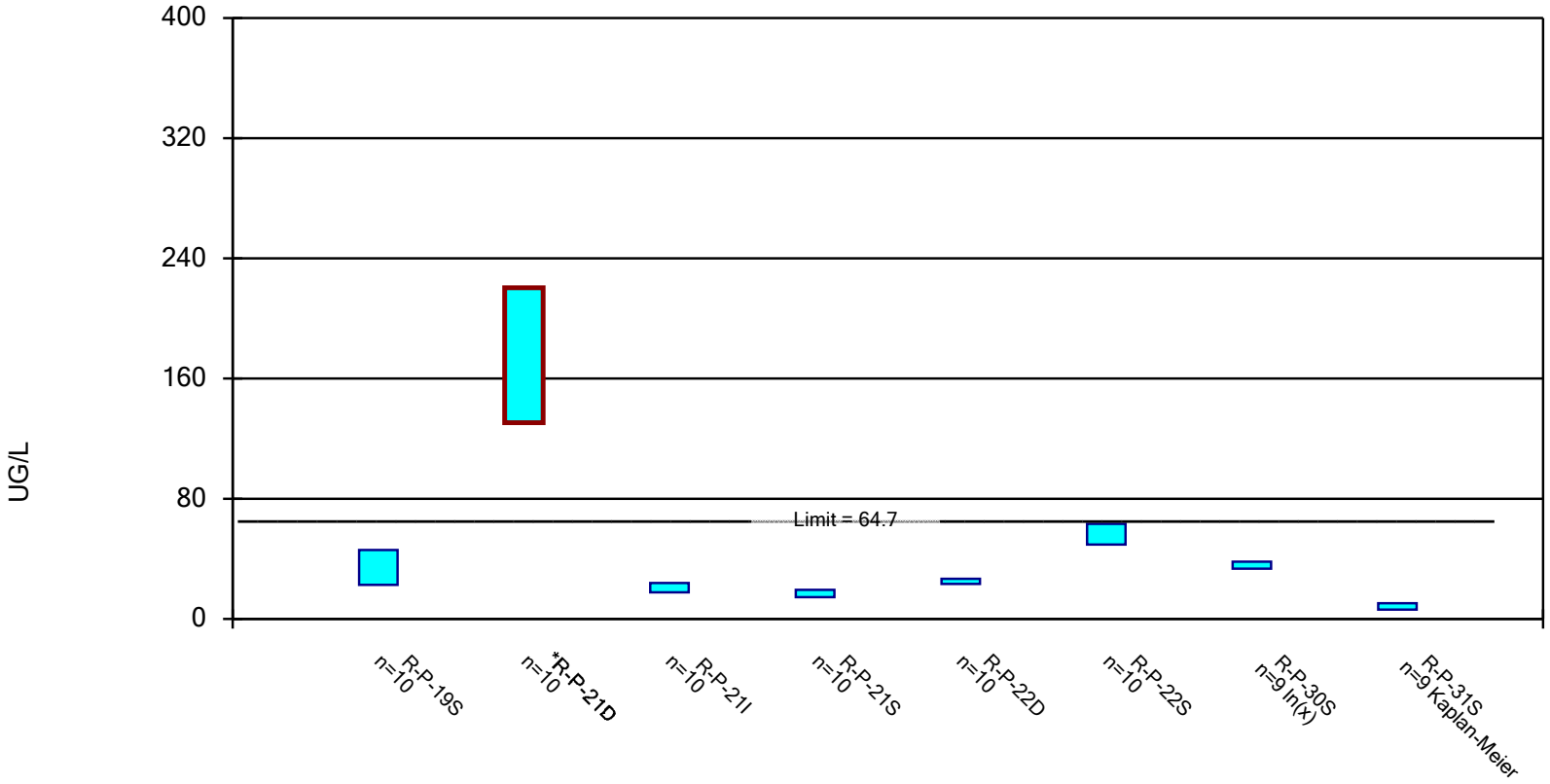


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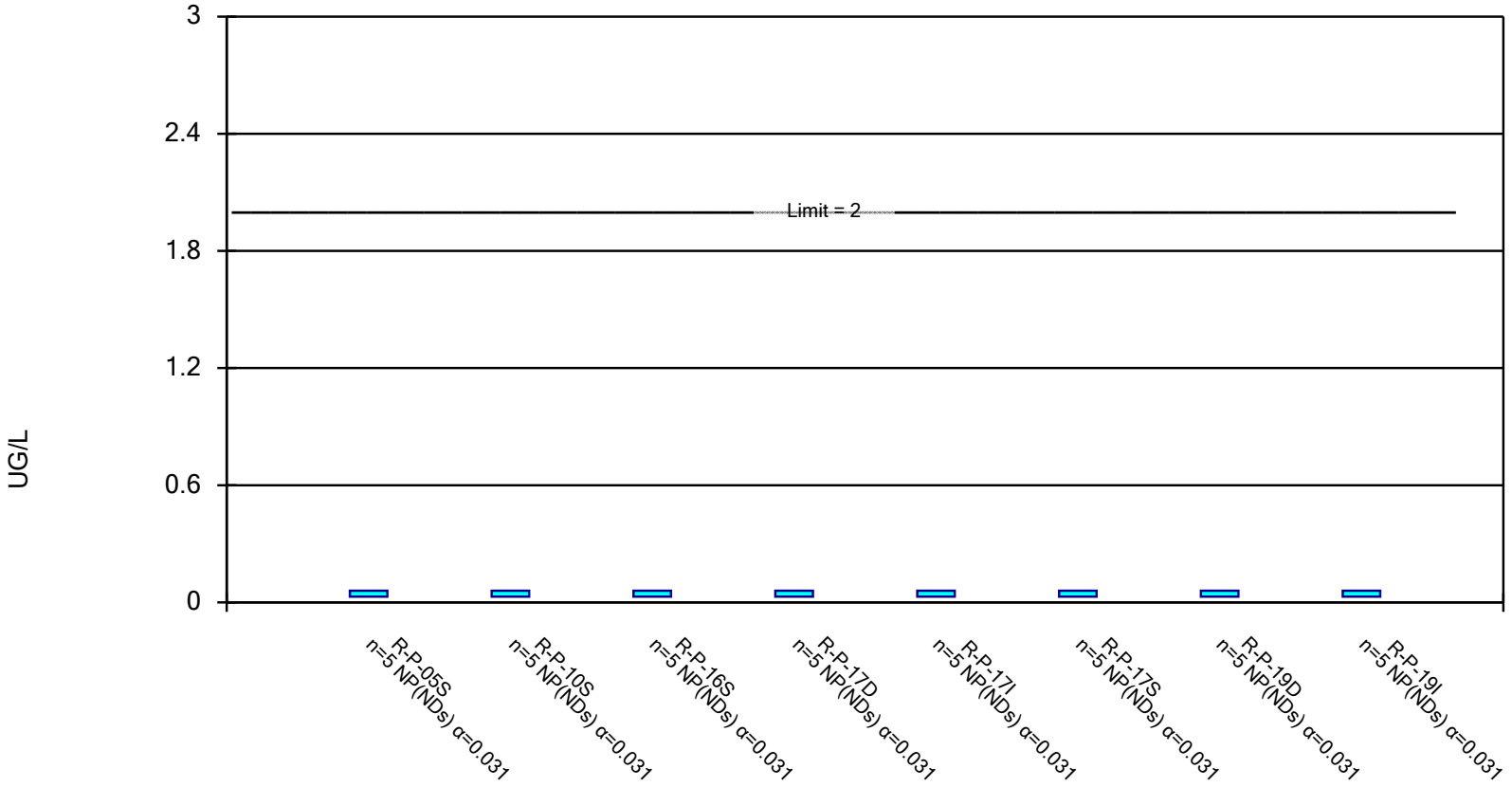
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Non-Parametric Confidence Interval, Corrective Action Mode

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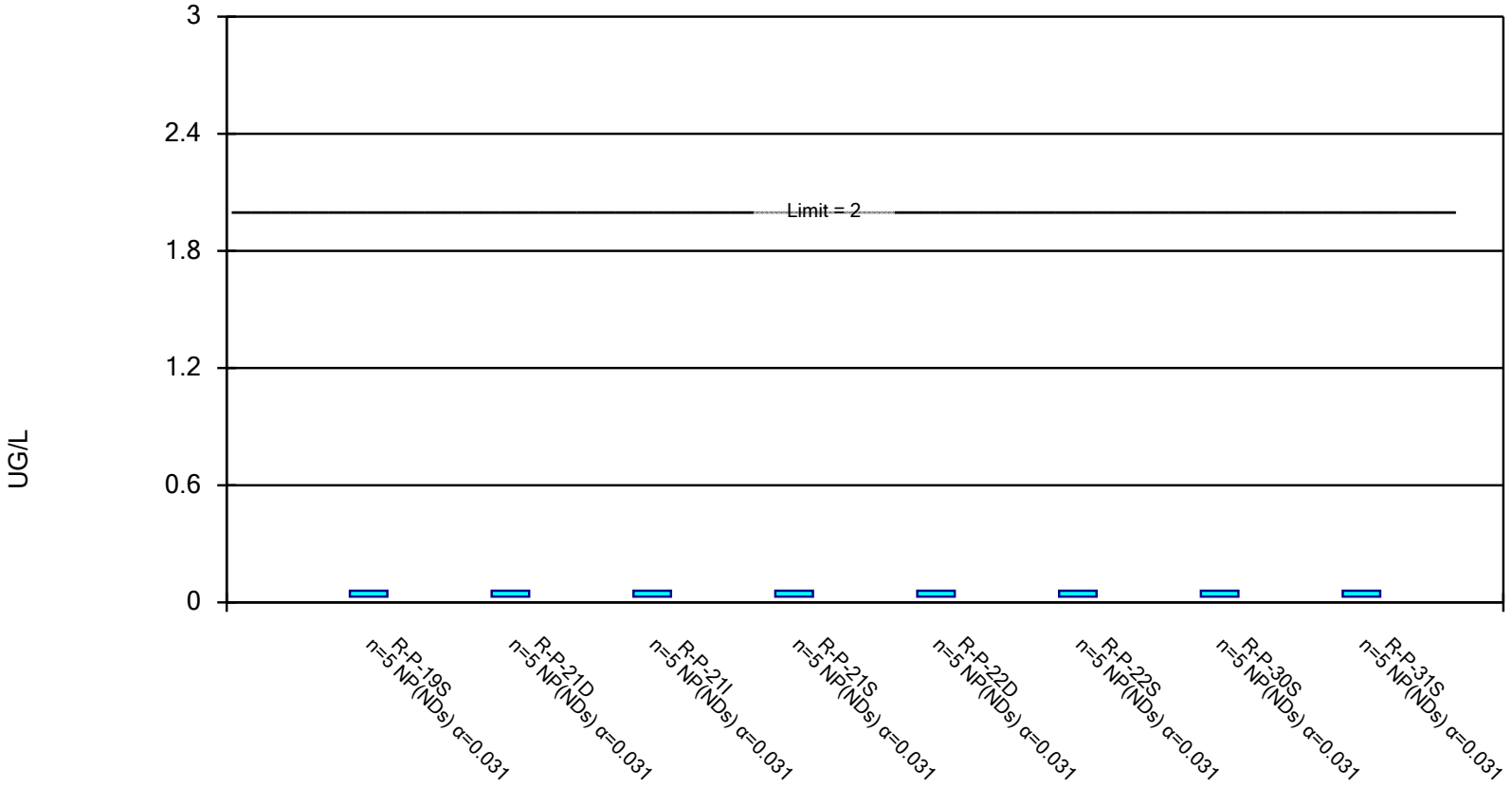
Constituent: MERCURY, TOTAL Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



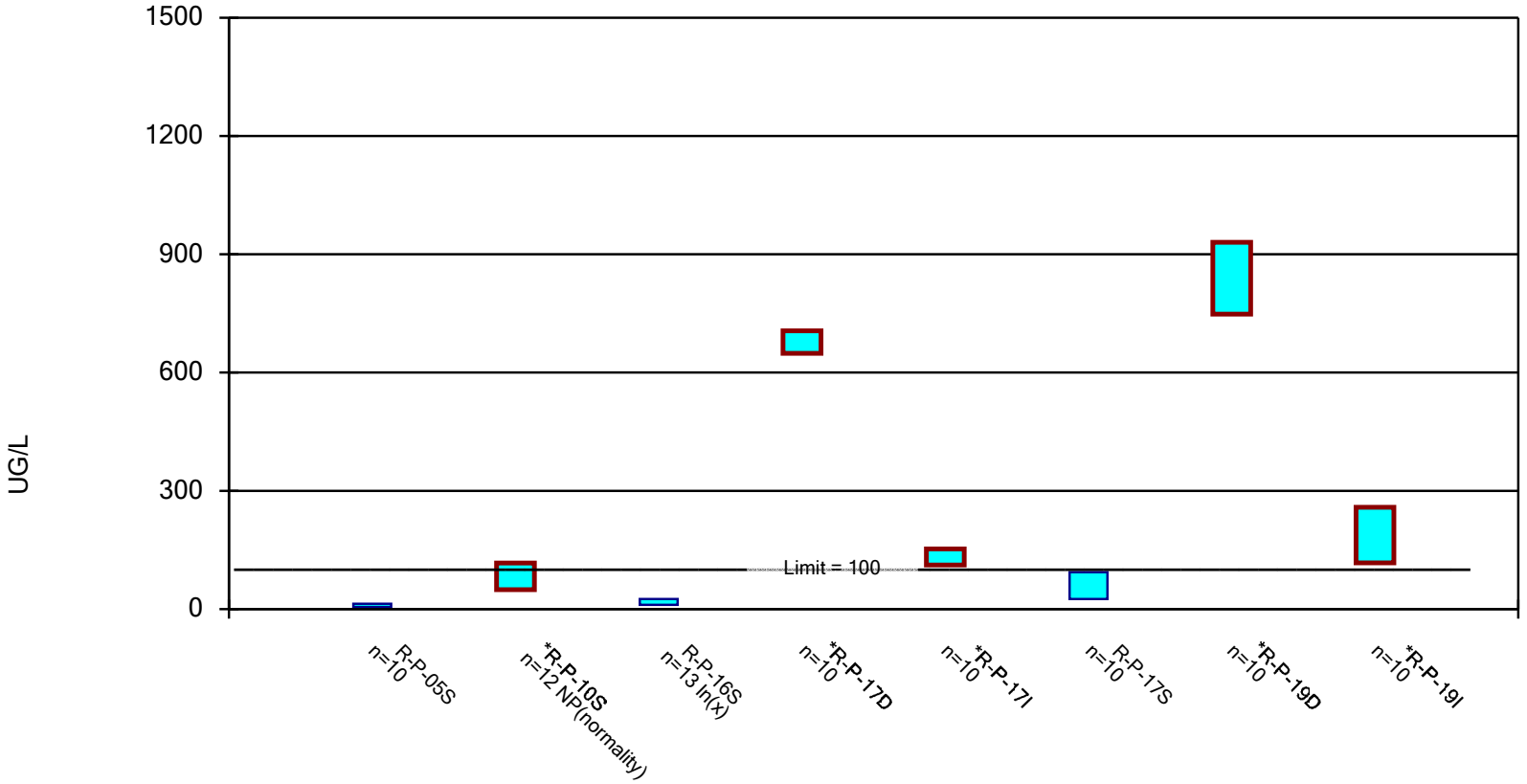
Constituent: MERCURY, TOTAL Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



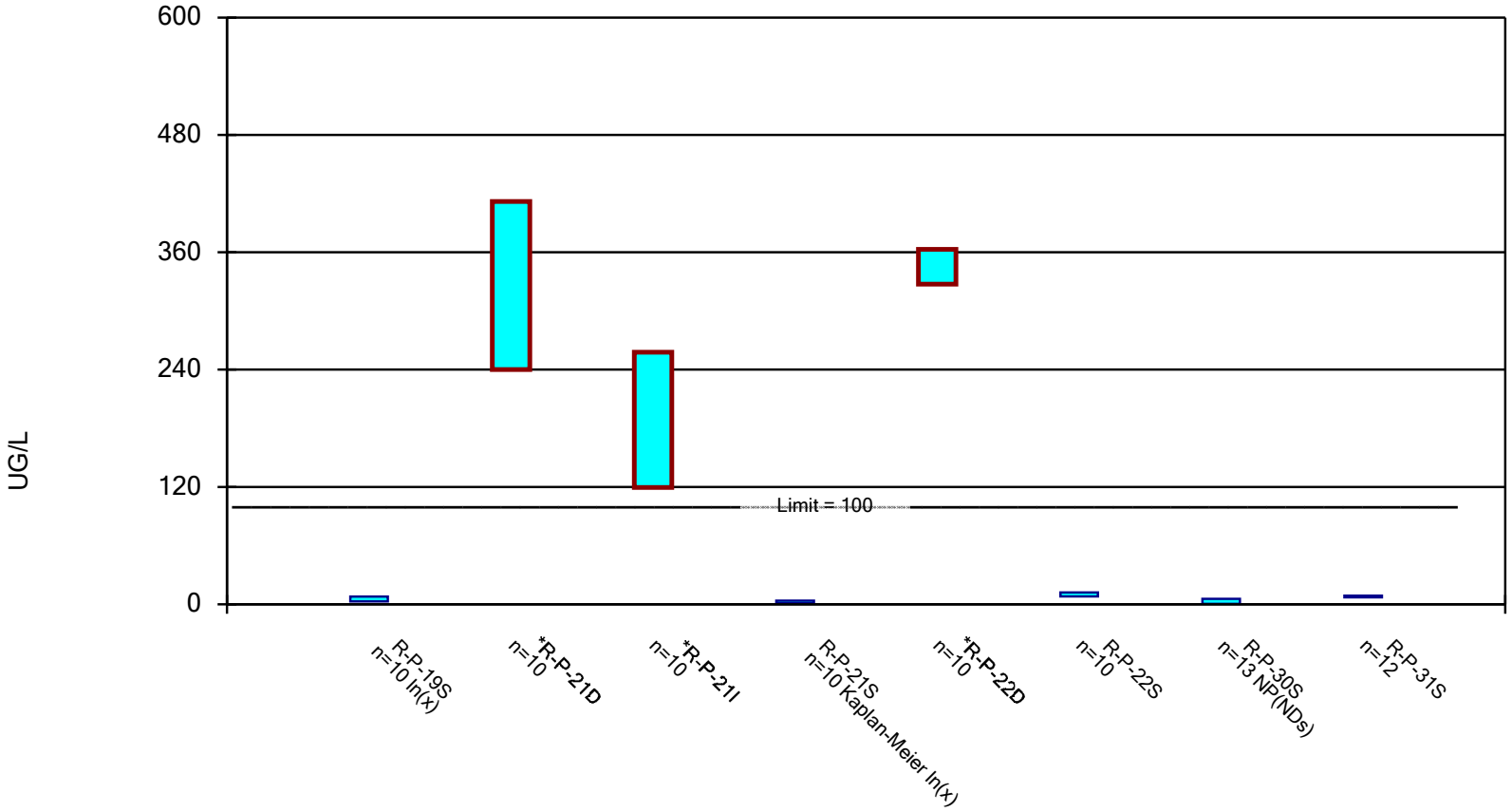
Constituent: MOLYBDENUM, TOTAL Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



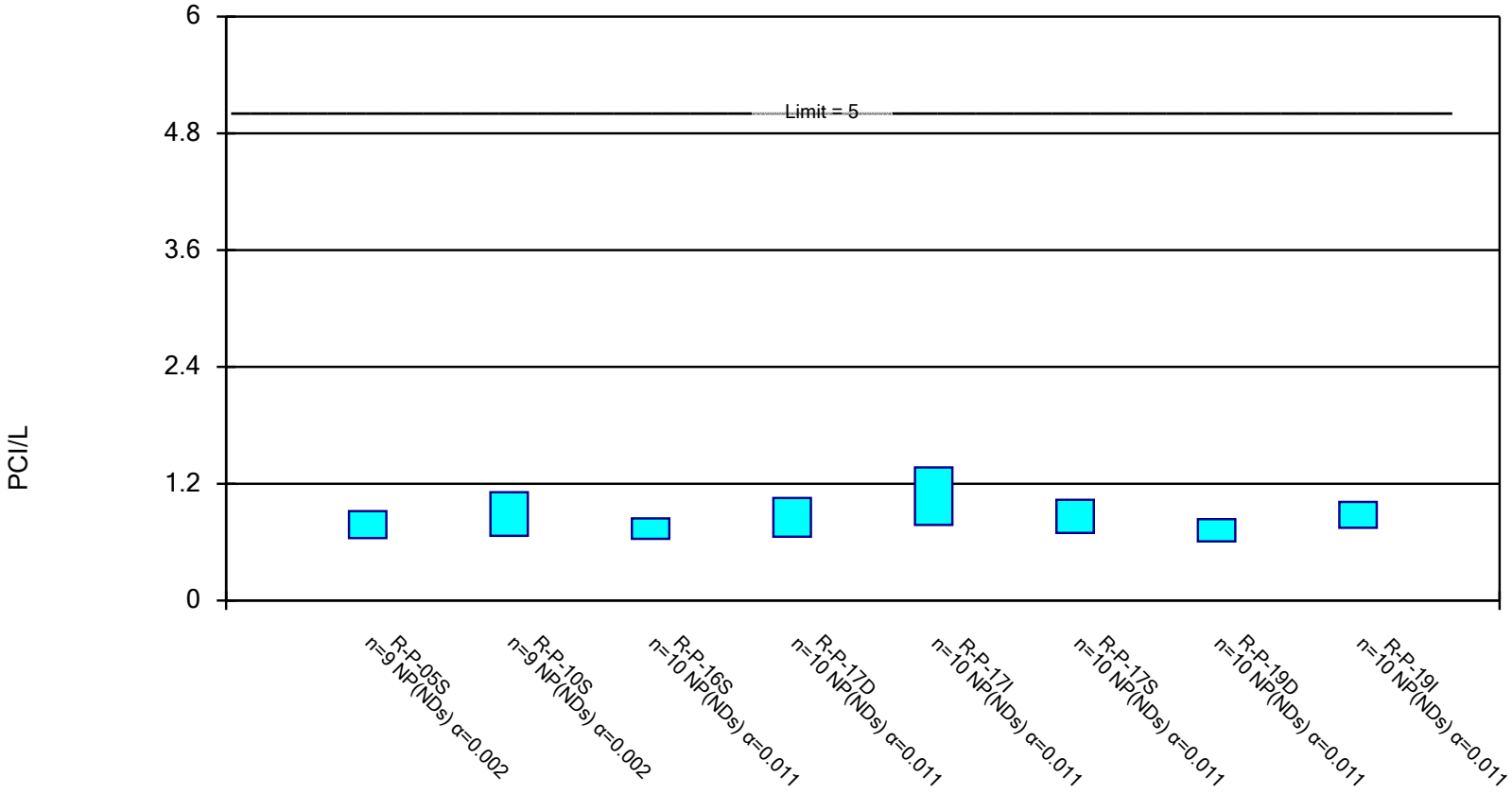
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.

