REPORT

2022 Annual Groundwater Monitoring and Corrective Action Report

SCPA Surface Impoundment, Sioux Energy Center, St. Charles County, Missouri, USA

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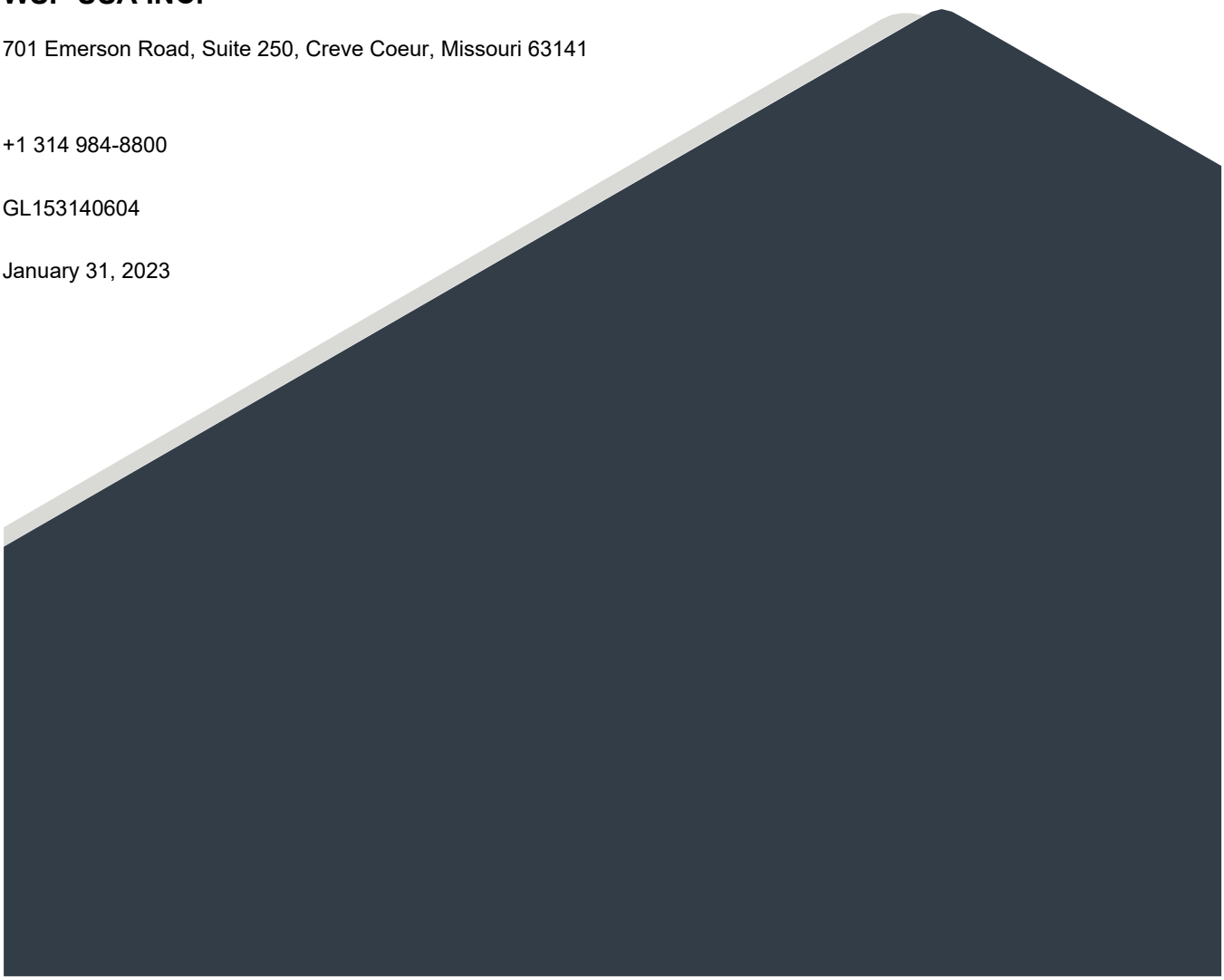
GL153140604

January 31, 2023



EXECUTIVE SUMMARY AND STATUS OF THE SCPA 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 SCPA Coal Combustion Residuals (CCR) Surface Impoundment at the Sioux Energy Center (SEC) is subject to the requirements of the CCR Rule. This Annual Report for the SCPA describes CCR Rule groundwater monitoring activities from January 1, 2022 through December 31, 2022 including verification results related to late 2021 sampling.

Throughout 2022, the SCPA 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 are provided in **Table 1**.

The Assessment Monitoring program was established at the SCPA 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 molybdenum was present at an SSL. A summary of SSLs for the past year is provided in **Table 1**.

Table 1 - Summary of 2022 SCPA Sampling Events, Previous Year Verification, and Statistical Evaluation for Detection and Assessment Monitoring Well Network

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt	Parameters Collected	Verified SSIs	SSLs	SSI & SSL Determination Date
November 2021 Sampling Event	Detection & Assessment Monitoring, November 8-11, 2021	December 20, 2021	Appendix III, Detected Appendix IV (See Note 1), & Major Cations and Anions	**pH:** UMW-2D, UMW-3D **Boron:** UMW-2D, UMW-3D, UMW-4D, UMW-5D, UMW-6D **Calcium:** UMW-2D, UMW-3D, UMW-4D **Chloride:** UMW-1D, UMW-2D, UMW-3D, UMW-4D, UMW-5D **Fluoride:** UMW-2D, UMW-3D, UMW-5D, UMW-6D **Sulfate:** UMW-2D, UMW-3D, UMW-4D, UMW-5D **TDS:** UMW-2D, UMW-3D, UMW-4D, UMW-5D	**Molybdenum:** UMW-2D, UMW-3D, UMW-4D, UMW-5D	March 18, 2022
	Verification Sampling, February 8, 2022	February 18, 2022	Detected Appendix III parameters (See Note 2)			

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt	Parameters Collected	Verified SSIs	SSLs	SSI & SSL Determination Date
March/