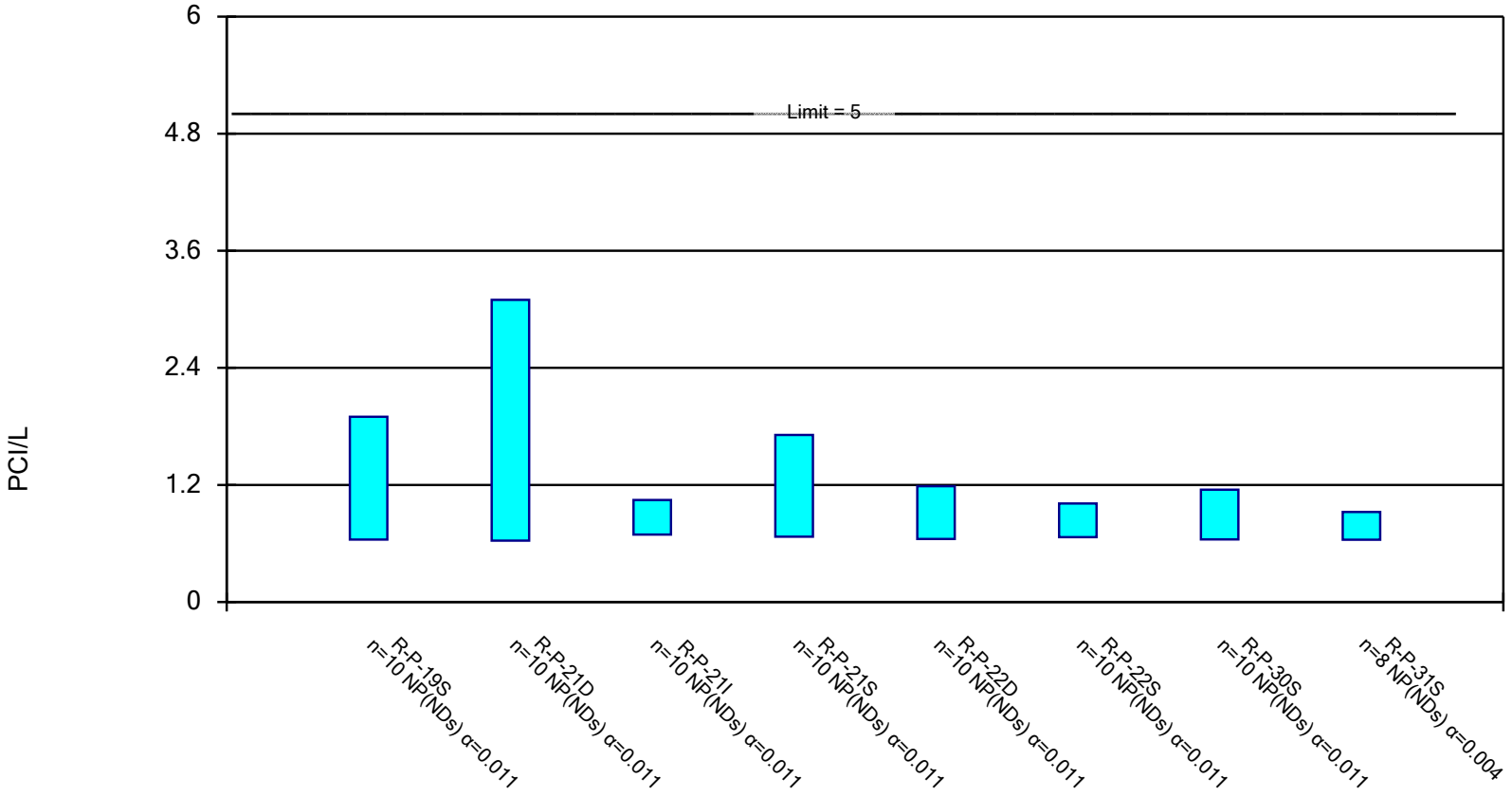


Constituent: RADIUM [226 + 228] Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



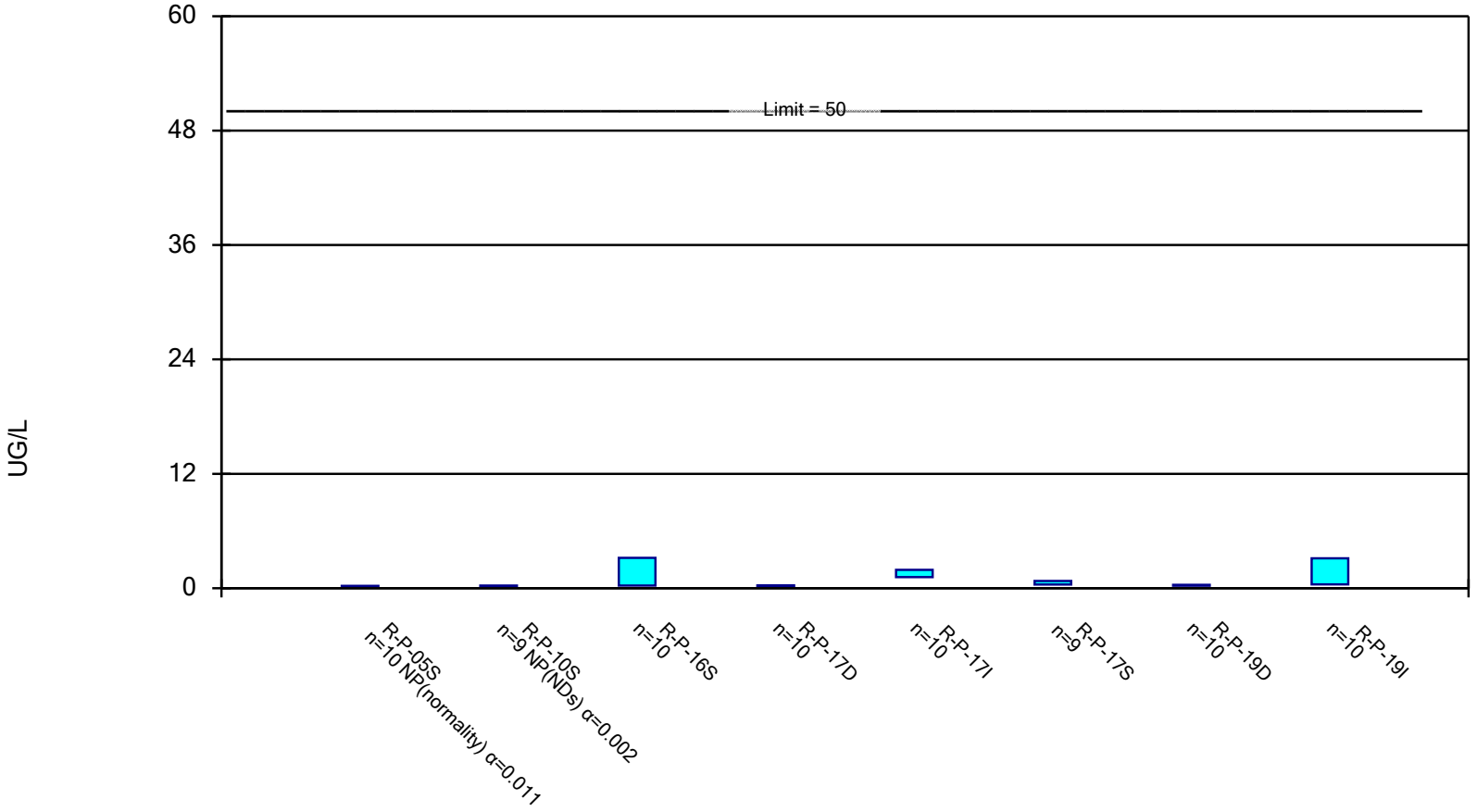
Constituent: RADIUM [226 + 228] Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



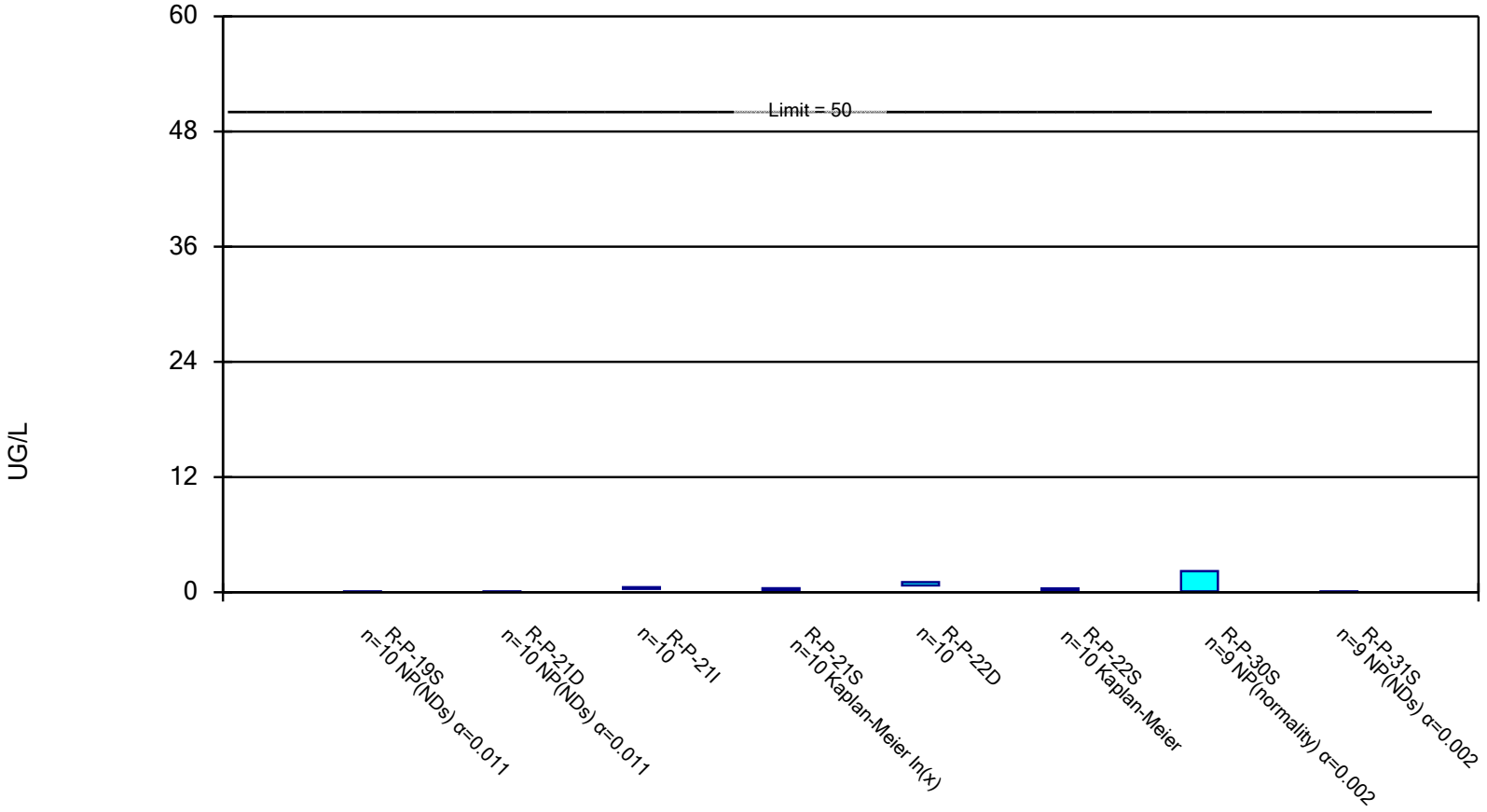
Constituent: SELENIUM, TOTAL Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



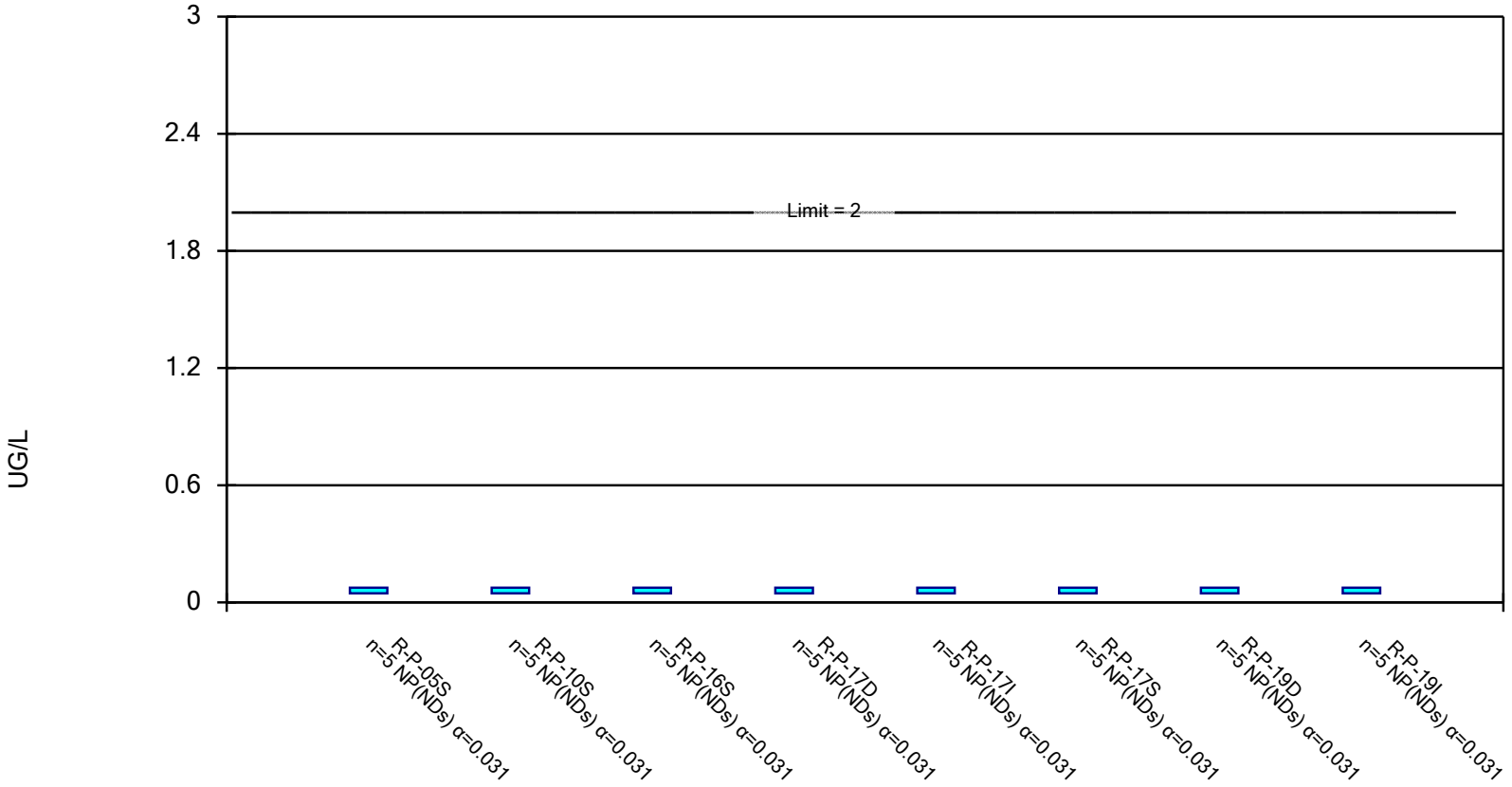
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Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



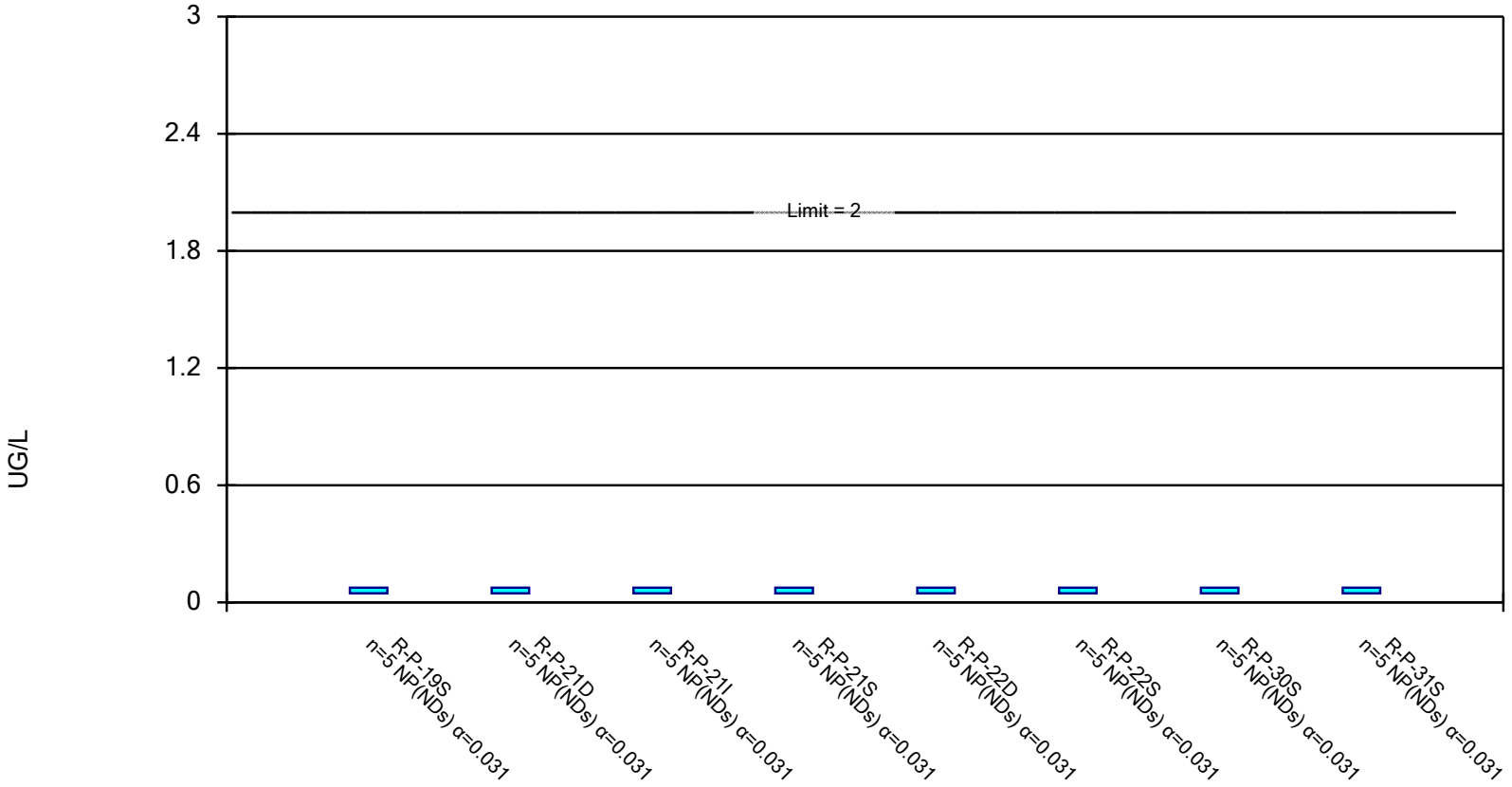
Constituent: THALLIUM, TOTAL Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



Constituent: THALLIUM, TOTAL Analysis Run 9/3/2024 2:16 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 2:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	R-P-05S	0.06	0.0485	6	No	10	100	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-10S	0.14	0.0485	6	No	9	66.67	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-16S	0.13	0.0485	6	No	10	80	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-17D	0.06	0.0485	6	No	10	100	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-17I	0.507	0.209	6	No	10	10	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-P-17S	0.2949	0.07786	6	No	10	40	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-P-19D	0.06	0.0485	6	No	10	100	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-19I	4.706	0.4287	6	No	10	0	ln(x)	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-P-19S	0.06	0.0485	6	No	10	90	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-21D	0.06	0.0485	6	No	10	100	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-21I	0.06	0.0485	6	No	10	100	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-21S	0.06	0.0485	6	No	10	90	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-22D	0.1789	0.1086	6	No	10	30	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	R-P-22S	0.06	0.0485	6	No	10	100	No	0.011	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-30S	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ANTIMONY, TOTAL (UG/L)	R-P-31S	0.06	0.0485	6	No	9	100	No	0.002	NP (NDs)
ARSENIC, TOTAL (UG/L)	**R-P-05S**	**189.8**	**152.8**	**30**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-P-10S	9.774	4.559	30	No	12	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-16S	1.977	1.193	30	No	13	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-17D	1.2	1.1	30	No	10	0	No	0.011	NP (normality)
ARSENIC, TOTAL (UG/L)	**R-P-17I**	**61.56**	**39.62**	**30**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	**R-P-17S**	**35.56**	**24.84**	**30**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-P-19D	0.7478	0.5722	30	No	10	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	**R-P-19I**	**271**	**28.5**	**30**	**Yes**	**10**	**0**	**No**	**0.011**	**NP (normality)**
ARSENIC, TOTAL (UG/L)	R-P-19S	21.82	8.584	30	No	10	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-21D	0.5931	0.4929	30	No	10	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-21I	5.9	5	30	No	10	0	No	0.011	NP (normality)
ARSENIC, TOTAL (UG/L)	**R-P-21S**	**112**	**32.98**	**30**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
ARSENIC, TOTAL (UG/L)	R-P-22D	10.71	8.794	30	No	10	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-22S	5.605	1.255	30	No	10	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-30S	1.829	1.021	30	No	13	0	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	R-P-31S	24.08	15.87	30	No	11	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-05S	214.8	165.2	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-10S	189.1	122.9	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-16S	121.6	63.24	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-17D	104.6	97.79	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-17I	18.63	13.82	2000	No	9	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-17S	148.6	83.32	2000	No	9	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-19D	109.6	73.4	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-19I	66.8	11.2	2000	No	10	0	No	0.011	NP (normality)
BARIUM, TOTAL (UG/L)	R-P-19S	475.5	194.3	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-21D	278.8	87.03	2000	No	10	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-21I	57.89	29.89	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-21S	476.2	243.3	2000	No	10	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-22D	77.14	65.62	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-22S	199.2	144	2000	No	10	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-30S	107.4	89.88	2000	No	10	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	R-P-31S	163.4	132.6	2000	No	8	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	R-P-05S	0.26	0.155	4	No	5	60	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-10S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 2:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
BERYLLIUM, TOTAL (UG/L)	R-P-16S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-17D	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-17I	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-17S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-19D	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-19I	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-19S	0.245	0.06	4	No	5	80	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-21D	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-21I	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-21S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-22D	0.245	0.12	4	No	5	60	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-22S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-30S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	R-P-31S	0.245	0.06	4	No	5	100	No	0.031	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-P-05S	0.031	0.025	5	No	8	100	No	0.004	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-P-10S	0.2402	0.07603	5	No	8	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-16S	0.1239	0.04554	5	No	8	25	ln(x)	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-17D	0.27	0.028	5	No	8	25	No	0.004	NP (normality)
CADMIUM, TOTAL (UG/L)	R-P-17I	0.6243	0.1827	5	No	8	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-17S	0.1396	0.04901	5	No	8	37.5	ln(x)	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-19D	0.3437	0.1056	5	No	8	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-19I	0.5336	0.1324	5	No	8	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-19S	0.031	0.025	5	No	7	100	No	0.008	NP (NDs)
CADMIUM, TOTAL (UG/L)	R-P-21D	0.1245	0.05478	5	No	8	37.5	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-21I	0.11	0.028	5	No	8	37.5	No	0.004	NP (normality)
CADMIUM, TOTAL (UG/L)	R-P-21S	0.1076	0.04461	5	No	8	37.5	ln(x)	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-22D	0.1658	0.0902	5	No	8	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-22S	0.1397	0.07377	5	No	8	0	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-30S	0.07568	0.04725	5	No	8	50	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	R-P-31S	0.031	0.025	5	No	8	100	No	0.004	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-05S	0.6016	0.3439	100	No	10	10	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-10S	0.6504	0.2553	100	No	9	44.44	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-16S	0.5	0.11	100	No	10	90	No	0.011	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-17D	0.4466	0.2178	100	No	10	50	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-17I	1.003	0.7026	100	No	10	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-17S	0.5434	0.2655	100	No	10	20	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-19D	0.7436	0.3284	100	No	10	10	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-19I	0.7252	0.3168	100	No	10	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-19S	0.445	0.275	100	No	10	20	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-21D	0.5	0.11	100	No	10	60	No	0.011	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-21I	0.5185	0.3375	100	No	10	10	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-21S	0.3574	0.2093	100	No	10	40	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-22D	1.884	1.154	100	No	10	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-22S	0.41	0.11	100	No	10	70	No	0.011	NP (NDs)
CHROMIUM, TOTAL (UG/L)	R-P-30S	0.334	0.2336	100	No	10	50	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	R-P-31S	0.51	0.11	100	No	9	55.56	No	0.002	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-05S	0.75	0.39	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-10S	3.39	1.182	6	No	7	28.57	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-16S	0.75	0.475	6	No	6	100	No	0.0155	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-17D	0.75	0.39	6	No	7	100	No	0.008	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 2:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
COBALT, TOTAL (UG/L)	R-P-17I	0.75	0.39	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-17S	2.58	1.12	6	No	6	16.67	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-19D	0.79	0.475	6	No	7	85.71	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-19I	0.75	0.39	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-19S	3.41	0.4075	6	No	7	42.86	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-21D	0.75	0.475	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-21I	0.75	0.39	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-21S	2.576	1.015	6	No	7	42.86	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-22D	0.75	0.475	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-22S	2.998	1.259	6	No	7	28.57	No	0.01	Param.
COBALT, TOTAL (UG/L)	R-P-30S	0.75	0.475	6	No	7	100	No	0.008	NP (NDs)
COBALT, TOTAL (UG/L)	R-P-31S	0.75	0.475	6	No	7	100	No	0.008	NP (NDs)
FLUORIDE, TOTAL (MG/L)	R-P-05S	0.43	0.32	4	No	10	10	No	0.011	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-10S	0.58	0.06	4	No	9	33.33	No	0.002	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-16S	0.4252	0.1268	4	No	10	40	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-17D	0.7	0.32	4	No	10	0	No	0.011	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-17I	2.2	1.3	4	No	10	10	No	0.011	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-17S	0.8312	0.2848	4	No	10	20	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-19D	2.2	1.6	4	No	10	0	No	0.011	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-19I	1.582	0.5896	4	No	10	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-19S	0.33	0.06	4	No	10	20	No	0.011	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-21D	1.315	0.6031	4	No	10	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-21I	1.093	0.7348	4	No	10	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-21S	0.36	0.1516	4	No	10	30	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-22D	2.53	2.05	4	No	10	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	R-P-22S	0.4	0.06	4	No	10	60	No	0.011	NP (NDs)
FLUORIDE, TOTAL (MG/L)	R-P-30S	0.44	0.06	4	No	10	30	No	0.011	NP (normality)
FLUORIDE, TOTAL (MG/L)	R-P-31S	0.44	0.06	4	No	9	11.11	No	0.002	NP (normality)
LEAD, TOTAL (UG/L)	R-P-05S	4.1	1.9	15	No	10	90	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-10S	4.3	1.9	15	No	8	100	No	0.004	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-16S	3.05	1.9	15	No	10	100	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-17D	3.9	1.9	15	No	10	90	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	**R-P-17I**	**17.98**	**5.984**	**15**	**Yes**	**10**	**10**	**No**	**0.01**	**Param.**
LEAD, TOTAL (UG/L)	R-P-17S	4.3	1.9	15	No	10	90	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-19D	2.3	1.9	15	No	10	100	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-19I	14.56	3.799	15	No	10	40	No	0.01	Param.
LEAD, TOTAL (UG/L)	R-P-19S	4.3	1.9	15	No	9	100	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-21D	3.05	1.9	15	No	10	100	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-21I	2.3	1.9	15	No	10	100	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-21S	4.7	1.9	15	No	9	88.89	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-22D	5.2	1.9	15	No	10	80	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-22S	4.3	1.9	15	No	10	90	No	0.011	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-30S	3.05	1.9	15	No	9	100	No	0.002	NP (NDs)
LEAD, TOTAL (UG/L)	R-P-31S	3.05	1.9	15	No	8	100	No	0.004	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-P-05S	17.75	13.95	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-10S	22.94	13.57	64.7	No	9	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-16S	45.12	20.34	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-17D	40.51	35.99	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-17I	4.4	2.3	64.7	No	10	60	No	0.011	NP (NDs)
LITHIUM, TOTAL (UG/L)	R-P-17S	37.94	25.9	64.7	No	9	0	No	0.01	Param.

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 2:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
LITHIUM, TOTAL (UG/L)	R-P-19D	20.16	15.74	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	**R-P-19I**	**134**	**12.8**	**64.7**	**Yes**	**11**	**0**	**No**	**0.006**	**NP (normality)**
LITHIUM, TOTAL (UG/L)	R-P-19S	45.9	22.68	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	**R-P-21D**	**220.5**	**130.6**	**64.7**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
LITHIUM, TOTAL (UG/L)	R-P-21I	23.86	17.7	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-21S	19.3	14.52	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-22D	26.71	23.25	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-22S	63.23	49.55	64.7	No	10	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-30S	38.05	33.44	64.7	No	9	0	ln(x)	0.01	Param.
LITHIUM, TOTAL (UG/L)	R-P-31S	10.42	6.201	64.7	No	9	22.22	No	0.01	Param.
MERCURY, TOTAL (UG/L)	R-P-05S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-10S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-16S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-17D	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-17I	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-17S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-19D	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-19I	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-19S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-21D	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-21I	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-21S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-22D	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-22S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-30S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MERCURY, TOTAL (UG/L)	R-P-31S	0.06	0.029	2	No	5	100	No	0.031	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-P-05S	13.5	5.182	100	No	10	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-10S**	**117**	**49.3**	**100**	**Yes**	**12**	**0**	**No**	**0.01**	**NP (normality)**
MOLYBDENUM, TOTAL (UG/L)	R-P-16S	25.39	10.69	100	No	13	0	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-17D**	**705.8**	**648.6**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-P-17I**	**152.4**	**111.7**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-17S	93.46	25.5	100	No	10	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-19D**	**930.3**	**748.1**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-P-19I**	**258.2**	**117.3**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-19S	7.909	2.875	100	No	10	0	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-21D**	**411.9**	**240.1**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**R-P-21I**	**257.8**	**119.4**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-21S	3.646	1.115	100	No	10	30	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**R-P-22D**	**362.9**	**327.5**	**100**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	R-P-22S	12.06	8.098	100	No	10	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	R-P-30S	5.6	0.5	100	No	13	53.85	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	R-P-31S	8.768	7.082	100	No	12	8.333	No	0.01	Param.
RADIUM [226 + 228] (PCI/L)	R-P-05S	0.9175	0.642	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-10S	1.112	0.664	5	No	9	100	No	0.002	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-16S	0.8435	0.6335	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-17D	1.053	0.6555	5	No	10	90	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-17I	1.367	0.7765	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-17S	1.035	0.695	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-19D	0.8355	0.6075	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-19I	1.013	0.7475	5	No	10	100	No	0.011	NP (NDs)

Confidence Interval

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 2:20 PM

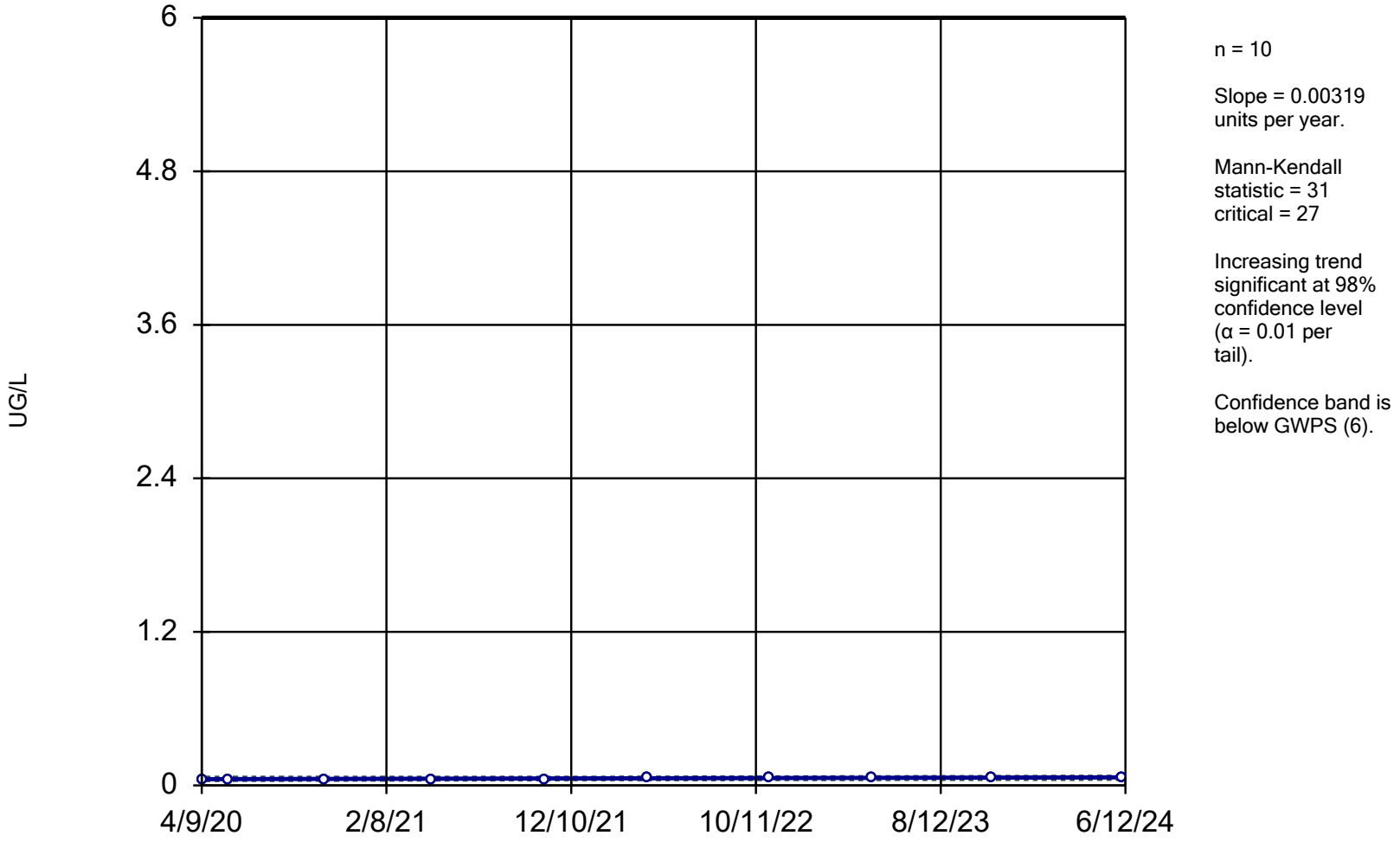
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
RADIUM [226 + 228] (PCI/L)	R-P-19S	1.899	0.6405	5	No	10	70	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-21D	3.097	0.6295	5	No	10	60	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-21I	1.045	0.6905	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-21S	1.712	0.67	5	No	10	90	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-22D	1.187	0.646	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-22S	1.01	0.665	5	No	10	90	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-30S	1.151	0.6415	5	No	10	100	No	0.011	NP (NDs)
RADIUM [226 + 228] (PCI/L)	R-P-31S	0.922	0.6385	5	No	8	100	No	0.004	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-05S	0.25	0.09	50	No	10	30	No	0.011	NP (normality)
SELENIUM, TOTAL (UG/L)	R-P-10S	0.28	0.09	50	No	9	66.67	No	0.002	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-16S	3.181	0.2807	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-17D	0.2877	0.2283	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-17I	1.919	1.161	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-17S	0.7645	0.3888	50	No	9	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-19D	0.3605	0.2675	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-19I	3.14	0.4024	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-19S	0.09	0.09	50	No	10	100	No	0.011	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-21D	0.09	0.09	50	No	10	90	No	0.011	NP (NDs)
SELENIUM, TOTAL (UG/L)	R-P-21I	0.5261	0.3579	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-21S	0.4151	0.1924	50	No	10	20	ln(x)	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-22D	1.05	0.7036	50	No	10	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-22S	0.4032	0.1745	50	No	10	30	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	R-P-30S	2.2	0.09	50	No	9	33.33	No	0.002	NP (normality)
SELENIUM, TOTAL (UG/L)	R-P-31S	0.09	0.09	50	No	9	100	No	0.002	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-05S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-10S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-16S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-17D	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-17I	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-17S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-19D	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-19I	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-19S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-21D	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-21I	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-21S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-22D	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-22S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-30S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)
THALLIUM, TOTAL (UG/L)	R-P-31S	0.075	0.0465	2	No	5	100	No	0.031	NP (NDs)

Appendix B
Sanitas Trending Confidence Bands Statistical Output

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-05S



n = 10

Slope = 0.00319 units per year.

Mann-Kendall statistic = 31
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

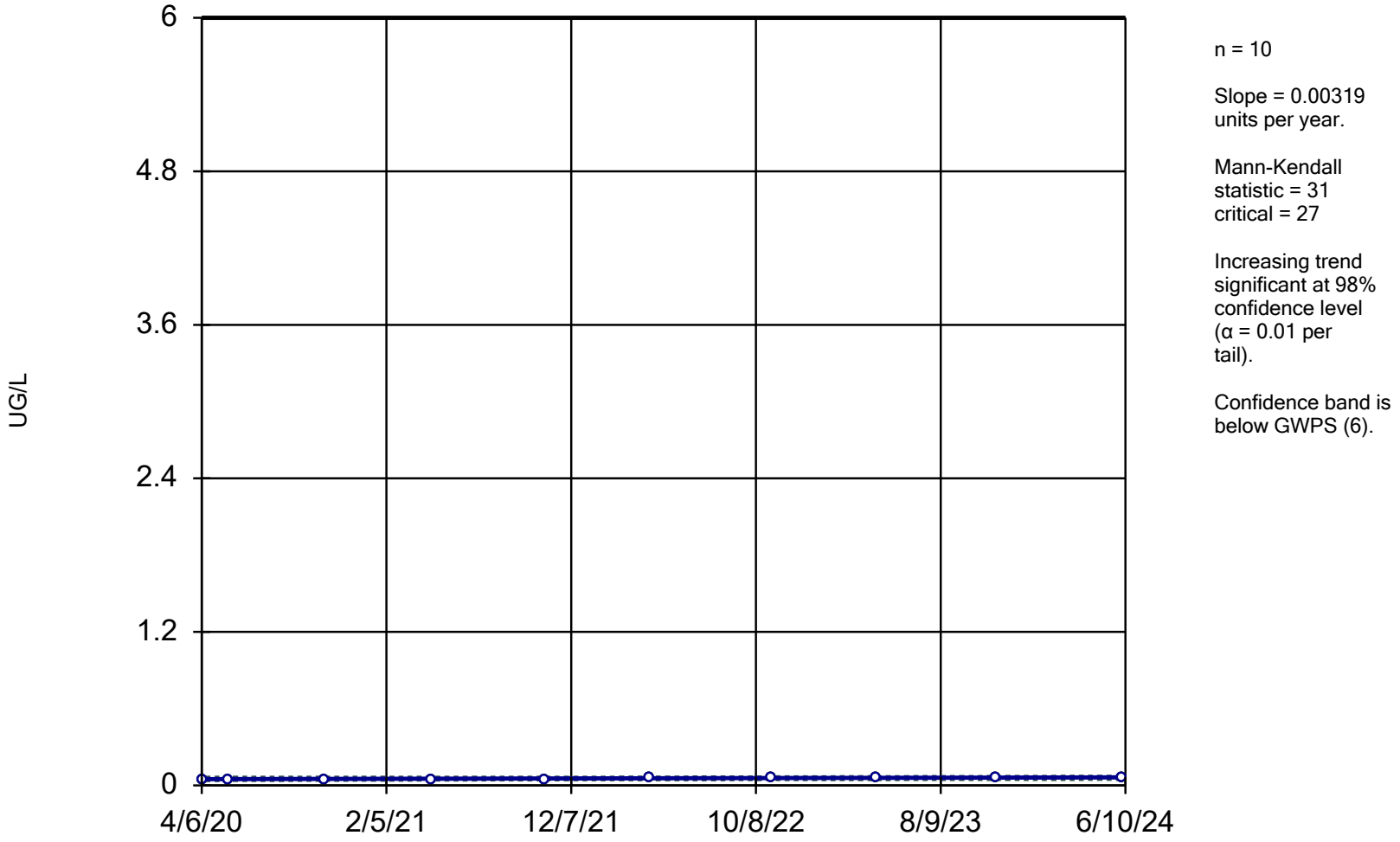
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-17D



n = 10

Slope = 0.00319 units per year.

Mann-Kendall statistic = 31
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

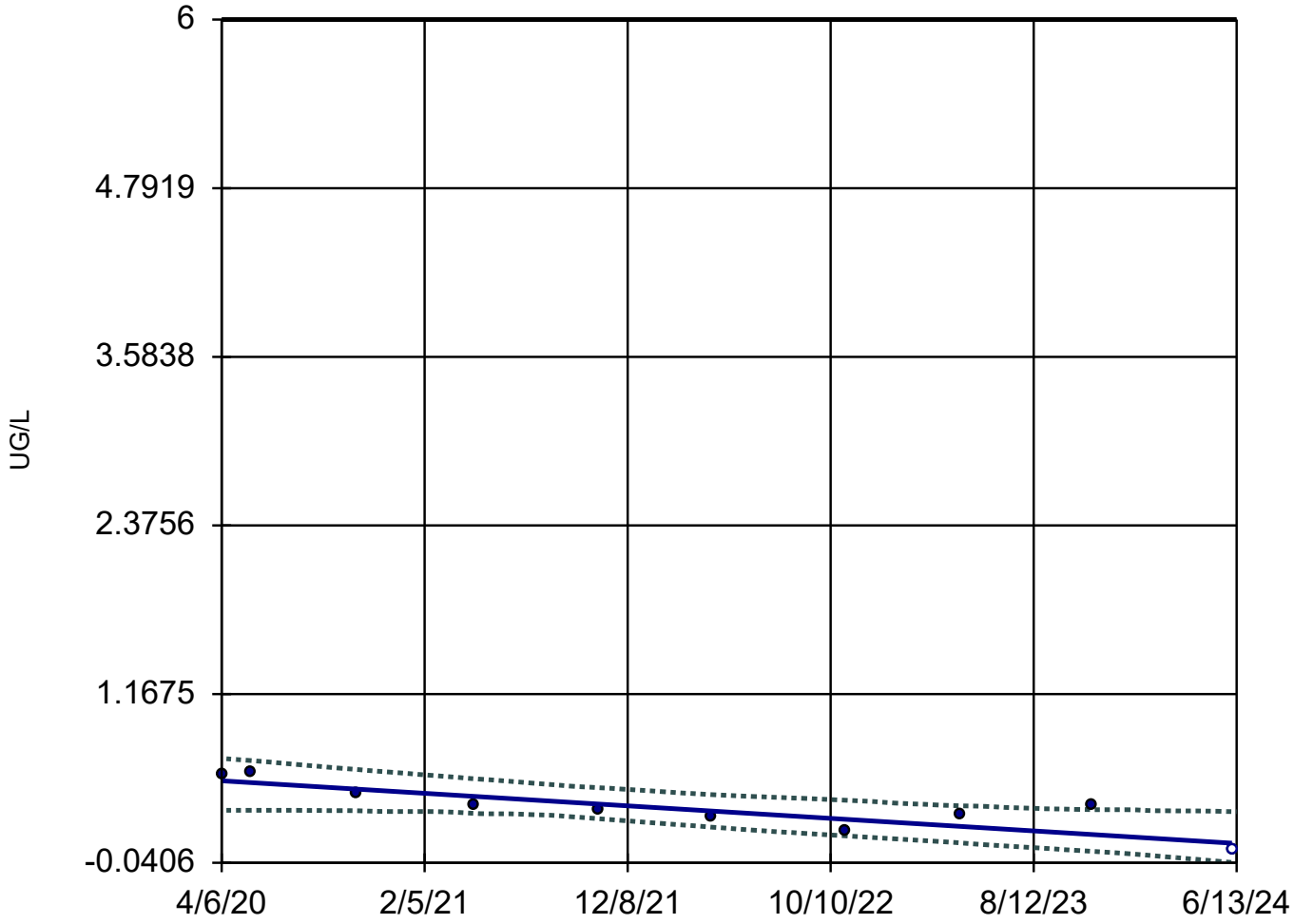
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-17I



n = 10

Slope = -0.1072 units per year.

Mann-Kendall statistic = -31
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

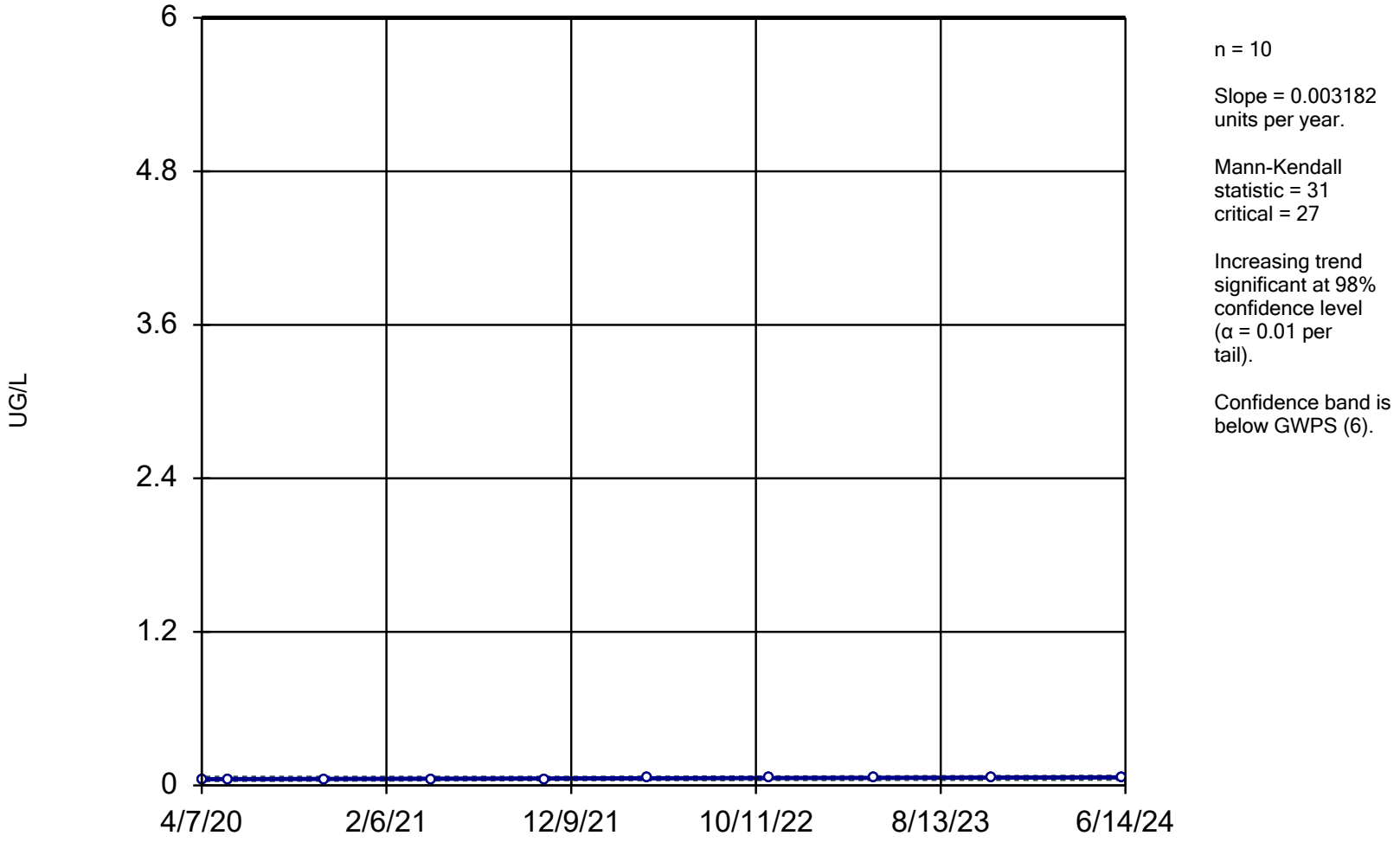
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-19D



n = 10

Slope = 0.003182 units per year.

Mann-Kendall statistic = 31
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

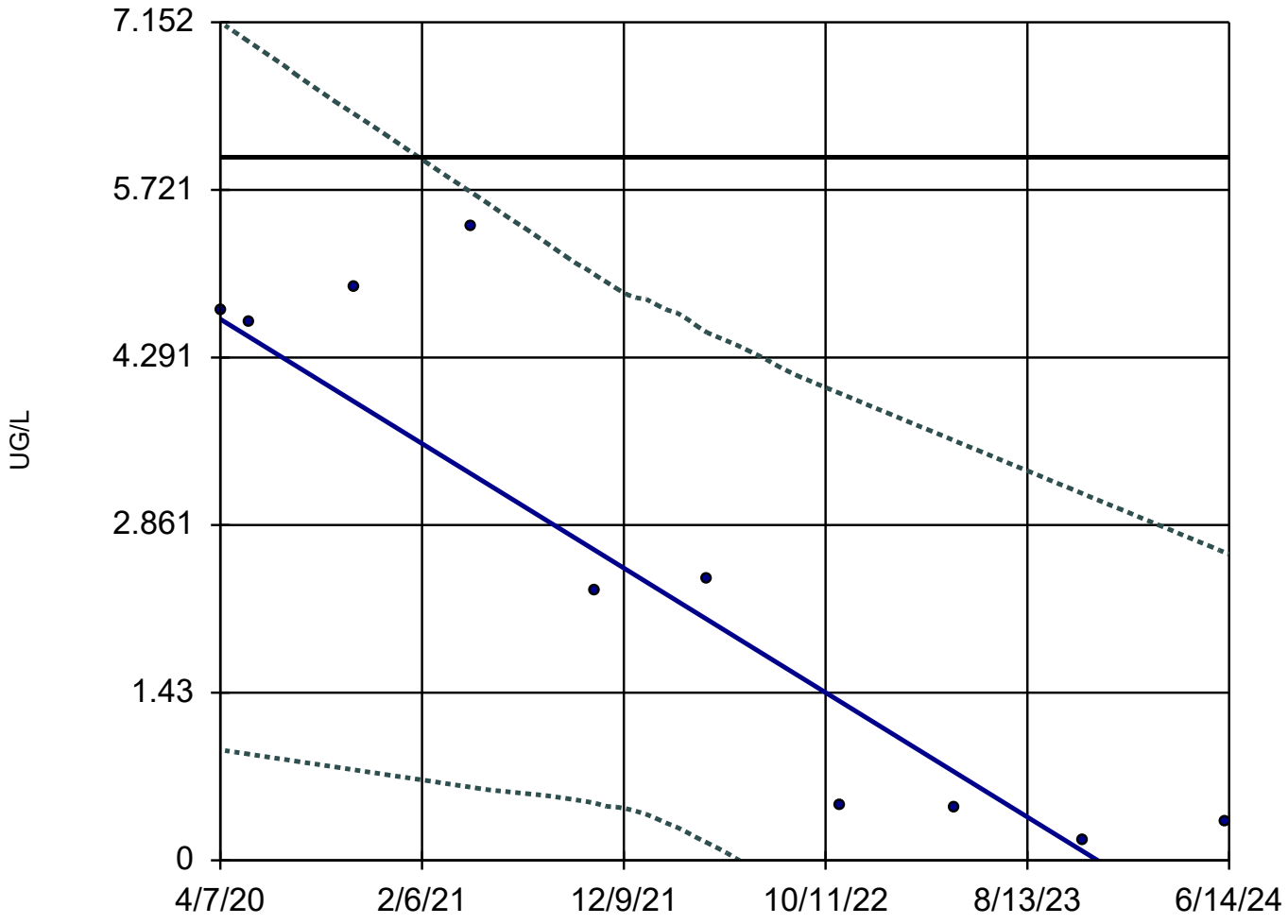
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Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 10

Slope = -1.267 units per year.

Mann-Kendall statistic = -31 critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (6) on 02/13/21.

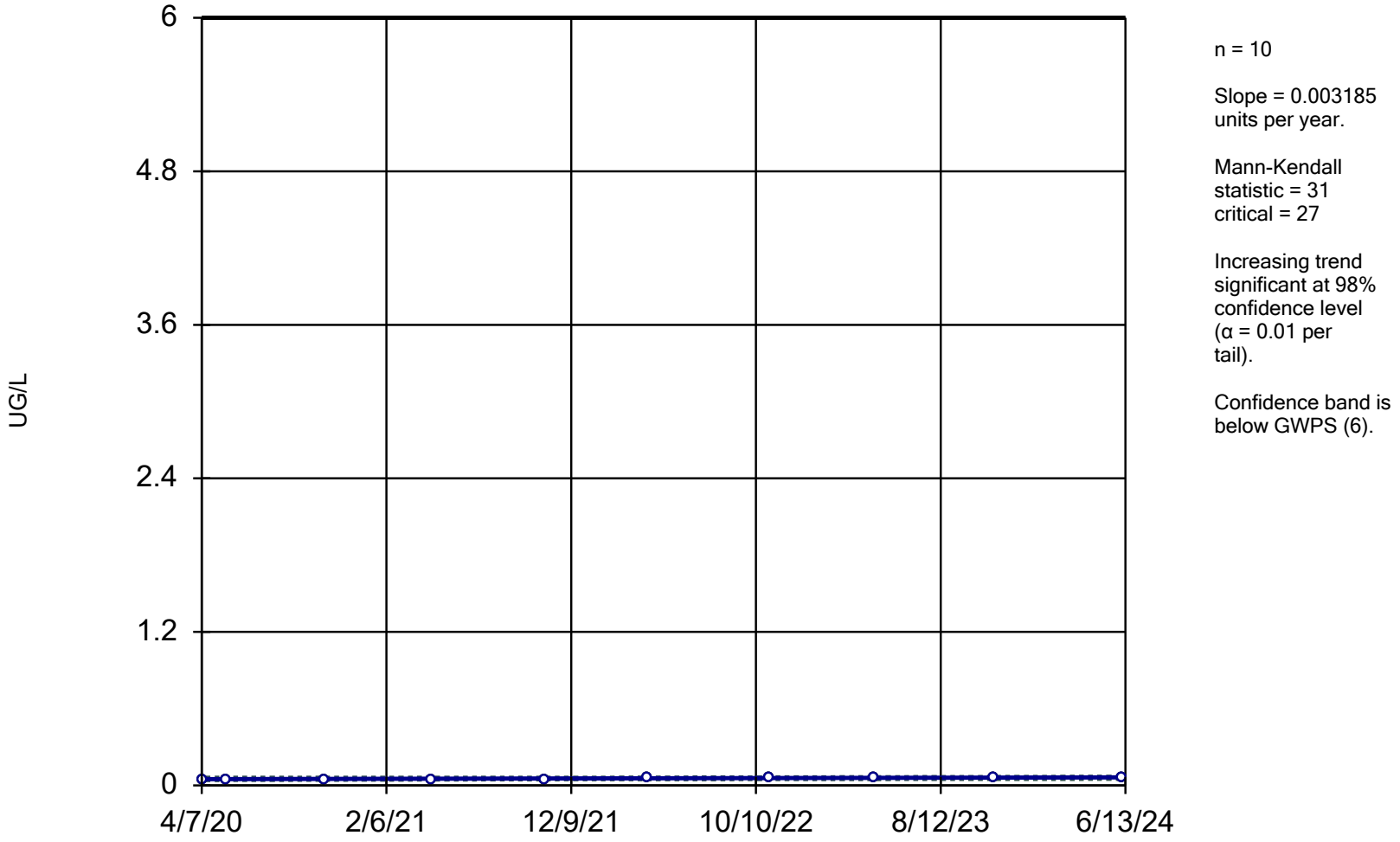
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-21D



n = 10

Slope = 0.003185 units per year.

Mann-Kendall statistic = 31
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

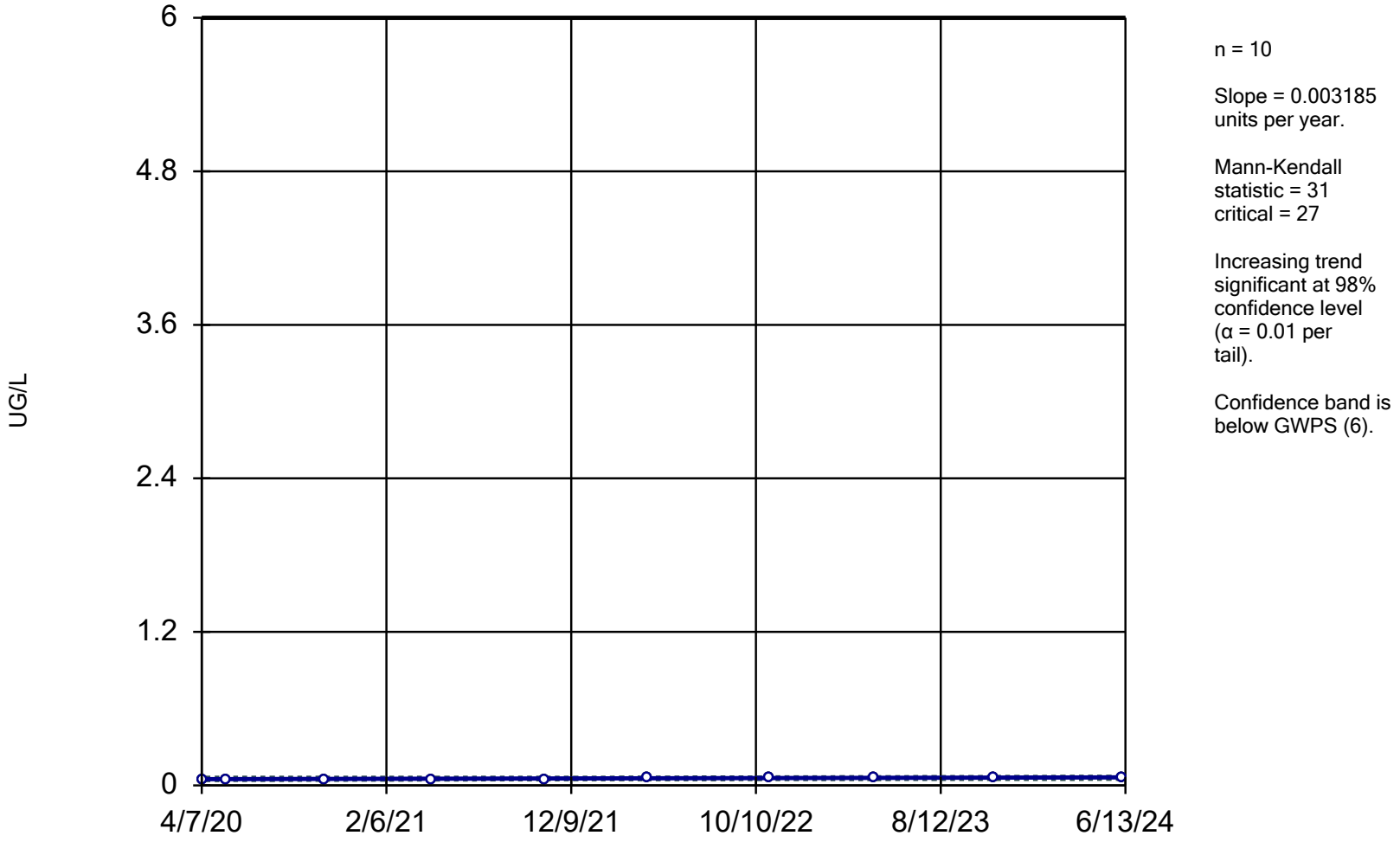
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-21I



n = 10

Slope = 0.003185 units per year.

Mann-Kendall statistic = 31
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

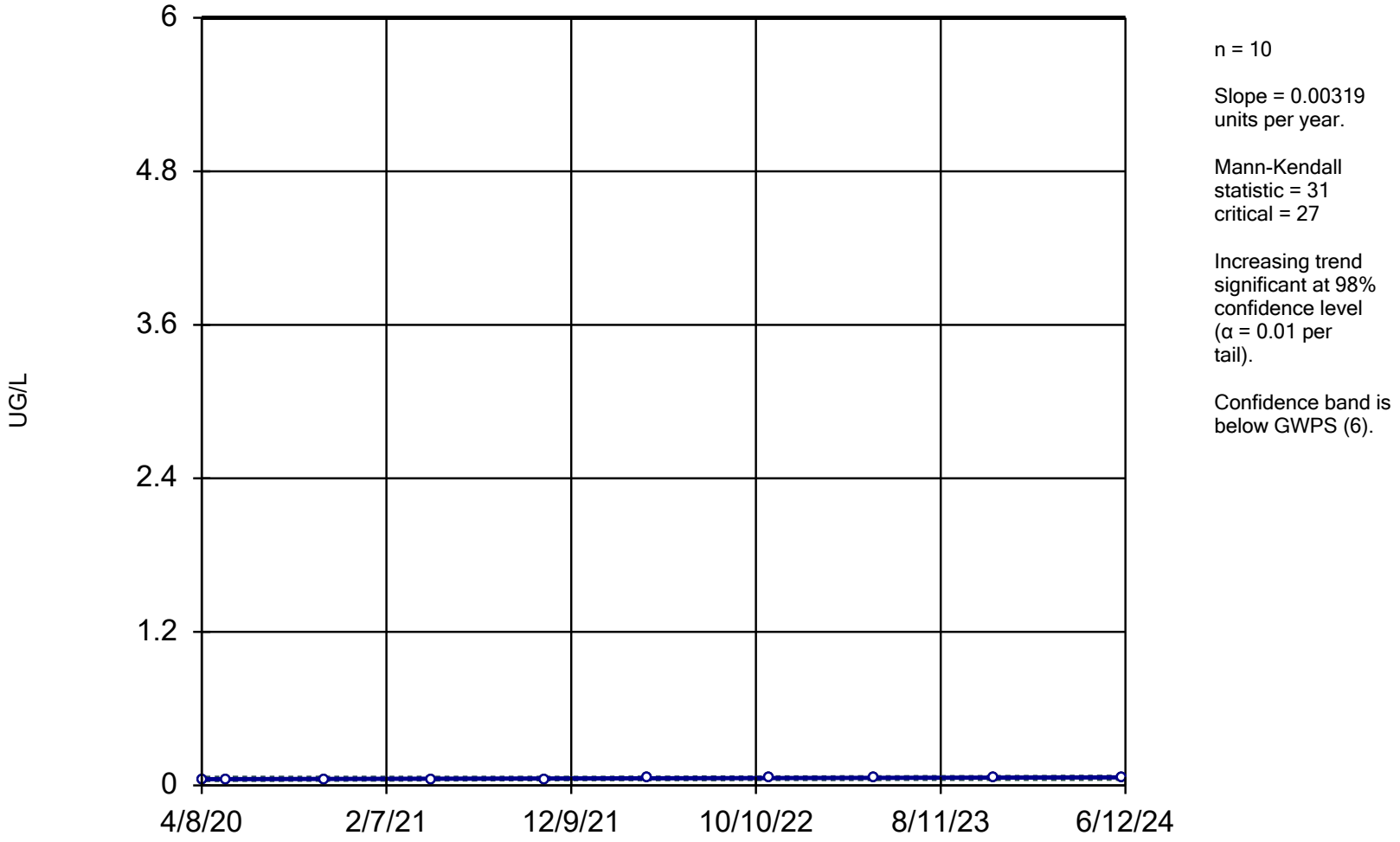
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-22S



n = 10

Slope = 0.00319 units per year.

Mann-Kendall statistic = 31
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

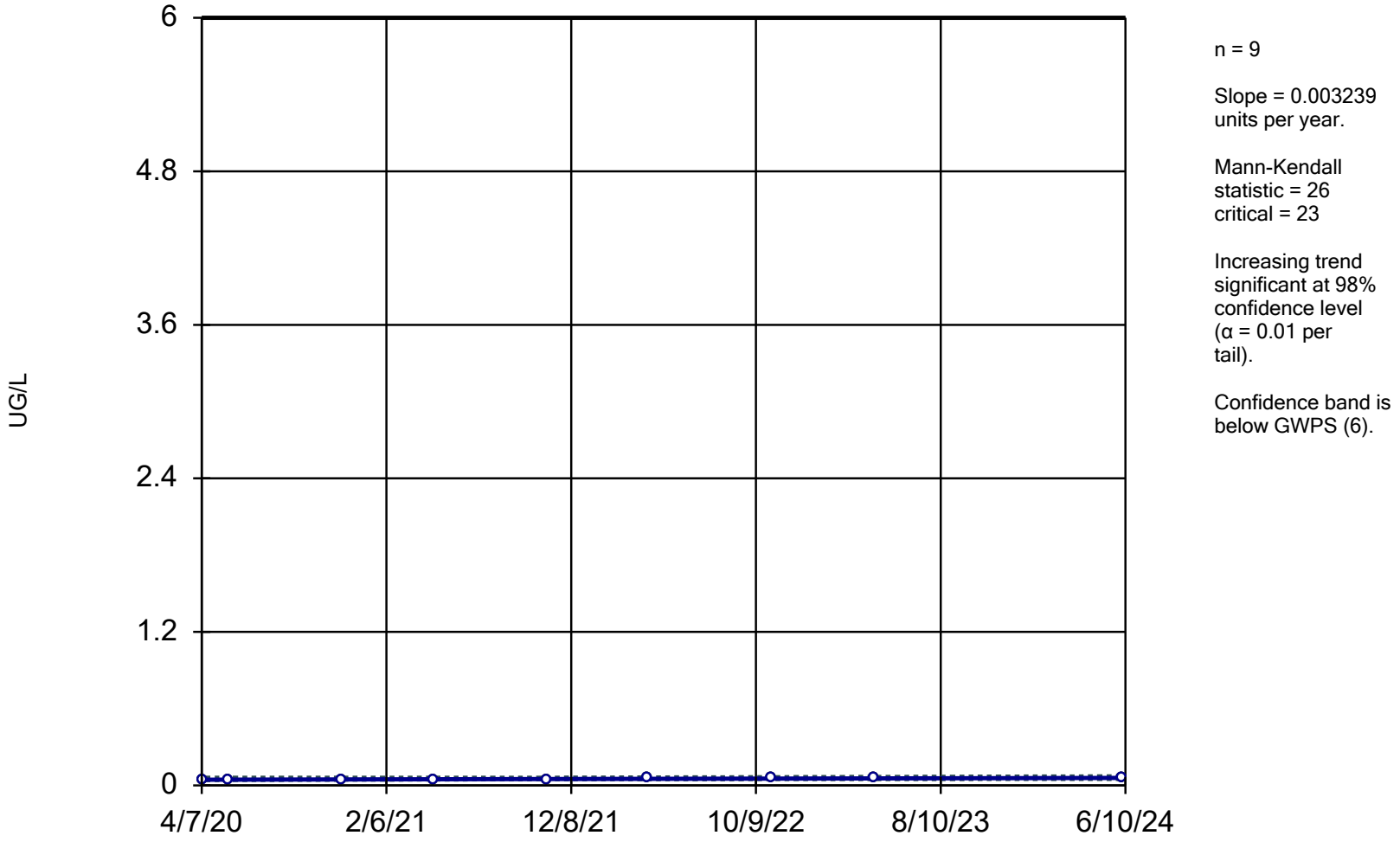
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-31S



n = 9

Slope = 0.003239 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

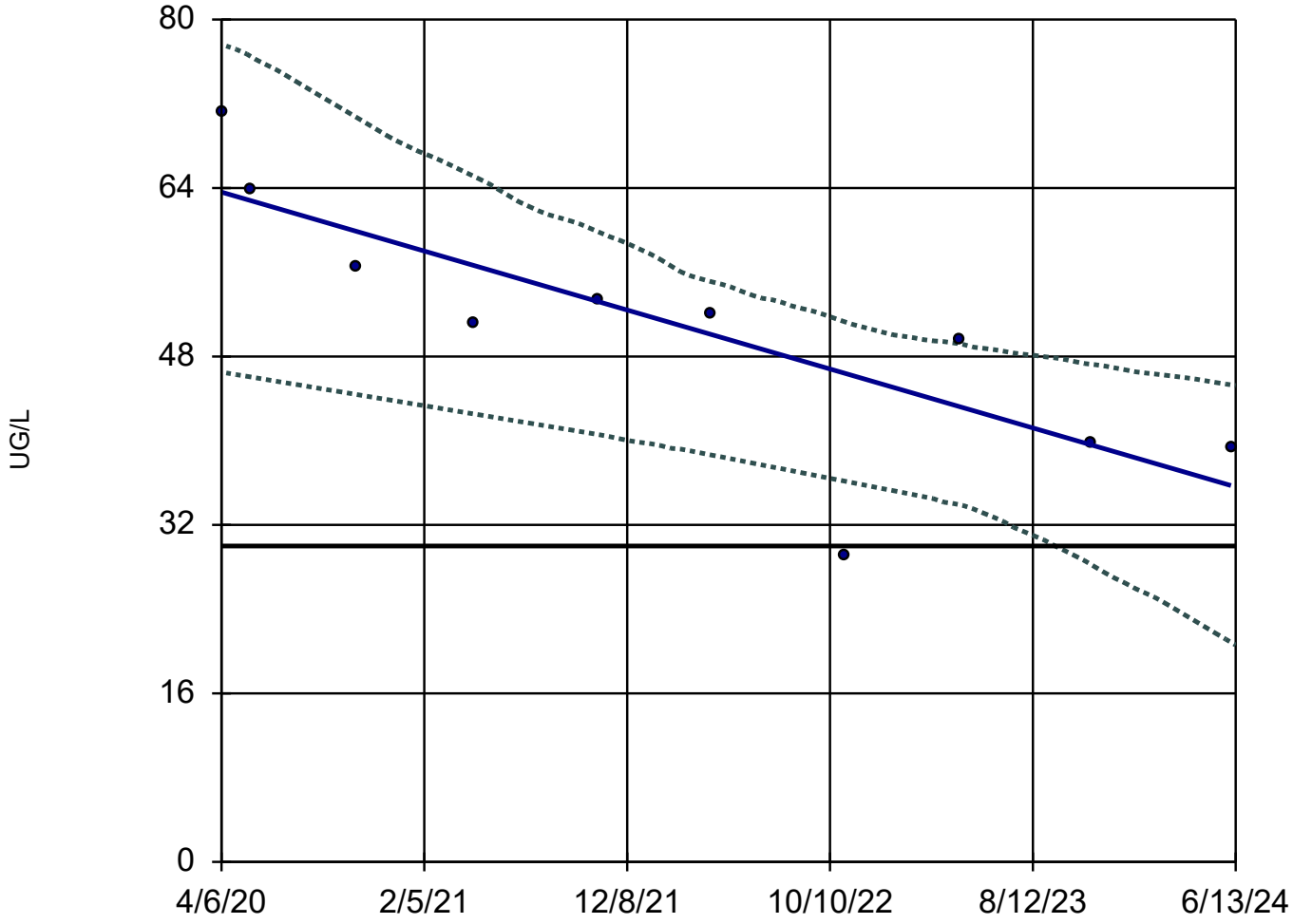
Constituent: ANTIMONY, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-17I



n = 10

Slope = -6.681 units per year.

Mann-Kendall statistic = -35
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (30) on 09/28/23.

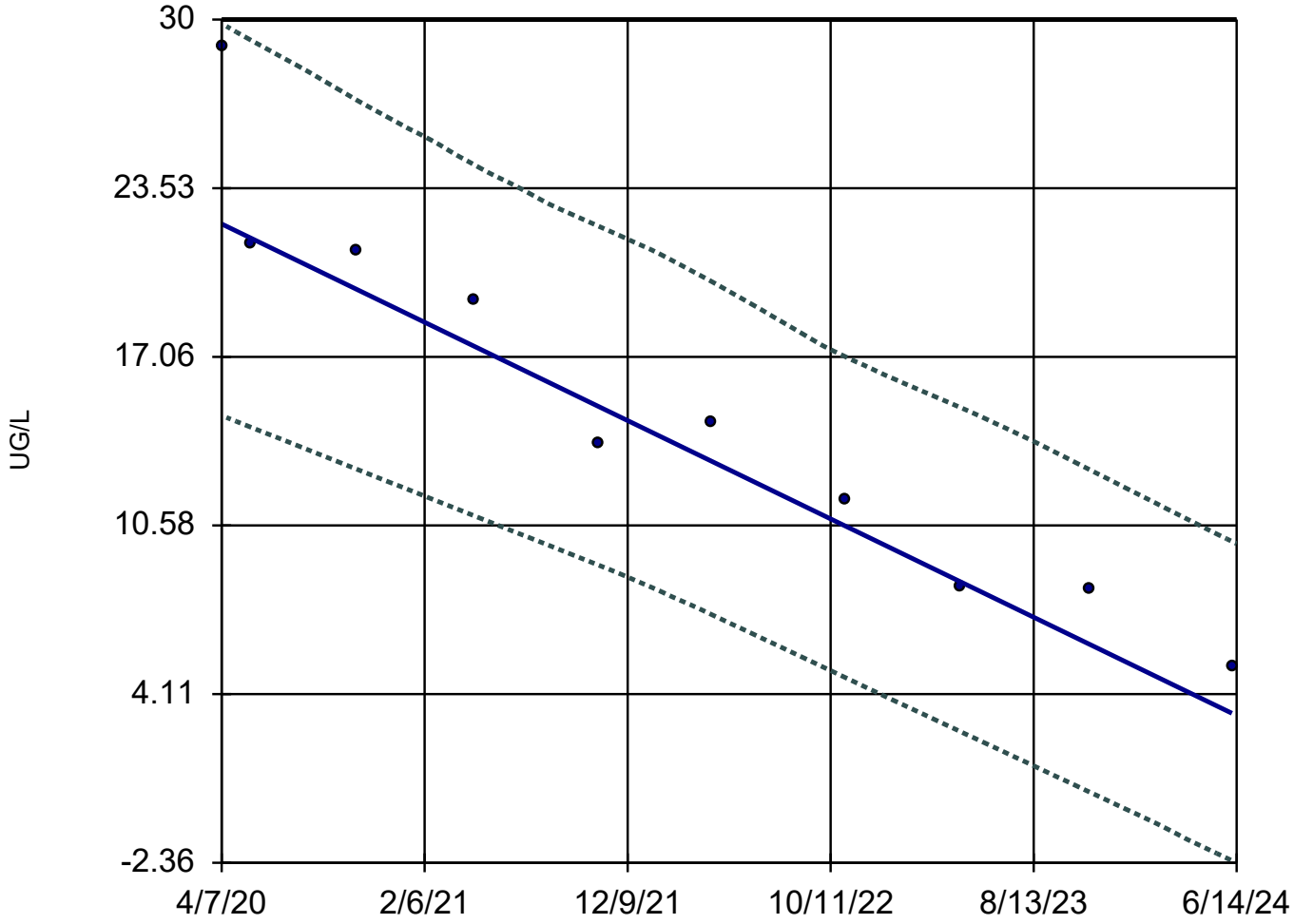
Constituent: ARSENIC, TOTAL Analysis Run 9/3/2024 2:33 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19S



n = 10

Slope = -4.503 units per year.

Mann-Kendall statistic = -43
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (30).

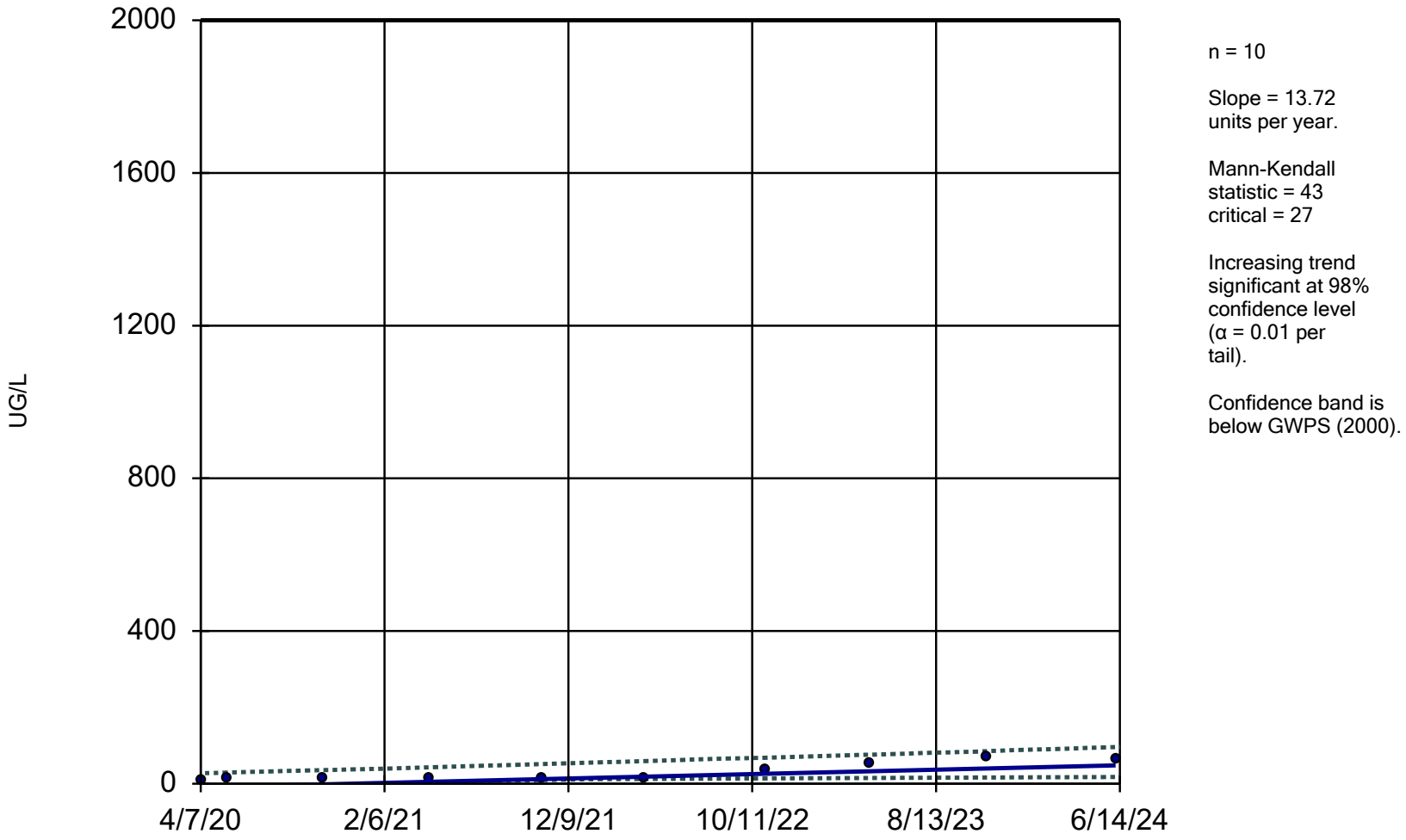
Constituent: ARSENIC, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 10

Slope = 13.72 units per year.

Mann-Kendall statistic = 43
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

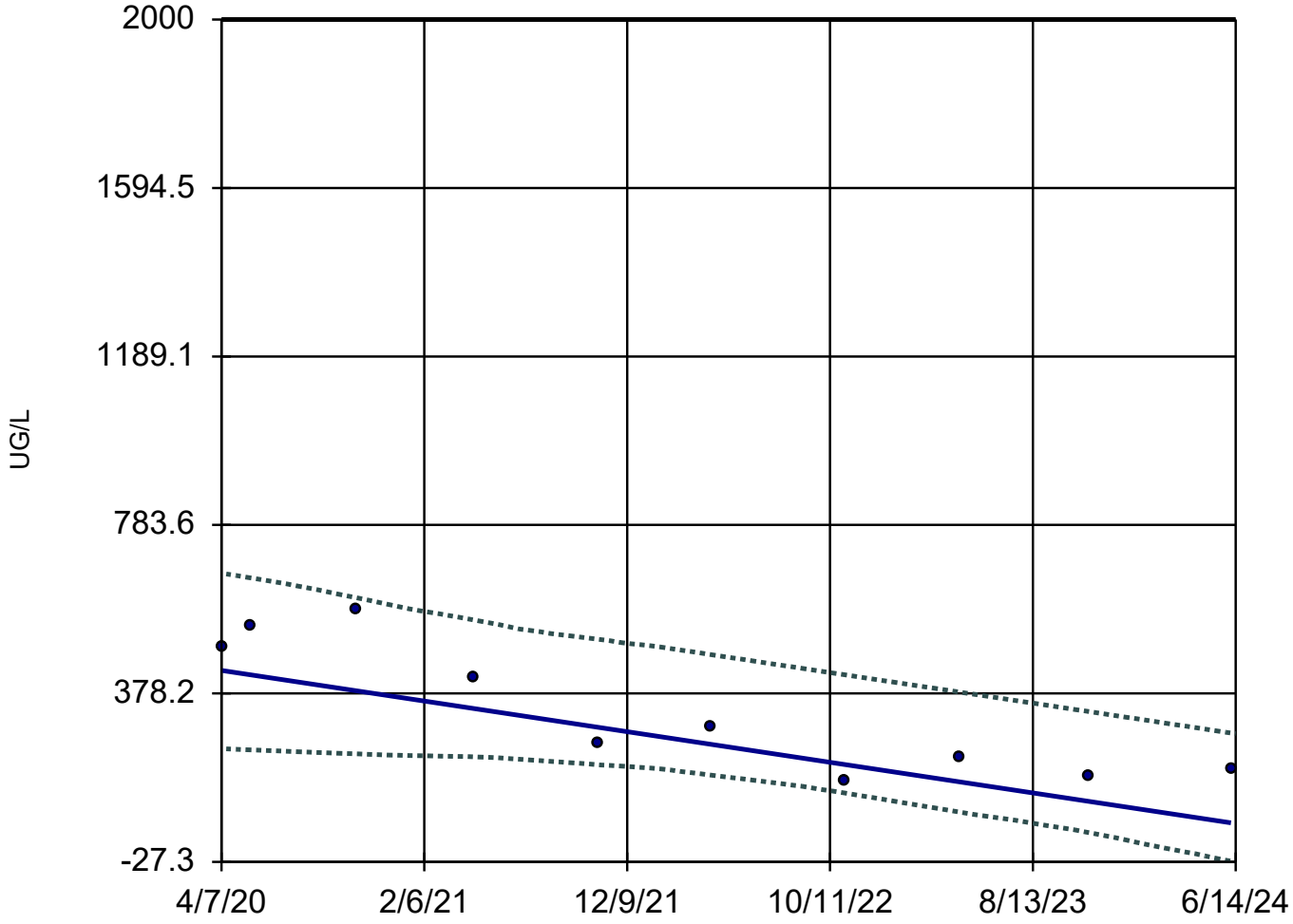
Constituent: BARIUM, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Sen's Slope and 95% Confidence Band

R-P-19S



n = 10

Slope = -87.97 units per year.

Mann-Kendall statistic = -29
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

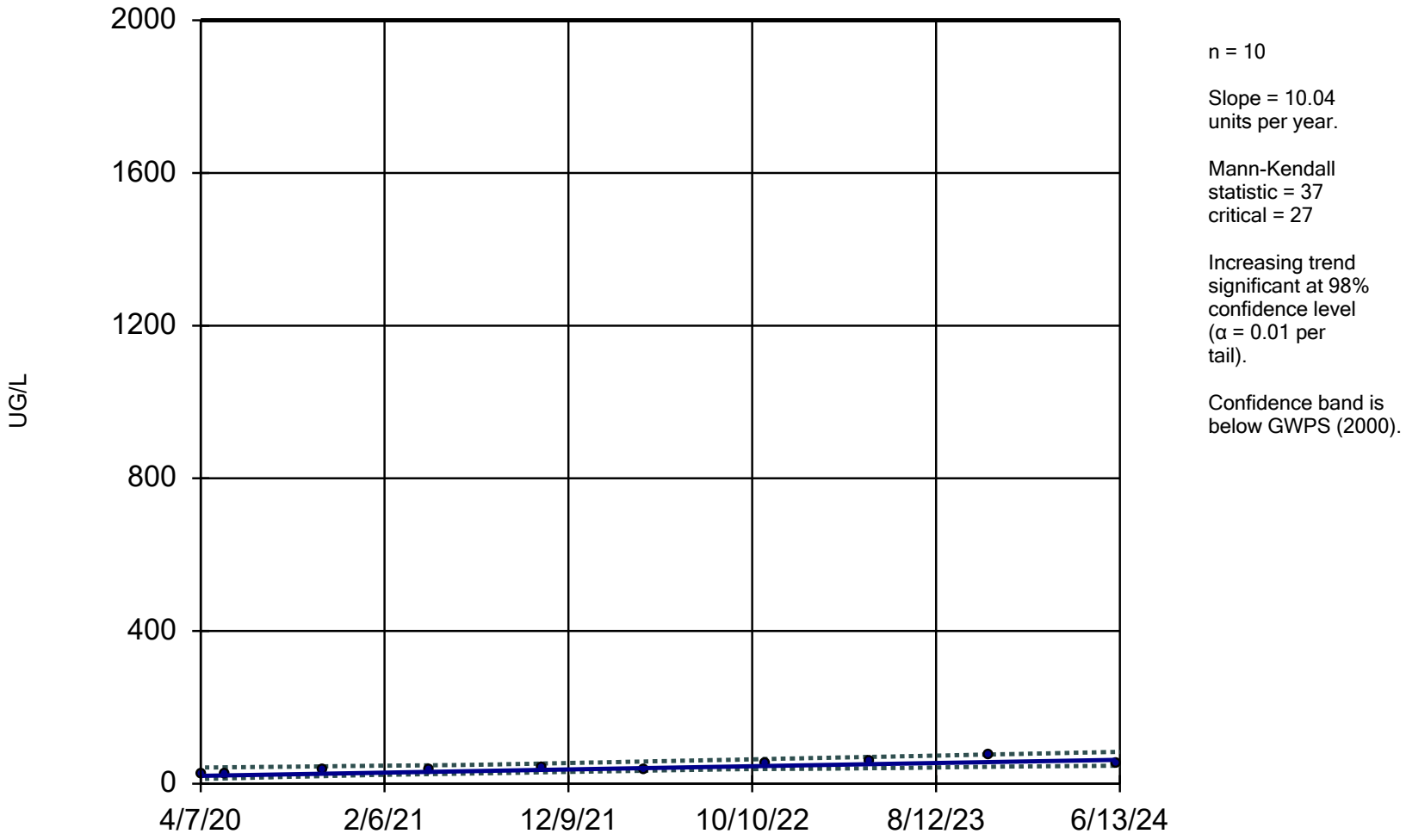
Constituent: BARIUM, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-21I



n = 10

Slope = 10.04 units per year.

Mann-Kendall statistic = 37
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

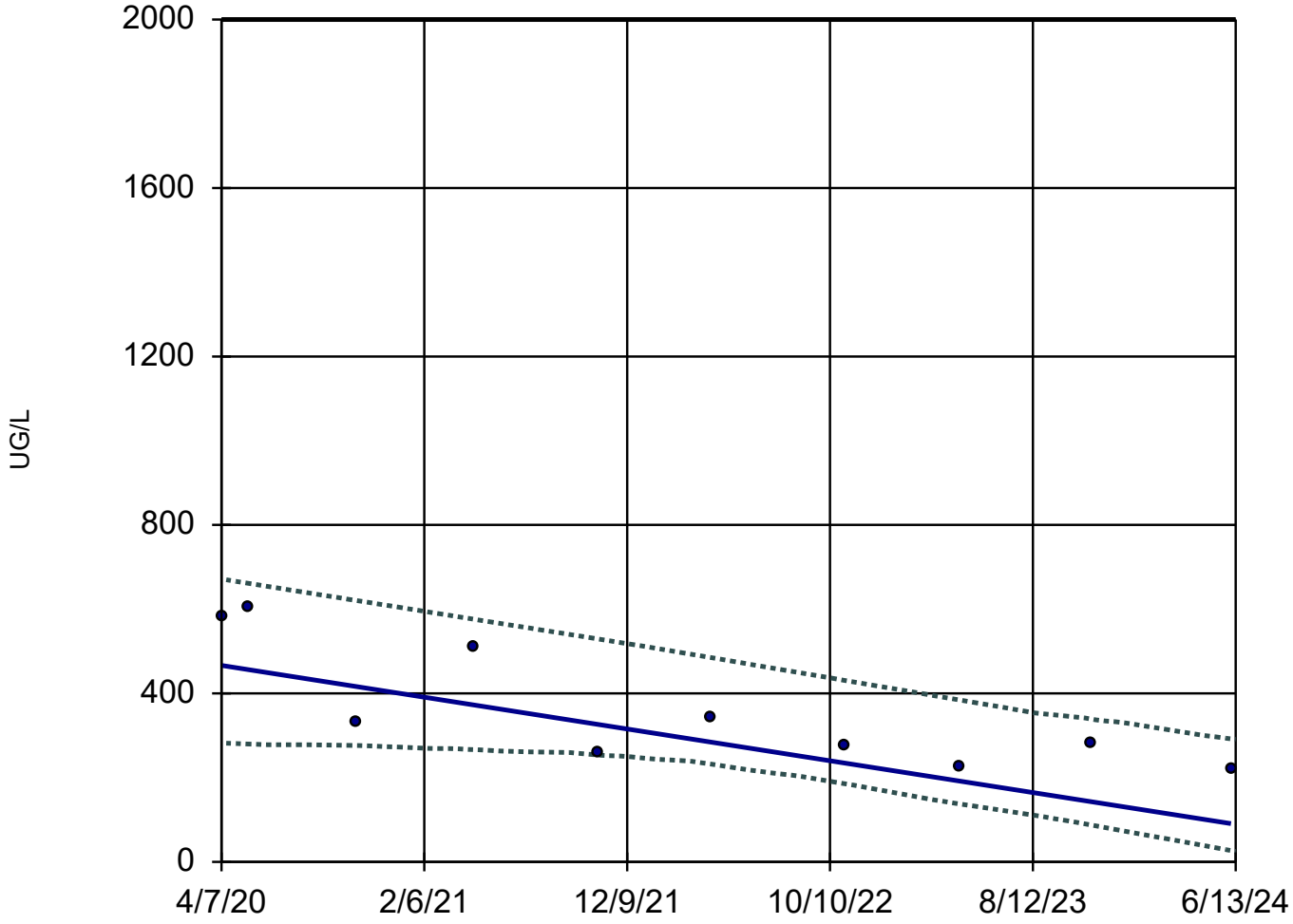
Constituent: BARIUM, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

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Sen's Slope and 95% Confidence Band

R-P-21S



n = 10

Slope = -90.07 units per year.

Mann-Kendall statistic = -29
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

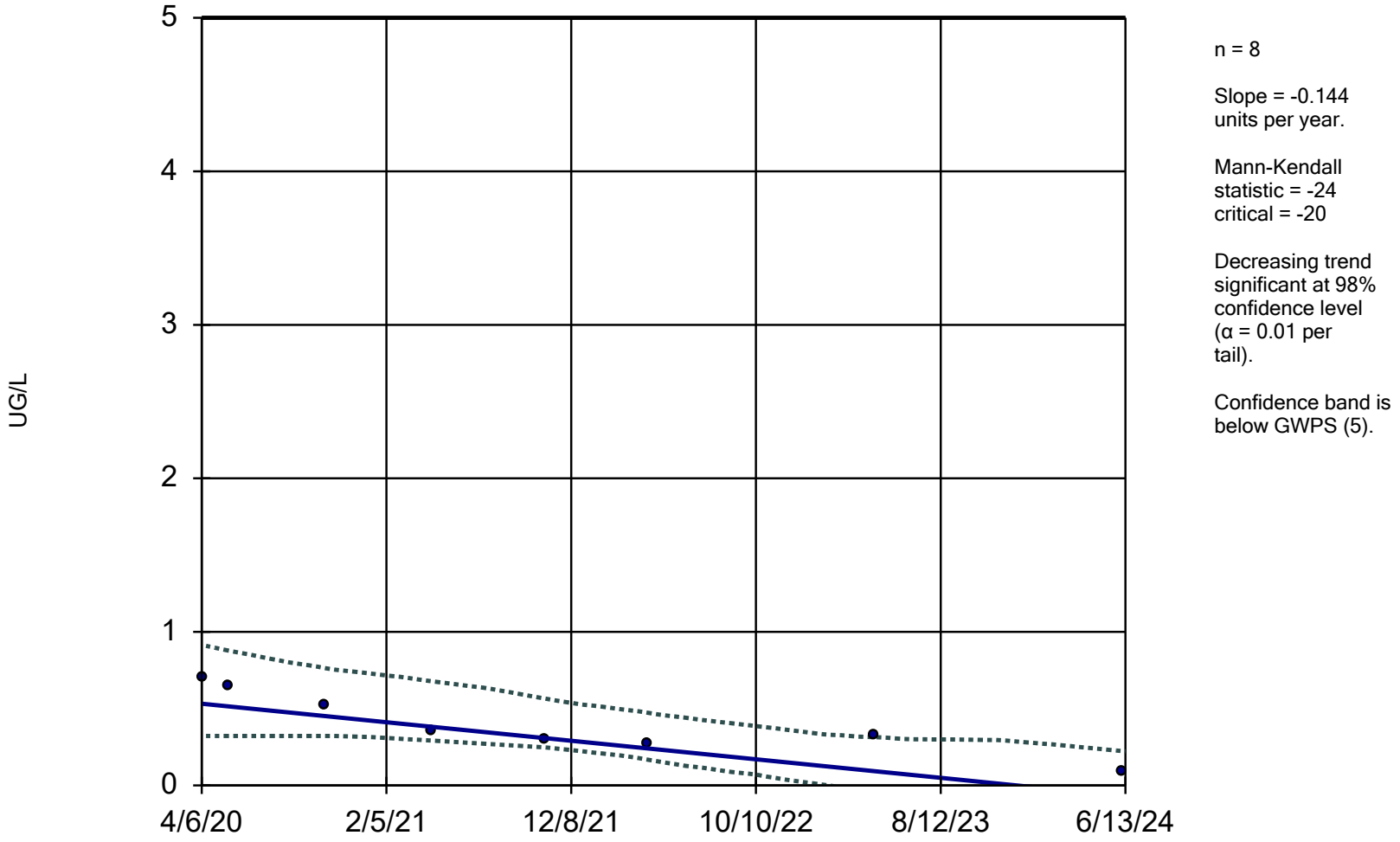
Constituent: BARIUM, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-17I



n = 8

Slope = -0.144 units per year.

Mann-Kendall statistic = -24
critical = -20

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

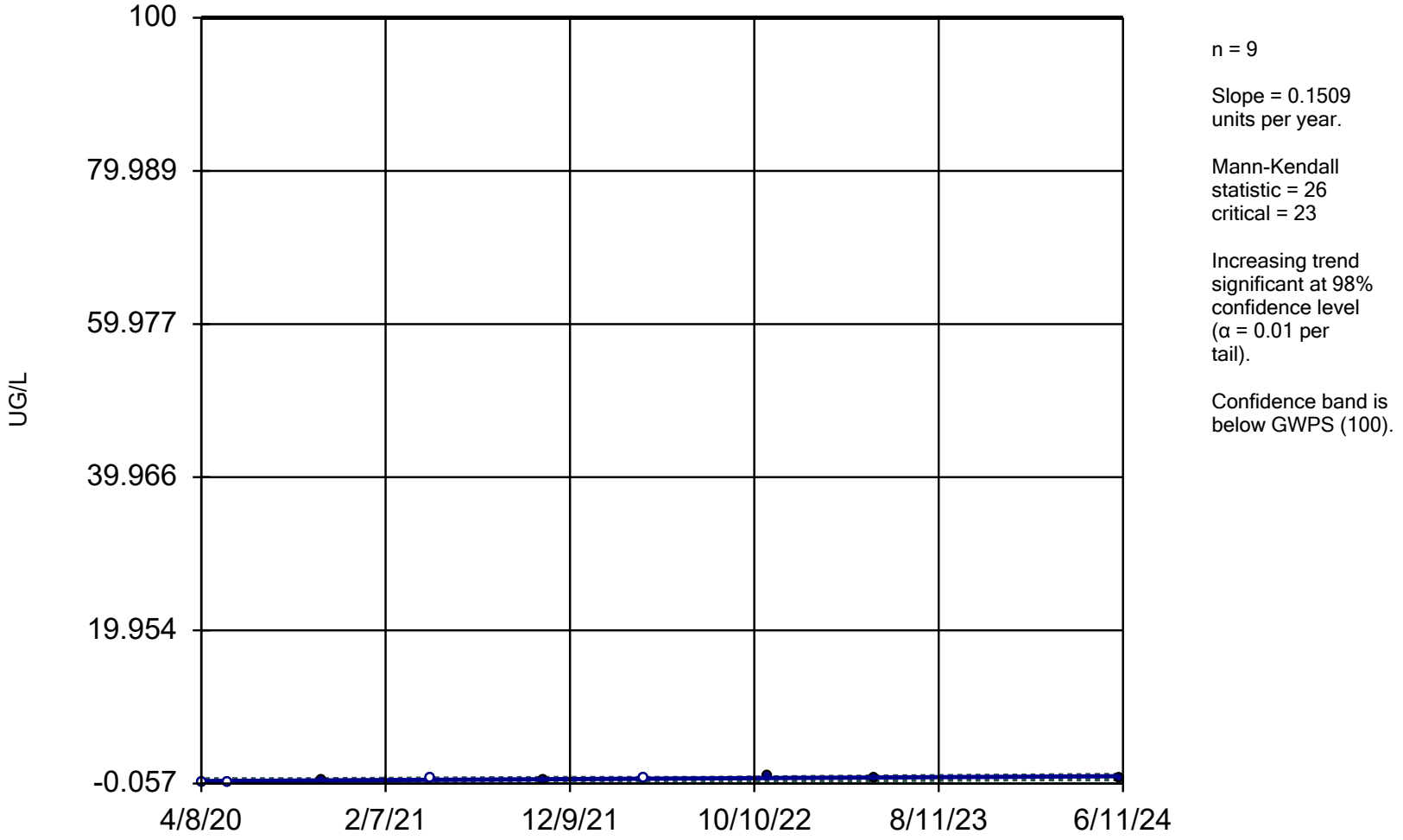
Constituent: CADMIUM, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-10S



n = 9

Slope = 0.1509 units per year.

Mann-Kendall statistic = 26
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (100).

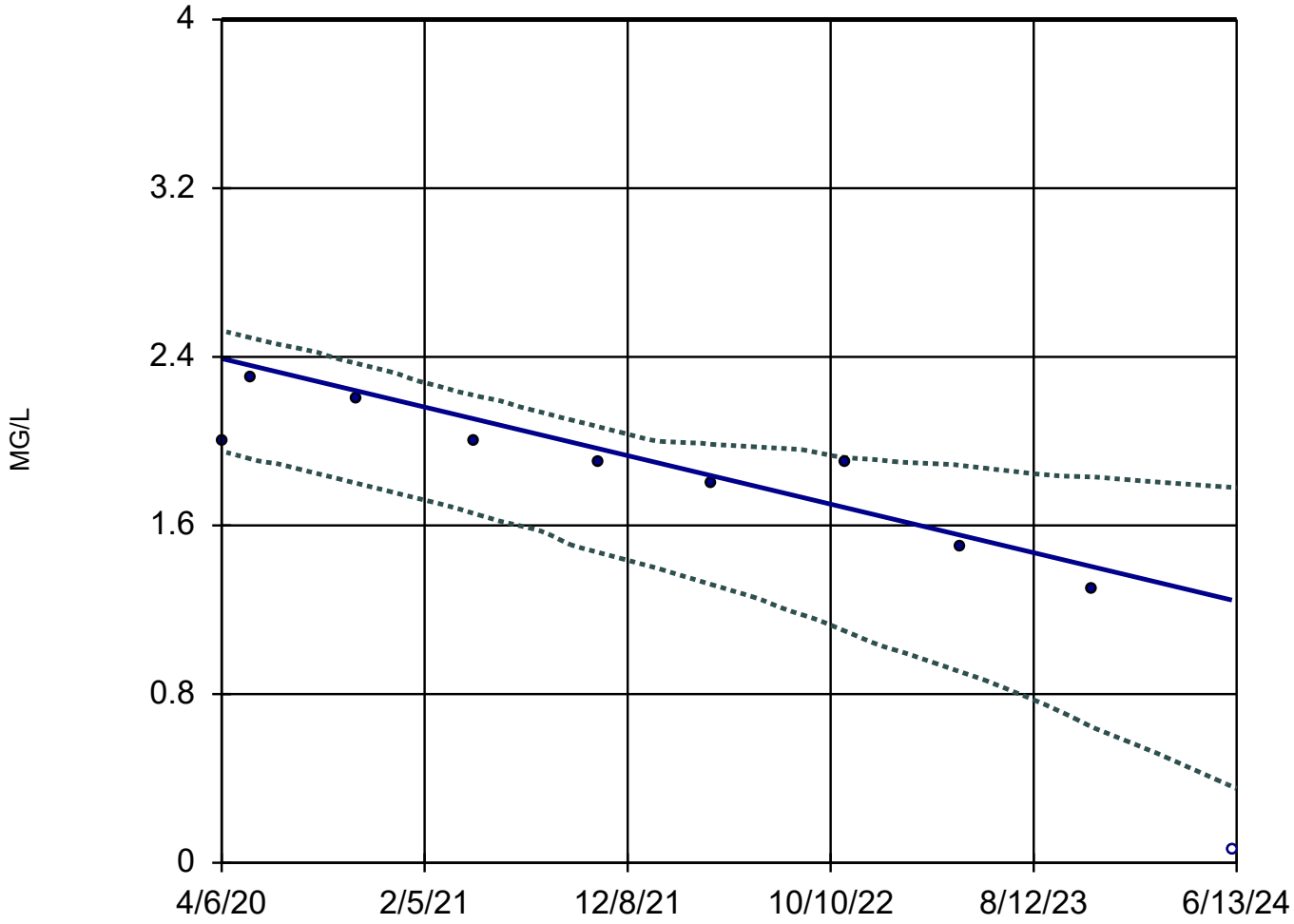
Constituent: CHROMIUM, TOTAL Analysis Run 9/3/2024 3:36 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-17I



n = 10

Slope = -0.2747 units per year.

Mann-Kendall statistic = -37
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

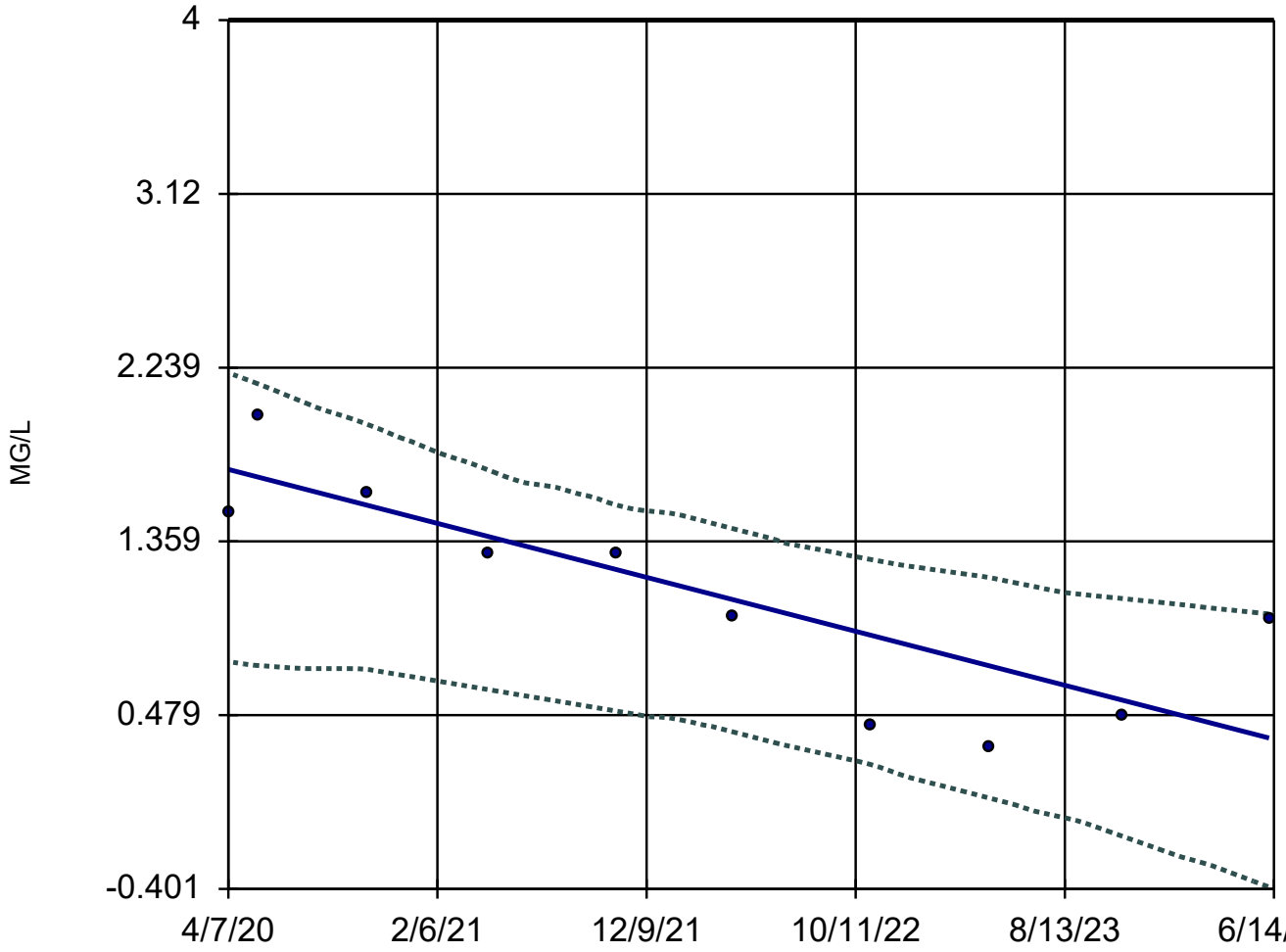
Constituent: FLUORIDE, TOTAL Analysis Run 9/3/2024 3:37 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 10

Slope = -0.3263 units per year.

Mann-Kendall statistic = -30
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

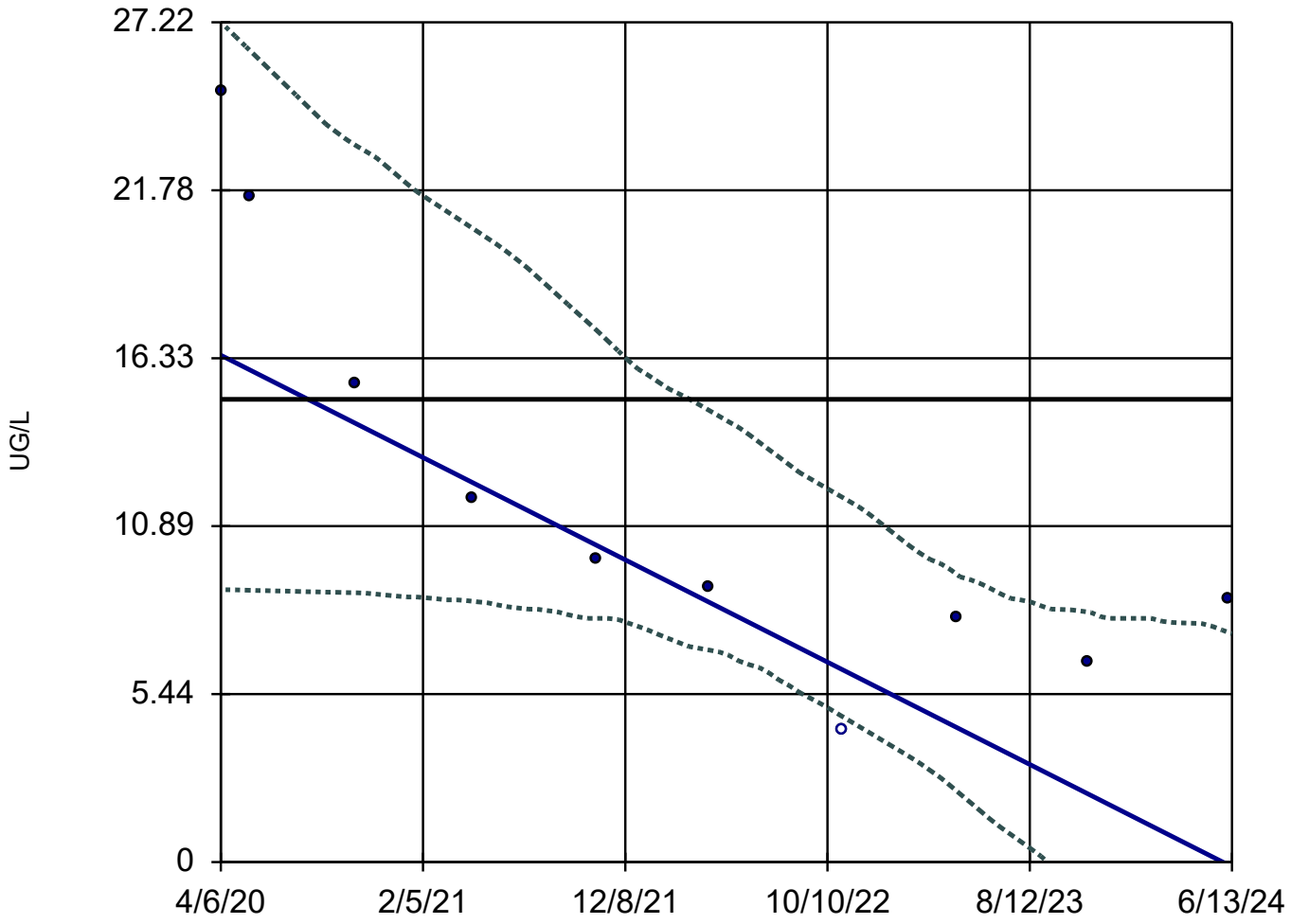
Constituent: FLUORIDE, TOTAL Analysis Run 9/3/2024 3:37 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-17I



n = 10

Slope = -3.957 units per year.

Mann-Kendall statistic = -35
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (15) on 03/29/22.

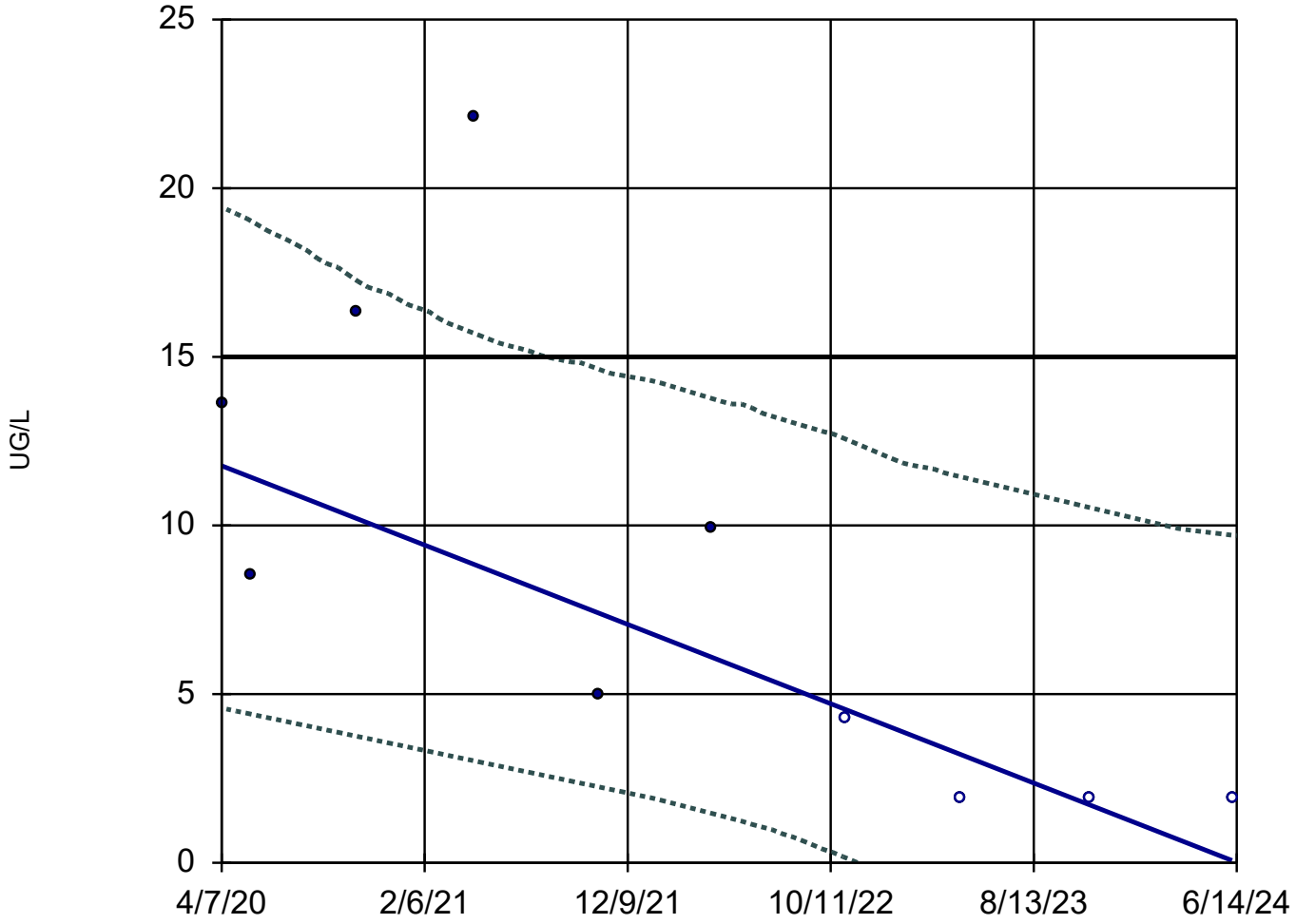
Constituent: LEAD, TOTAL Analysis Run 9/3/2024 3:37 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-19I



n = 10

Slope = -2.806 units per year.

Mann-Kendall statistic = -28
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (15) on 08/14/21.

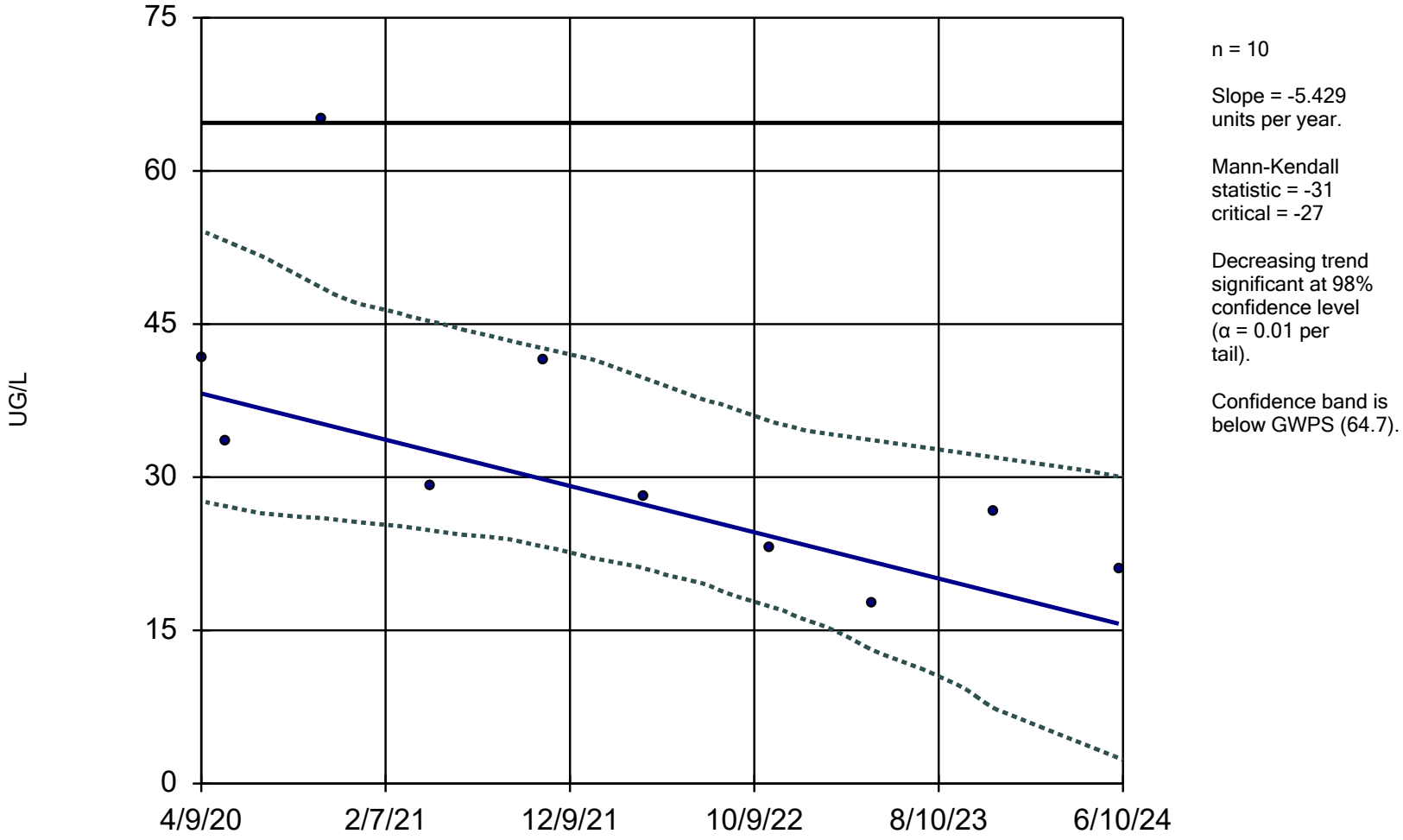
Constituent: LEAD, TOTAL Analysis Run 9/3/2024 3:42 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-16S



n = 10

Slope = -5.429 units per year.

Mann-Kendall statistic = -31
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

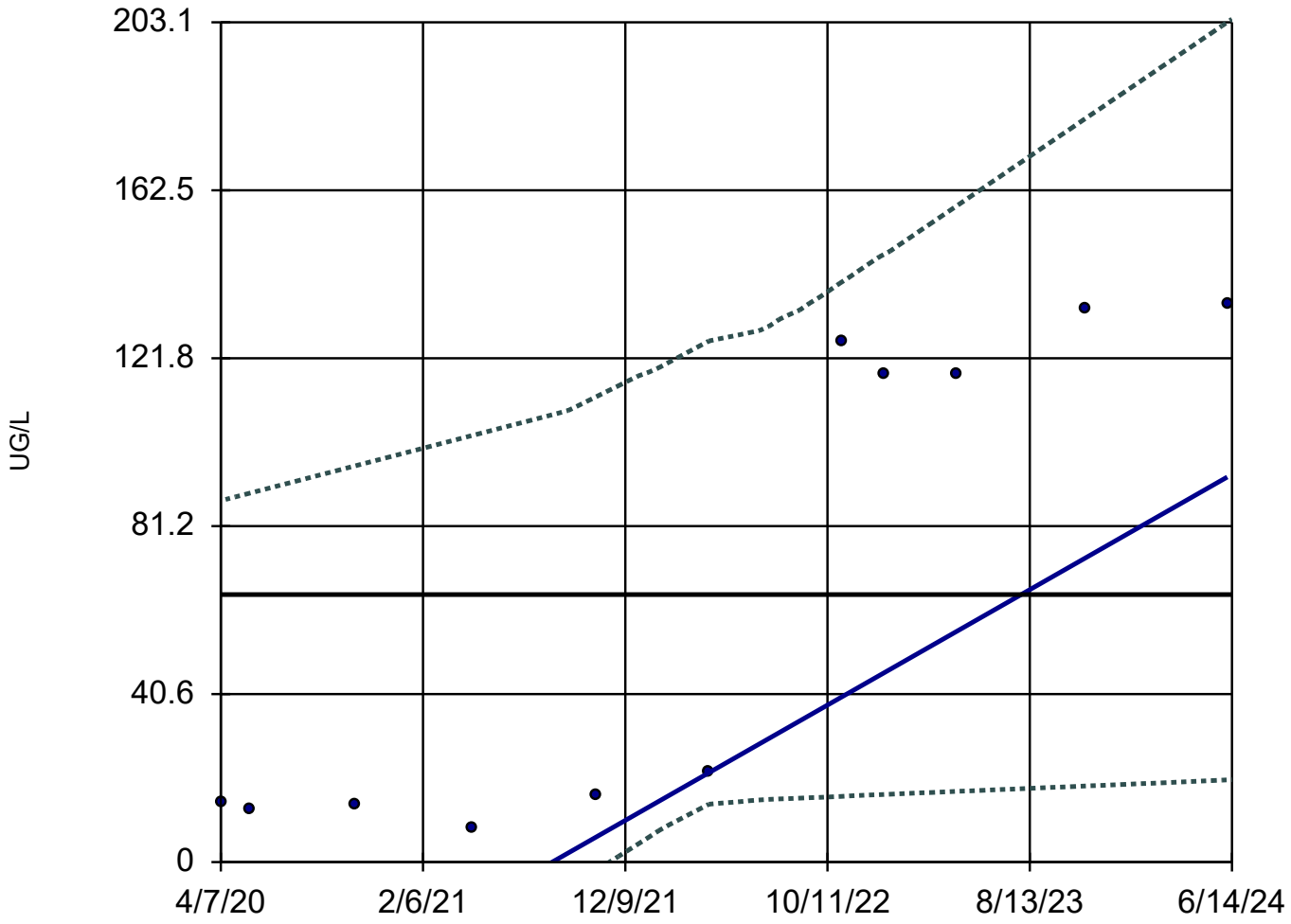
Constituent: LITHIUM, TOTAL Analysis Run 9/3/2024 3:41 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19I



n = 11

Slope = 33.29 units per year.

Mann-Kendall statistic = 40
critical = 31

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS (64.7) is entirely within the confidence band.

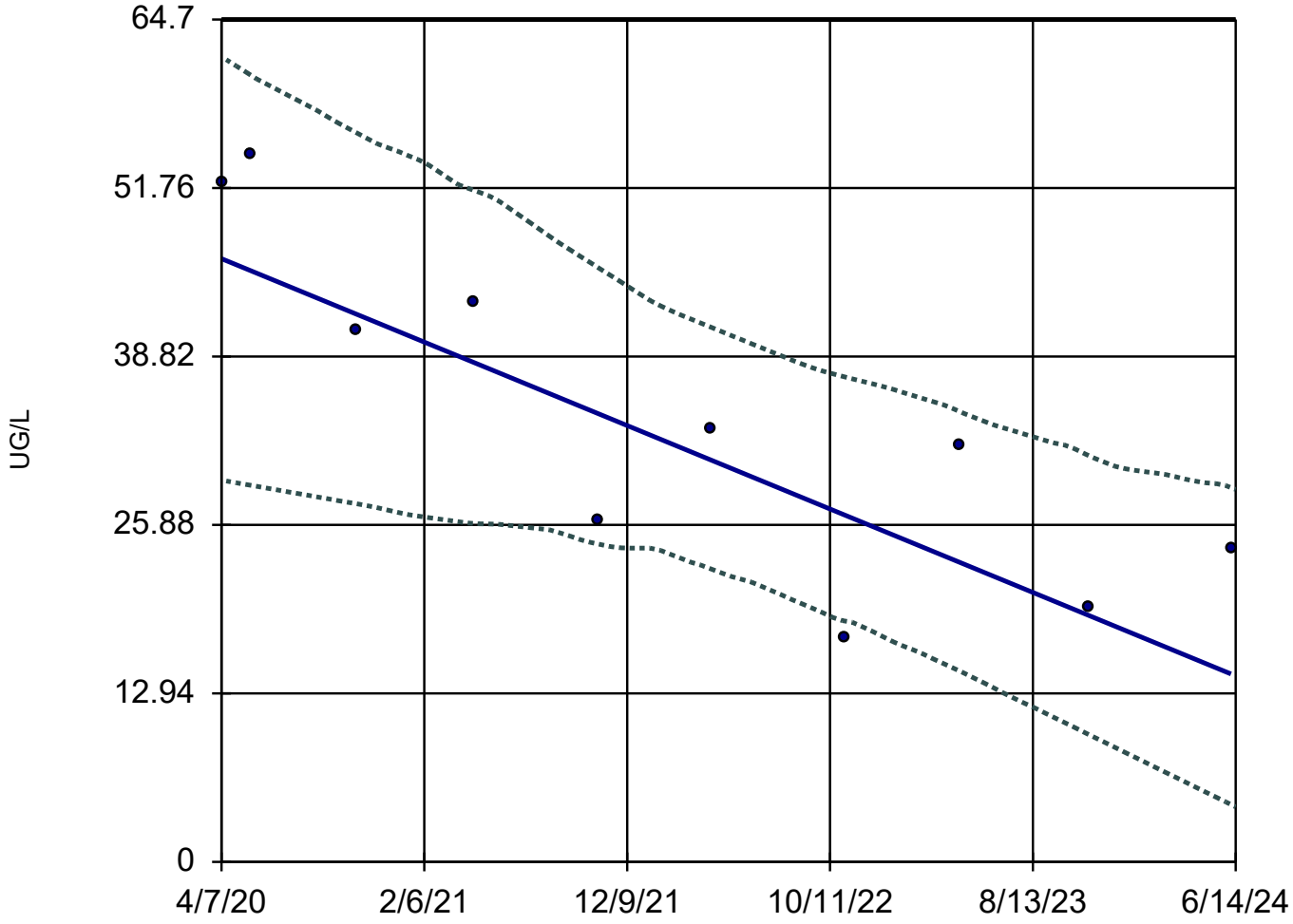
Constituent: LITHIUM, TOTAL Analysis Run 9/3/2024 3:37 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-19S



n = 10

Slope = -7.648 units per year.

Mann-Kendall statistic = -29
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (64.7).

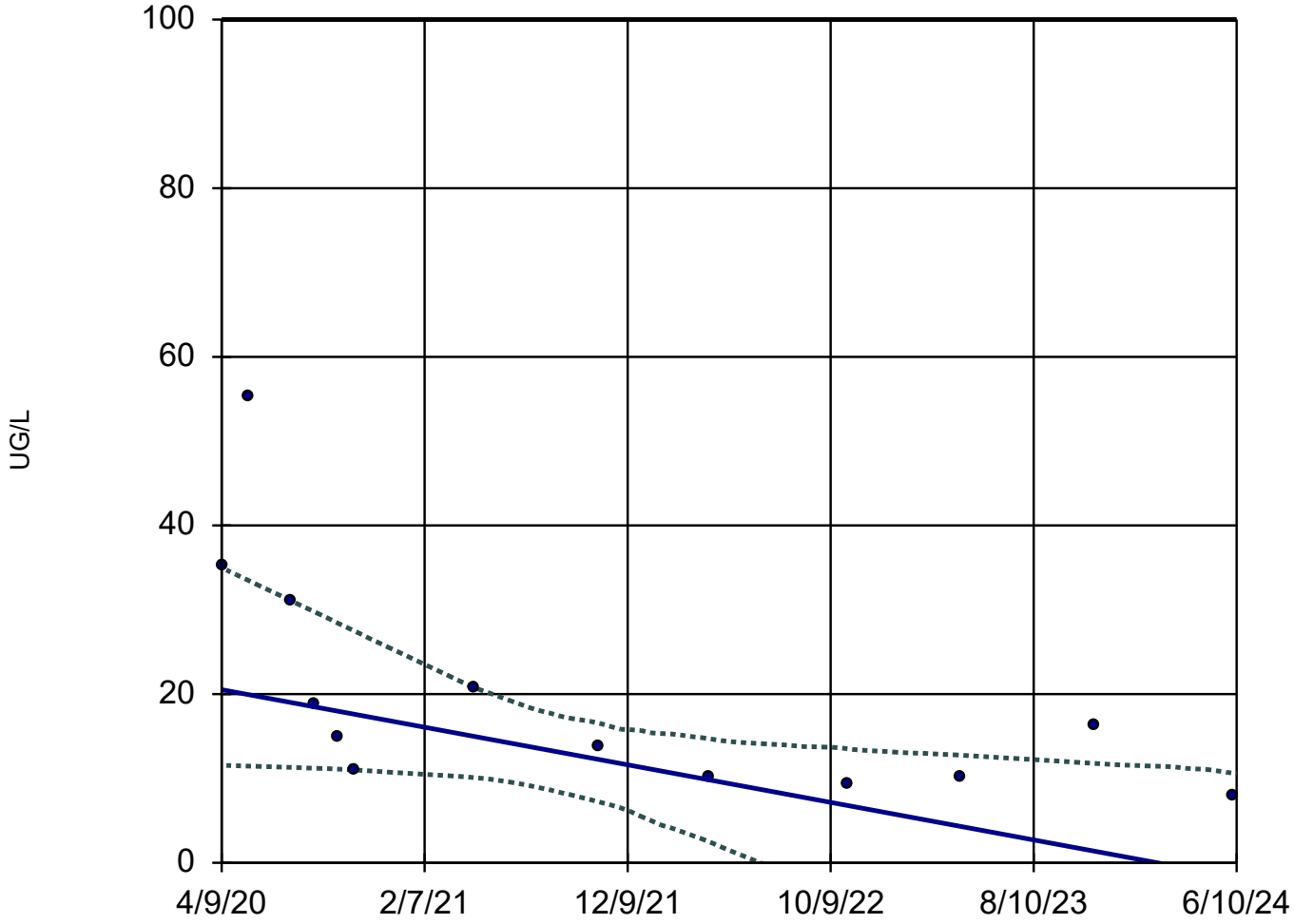
Constituent: LITHIUM, TOTAL Analysis Run 9/3/2024 3:37 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-16S



n = 13

Slope = -5.336 units per year.

Mann-Kendall statistic = -54 critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (100).

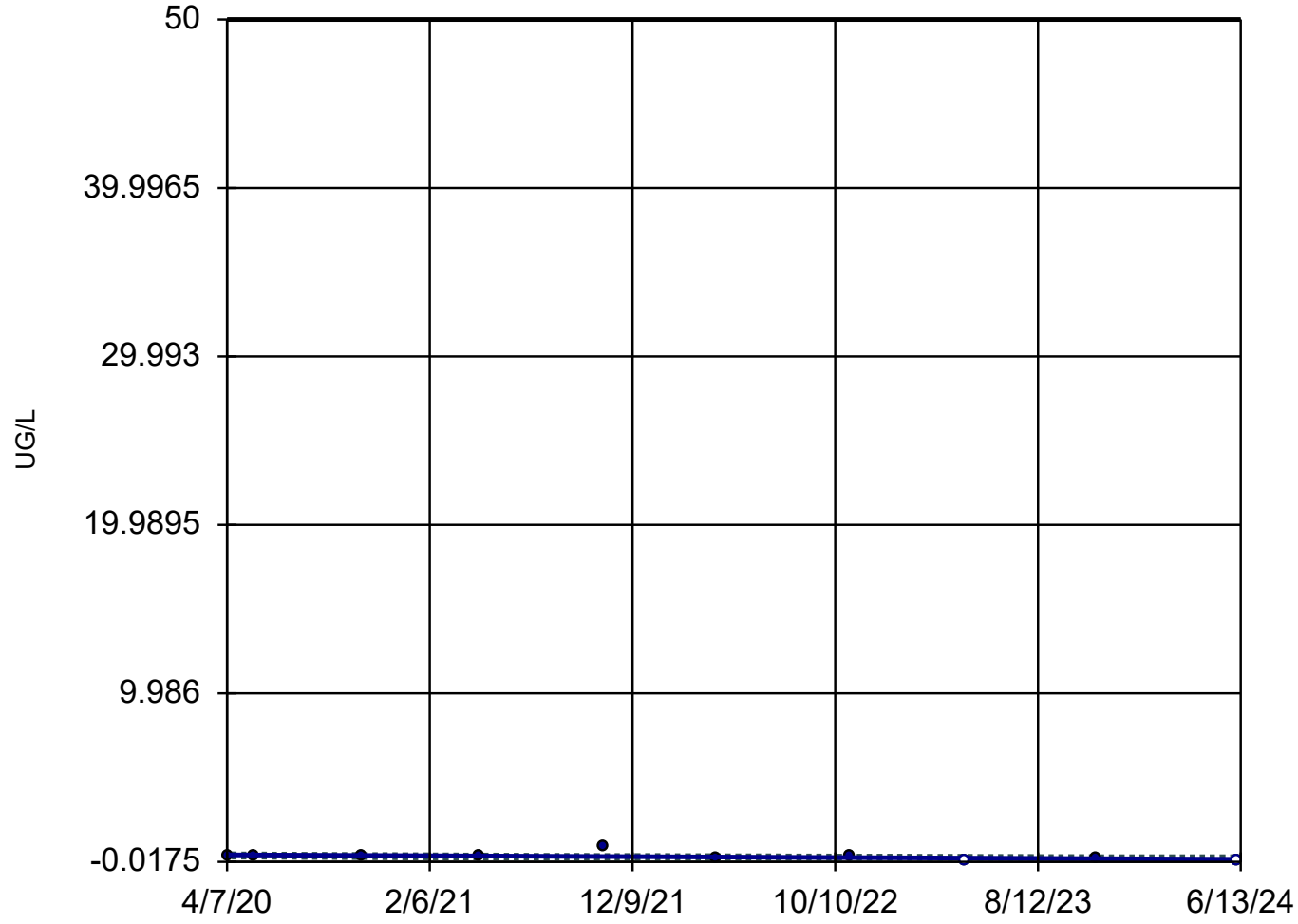
Constituent: MOLYBDENUM, TOTAL Analysis Run 9/3/2024 3:37 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

R-P-21S



n = 10

Slope = -0.06369 units per year.

Mann-Kendall statistic = -29
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (50).

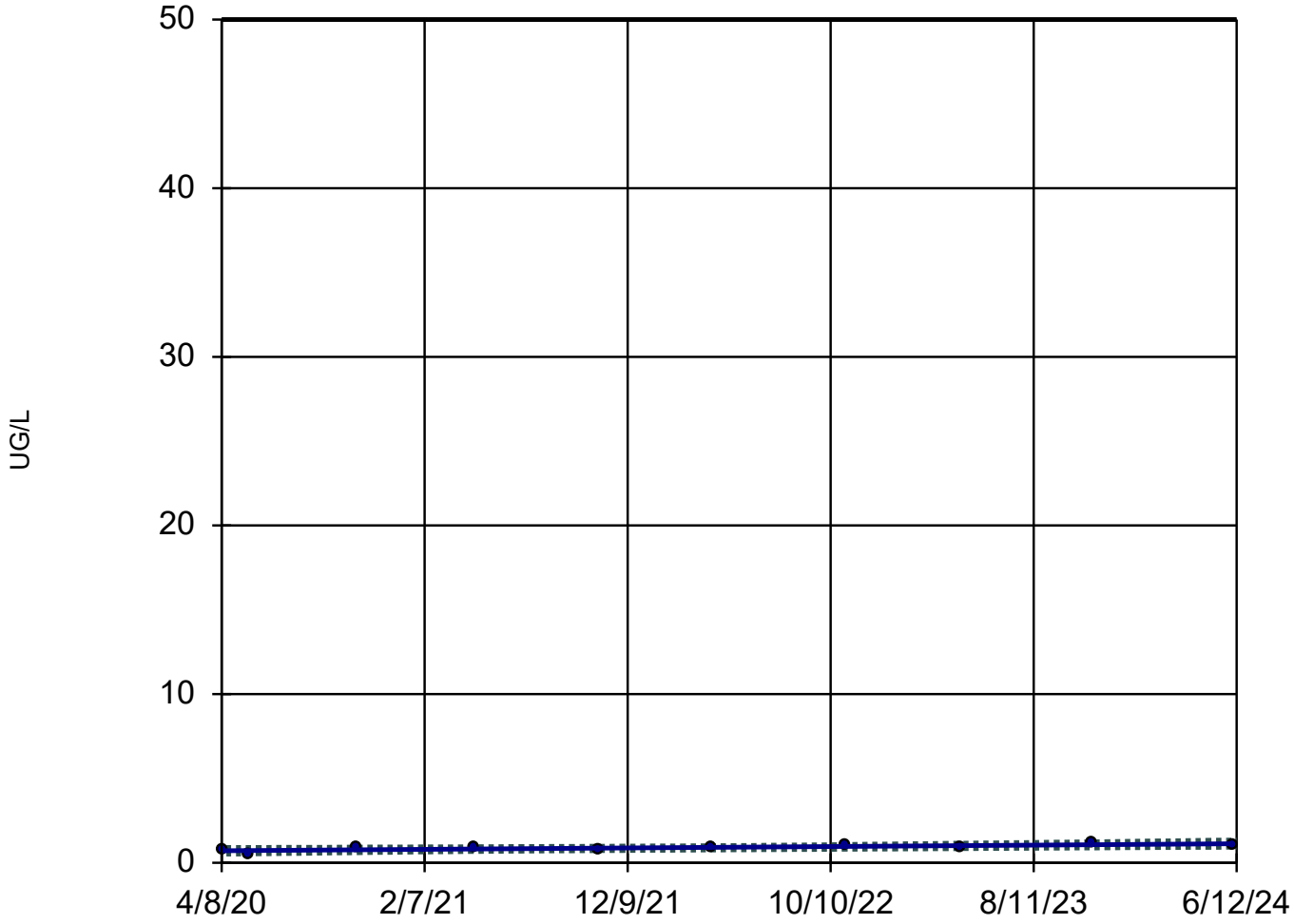
Constituent: SELENIUM, TOTAL Analysis Run 9/3/2024 3:38 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Sanitas™ v.9.6.37 Software licensed to Rocksmith Geoengineering. EPA

Sen's Slope and 95% Confidence Band

R-P-22D



n = 10

Slope = 0.09968 units per year.

Mann-Kendall statistic = 33
critical = 27

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (50).

Constituent: SELENIUM, TOTAL Analysis Run 9/3/2024 3:38 PM View: Corrective Action

Rush Island E.C. Client: Ameren Data: RIEC Data

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 3:38 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	**R-P-05S**	**0.00319**	**31**	**27**	**Yes**	**10**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-10S	0.000...	4	23	No	9	66.67	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	R-P-16S	0.003782	24	27	No	10	80	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-17D**	**0.00319**	**31**	**27**	**Yes**	**10**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-P-17I**	**-0.1072**	**-31**	**-27**	**Yes**	**10**	**10**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-17S	0.03729	19	27	No	10	40	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-19D**	**0.003182**	**31**	**27**	**Yes**	**10**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-P-19I**	**-1.267**	**-31**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-19S	0.001625	19	27	No	10	90	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-21D**	**0.003185**	**31**	**27**	**Yes**	**10**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	**R-P-21I**	**0.003185**	**31**	**27**	**Yes**	**10**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-21S	0.003076	22	27	No	10	90	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	R-P-22D	0.03945	24	27	No	10	30	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-22S**	**0.00319**	**31**	**27**	**Yes**	**10**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ANTIMONY, TOTAL (UG/L)	R-P-30S	0.003116	23	23	No	9	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	**R-P-31S**	**0.003239**	**26**	**23**	**Yes**	**9**	**100**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-P-05S	8.943	23	27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-10S	0.5633	8	35	No	12	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-16S	-0.1936	-25	-39	No	13	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-17D	0	-3	-27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-P-17I**	**-6.681**	**-35**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-P-17S	-1.727	-13	-27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-19D	-0.0264	-11	-27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-19I	-73.24	-26	-27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**R-P-19S**	**-4.503**	**-43**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	R-P-21D	-0.0251	-19	-27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-21I	0	6	27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-21S	-9.479	-5	-27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-22D	0.6724	24	27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-22S	0.6905	18	27	No	10	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-30S	-0.09689	-18	-39	No	13	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	R-P-31S	2.361	21	31	No	11	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-05S	16.85	27	27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-10S	23.75	21	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-16S	7.575	7	27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-17D	-1.965	-25	-27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-17I	0.1839	6	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-17S	10.12	12	23	No	9	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-19D	5.777	15	27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-P-19I**	**13.72**	**43**	**27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-P-19S**	**-87.97**	**-29**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-P-21D	-21	-5	-27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**R-P-21I**	**10.04**	**37**	**27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	**R-P-21S**	**-90.07**	**-29**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	R-P-22D	0.2018	1	27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-22S	-12.59	-25	-27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-30S	2.893	13	27	No	10	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	R-P-31S	3.155	6	20	No	8	0	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-05S	-0.00...	-11	-20	No	8	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-10S	0.02621	8	20	No	8	0	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 3:38 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
CADMIUM, TOTAL (UG/L)	R-P-16S	-0.02008	-14	-20	No	8	25	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-17D	0.004783	3	20	No	8	25	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	**R-P-17I**	**-0.144**	**-24**	**-20**	**Yes**	**8**	**0**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	R-P-17S	0.02985	13	20	No	8	37.5	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-19D	0.003569	0	20	No	8	0	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-19I	-0.1106	-18	-20	No	8	0	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-19S	-0.00...	-11	-17	No	7	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-21D	0.02147	15	20	No	8	37.5	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-21I	0.001504	2	20	No	8	37.5	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-21S	0.005761	7	20	No	8	37.5	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-22D	0.004475	3	20	No	8	0	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-22S	0.009531	9	20	No	8	0	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-30S	-0.01269	-19	-20	No	8	50	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	R-P-31S	-0.00...	-11	-20	No	8	100	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-05S	0.01941	8	27	No	10	10	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	**R-P-10S**	**0.1509**	**26**	**23**	**Yes**	**9**	**44.44**	**n/a**	**n/a**	**0.02**	**NP**
CHROMIUM, TOTAL (UG/L)	R-P-16S	0.009631	8	27	No	10	90	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-17D	0.01152	13	27	No	10	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-17I	-0.05903	-9	-27	No	10	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-17S	0.07496	19	27	No	10	20	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-19D	0.01641	1	27	No	10	10	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-19I	0.04267	8	27	No	10	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-19S	0.07069	22	27	No	10	20	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-21D	0.0363	9	27	No	10	60	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-21I	0	2	27	No	10	10	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-21S	0.009872	3	27	No	10	40	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-22D	0.2422	25	27	No	10	0	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-22S	0.01314	12	27	No	10	70	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-30S	0.05283	22	27	No	10	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	R-P-31S	0.01154	7	23	No	9	55.56	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-05S	-0.02044	-15	-27	No	10	10	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-10S	-0.104	-23	-23	No	9	33.33	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-16S	-0.07662	-19	-27	No	10	40	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-17D	-0.0865	-25	-27	No	10	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-P-17I**	**-0.2747**	**-37**	**-27**	**Yes**	**10**	**10**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-P-17S	-0.1059	-10	-27	No	10	20	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-19D	-0.1083	-18	-27	No	10	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**R-P-19I**	**-0.3263**	**-30**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	R-P-19S	-0.03462	-14	-27	No	10	20	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-21D	-0.04093	-6	-27	No	10	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-21I	-0.0944	-23	-27	No	10	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-21S	-0.05999	-21	-27	No	10	30	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-22D	-0.07209	-10	-27	No	10	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-22S	-0.08396	-16	-27	No	10	60	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-30S	-0.08431	-23	-27	No	10	30	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	R-P-31S	-0.0188	-9	-23	No	9	11.11	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-05S	-0.09898	-16	-27	No	10	90	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-10S	0	-4	-20	No	8	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-16S	0	-10	-27	No	10	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-17D	-0.09898	-16	-27	No	10	90	n/a	n/a	0.02	NP

Trend Test

Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 3:38 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
LEAD, TOTAL (UG/L)	**R-P-17I**	**-3.957**	**-35**	**-27**	**Yes**	**10**	**10**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-P-17S	-0.1021	-18	-27	No	10	90	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-19D	-0.07878	-16	-27	No	10	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	**R-P-19I**	**-2.806**	**-28**	**-27**	**Yes**	**10**	**40**	**n/a**	**n/a**	**0.02**	**NP**
LEAD, TOTAL (UG/L)	R-P-19S	-0.09732	-15	-23	No	9	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-21D	0	-10	-27	No	10	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-21I	-0.07878	-16	-27	No	10	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-21S	-0.114	-17	-23	No	9	88.89	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-22D	0	0	27	No	10	80	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-22S	-0.09878	-12	-27	No	10	90	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-30S	-0.04803	-13	-23	No	9	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	R-P-31S	-0.04809	-9	-20	No	8	100	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-05S	-1.034	-21	-27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-10S	2.219	8	23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-P-16S**	**-5.429**	**-31**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-P-17D	-1.171	-17	-27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-17I	-0.01599	-3	-27	No	10	60	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-17S	0.7748	4	23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-19D	0.8722	11	27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	**R-P-19I**	**33.29**	**40**	**31**	**Yes**	**11**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	**R-P-19S**	**-7.648**	**-29**	**-27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
LITHIUM, TOTAL (UG/L)	R-P-21D	-3.702	-1	-27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-21I	1.827	21	27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-21S	-1.476	-25	-27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-22D	-0.7885	-20	-27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-22S	-3.778	-20	-27	No	10	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-30S	0.9309	11	23	No	9	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	R-P-31S	0.2963	2	23	No	9	22.22	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-05S	-1.488	-26	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-10S	-12.69	-31	-35	No	12	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**R-P-16S**	**-5.336**	**-54**	**-39**	**Yes**	**13**	**0**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	R-P-17D	-8.488	-9	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-17I	8.538	15	27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-17S	-2.162	-1	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-19D	-50.36	-23	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-19I	-34.23	-23	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-19S	-0.4926	-11	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-21D	16.8	9	27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-21I	43.42	27	27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-21S	-0.4252	-14	-27	No	10	30	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-22D	-10.57	-21	-27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-22S	0.606	9	27	No	10	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-30S	0.4426	31	39	No	13	53.85	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	R-P-31S	0.3999	14	35	No	12	8.333	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-05S	0.03184	9	23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-10S	0.08207	16	23	No	9	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-16S	0.05426	9	27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-17D	-0.00...	-3	-27	No	10	90	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-17I	-0.00...	-3	-27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-17S	0.01468	7	27	No	10	100	n/a	n/a	0.02	NP

Trend Test

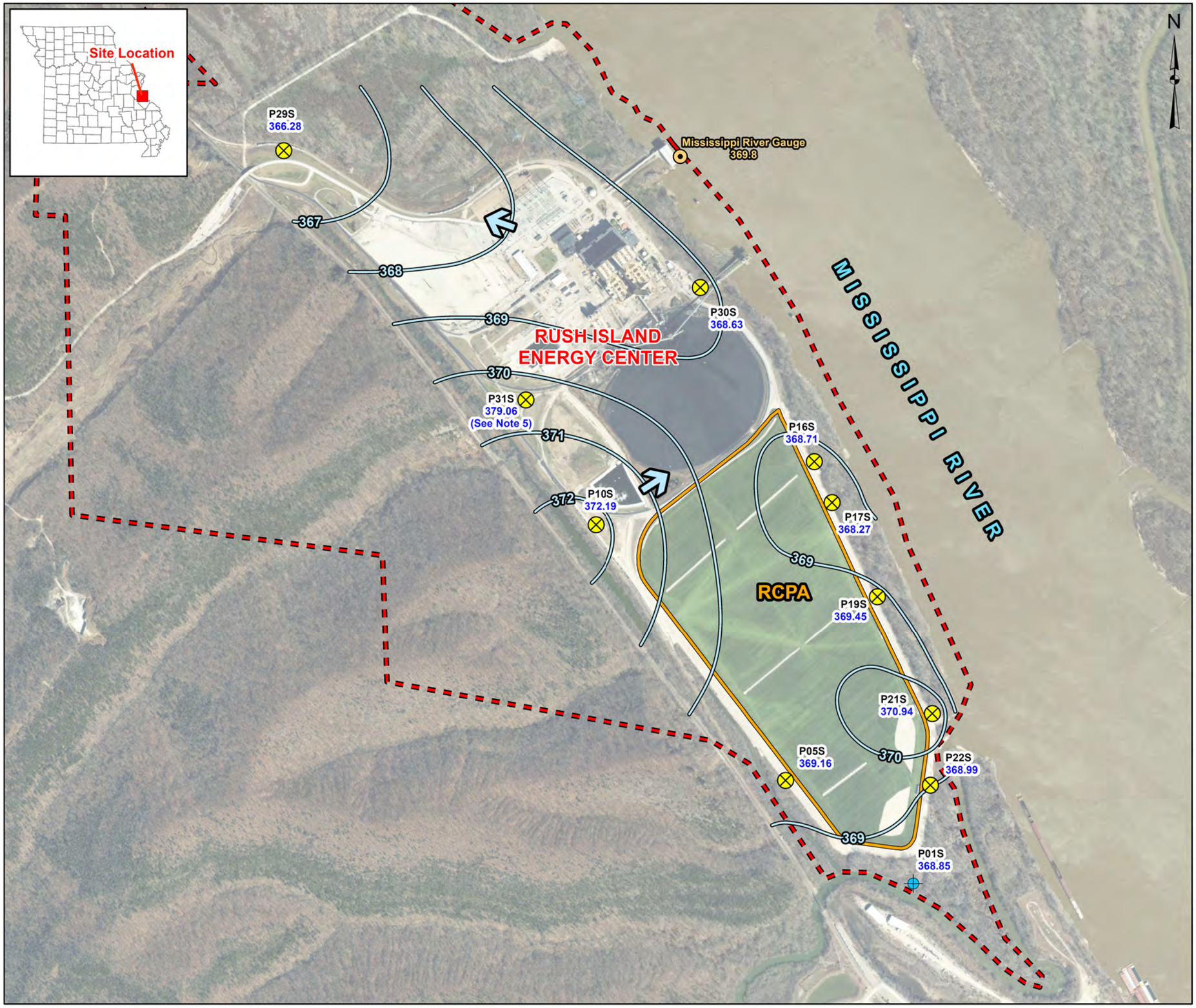
Rush Island E.C. Client: Ameren Data: RIEC Data Printed 9/3/2024, 3:38 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
RADIUM [226 + 228] (PCI/L)	R-P-19D	-0.01185	-14	-27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-19I	-0.02827	-13	-27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-19S	-0.09125	-9	-27	No	10	70	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-21D	-0.2379	-19	-27	No	10	60	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-21I	-0.06428	-13	-27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-21S	0.03573	3	27	No	10	90	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-22D	0.03835	7	27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-22S	-0.00...	-1	-27	No	10	90	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-30S	0.008758	3	27	No	10	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	R-P-31S	0.01735	2	20	No	8	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-05S	0	2	27	No	10	30	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-10S	0	-3	-23	No	9	66.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-16S	0.01557	3	27	No	10	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-17D	-0.00...	-12	-27	No	10	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-17I	-0.2296	-26	-27	No	10	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-17S	0.07079	12	23	No	9	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-19D	-0.02557	-25	-27	No	10	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-19I	-0.5577	-21	-27	No	10	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-19S	0	0	27	No	10	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-21D	0	3	27	No	10	90	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-21I	-0.03925	-23	-27	No	10	0	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	**R-P-21S**	**-0.06369**	**-29**	**-27**	**Yes**	**10**	**20**	**n/a**	**n/a**	**0.02**	**NP**
SELENIUM, TOTAL (UG/L)	**R-P-22D**	**0.09968**	**33**	**27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
SELENIUM, TOTAL (UG/L)	R-P-22S	0.02963	7	27	No	10	30	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-30S	-0.00...	-3	-23	No	9	33.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	R-P-31S	0	0	23	No	9	100	n/a	n/a	0.02	NP

Appendix F

2024 Potentiometric Surface Maps

FEBRUARY 13, 2024 POTENTIOMETRIC SURFACE MAP - SHALLOW ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.
5. P31S was not used in potentiometric surface map contouring due to pump obstruction in the well.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
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RUSH ISLAND ENERGY CENTER

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REVIEW	JTR		
APPROVED	MNH		

FIGURE F1

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FEBRUARY 13, 2024 POTENTIOMETRIC SURFACE MAP - INTERMEDIATE ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Well
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contour

- Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

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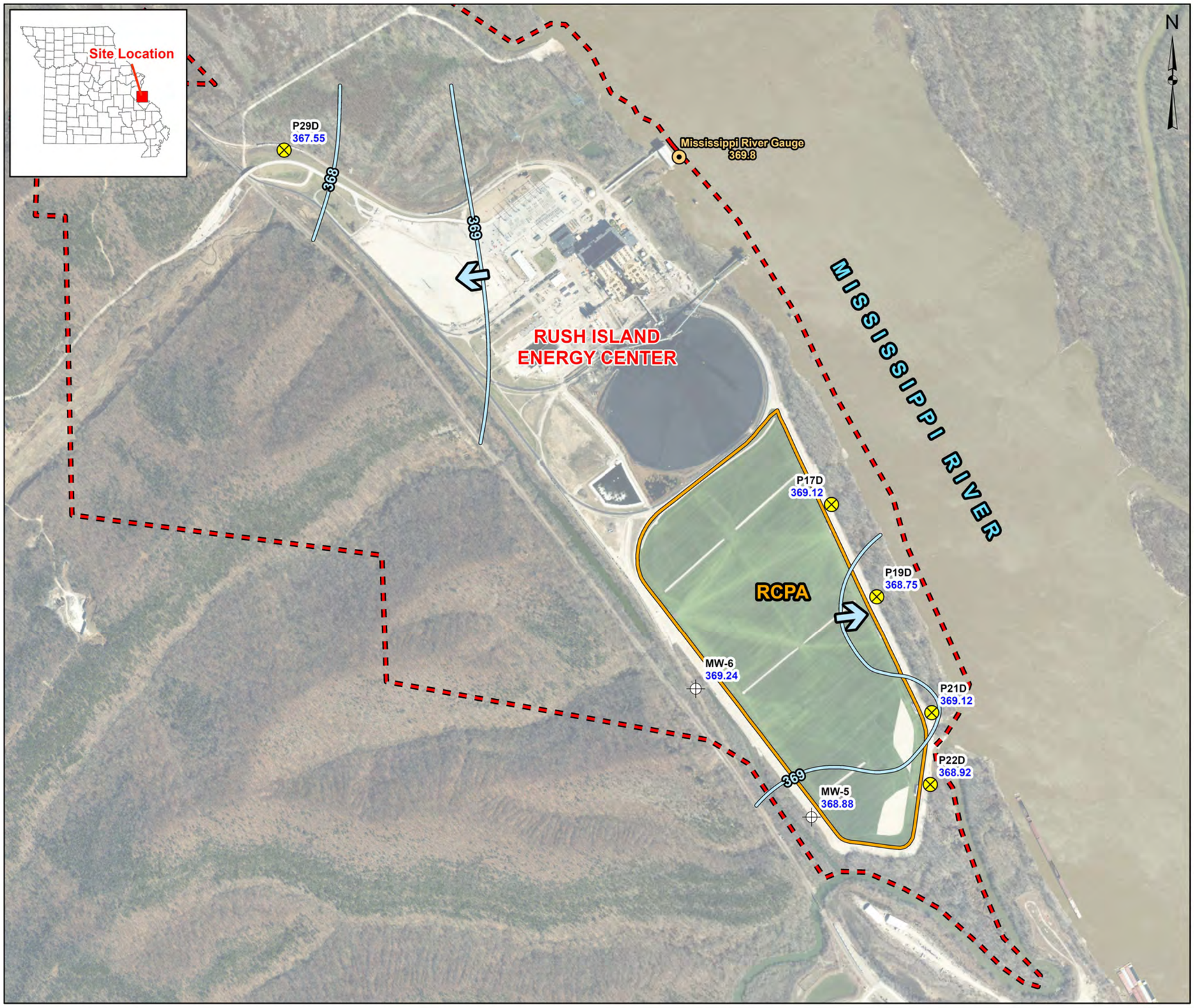
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FIGURE F2

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FEBRUARY 13, 2024 POTENTIOMETRIC SURFACE MAP - DEEP ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Wells
- Corrective Action Monitoring Wells

Groundwater Elevation Contour

- Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

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FIGURE F3

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JUNE 3, 2024 POTENTIOMETRIC SURFACE MAP - SHALLOW ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.
5. P17S was not used in potentiometric surface map contouring; well screen interval is in lower permeability aquifer materials and its water level response is slower than other wells in the aquifer.
6. P31S was note used in potentiometric surface map contouring due to pump obstruction in the well.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

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FIGURE F4

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JUNE 3, 2024 POTENTIOMETRIC SURFACE MAP - INTERMEDIATE ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Well
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

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APPROVED	MNH		

FIGURE F5

Path: C:\Users\Jack\Rasmussen\Rocksmith Geoengineering LLC\23007 - Ameren GW - Documents\400 - Drawings_Figures\4.2-RIEC\4.2.2 - Production\POT MAPS\2024 Annual Report\240607_RIEC_Int_PotMap.aprx

JUNE 3, 2024 POTENTIOMETRIC SURFACE MAP - DEEP ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Wells
- Corrective Action Monitoring Wells

Groundwater Elevation Contour

- Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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FIGURE F6

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS INDICATED, THE SHEET SIZE HAS BEEN ADJUSTED FROM:

JULY 31, 2024 POTENTIOMETRIC SURFACE MAP - SHALLOW ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.
5. P31S was not used in potentiometric surface map contouring due to pump obstruction in the well.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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FIGURE F7

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JULY 31, 2024 POTENTIOMETRIC SURFACE MAP - INTERMEDIATE ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Well
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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APPROVED	MNH		

FIGURE F8

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS INDICATED, PLEASE SELECT SCALE THAT MATCHES PRINT.

JULY 31, 2024 POTENTIOMETRIC SURFACE MAP - DEEP ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Wells
- Corrective Action Monitoring Wells

Groundwater Elevation Contour

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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FIGURE F9

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NOVEMBER 8, 2024 POTENTIOMETRIC SURFACE MAP - SHALLOW ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.
5. P31S was not used in potentiometric surface map contouring due to pump obstruction in the well.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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FIGURE F10

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NOVEMBER 8, 2024 POTENTIOMETRIC SURFACE MAP - INTERMEDIATE ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Well
- Corrective Action Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

Groundwater Elevation Contours

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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APPROVED	MNH		

FIGURE F11

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NOVEMBER 8, 2024 POTENTIOMETRIC SURFACE MAP - DEEP ALLUVIAL AQUIFER ZONE



LEGEND

- Approximate Rush Island Energy Center Property Boundary
- RCPA Surface Impoundment

Ground/Surface Water Measurement Locations

- Mississippi River Gauge
- CCR Rule Monitoring Wells
- Corrective Action Monitoring Wells

Groundwater Elevation Contour

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. All locations and boundaries are approximate.
2. Groundwater elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Groundwater elevation measurements collected by Rocksmith.
4. Mississippi River level provided by Ameren.

REFERENCES

1. Ameren Missouri Rush Island Energy Center, Rush Island Property Control Map, January 2012.
2. Coordinate system: NAD 1983 State Plane Missouri East FIPS 2401 feet.

0 500 1,000 2,000 Feet

PROJECT
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APPROVED	MNH		

FIGURE F12

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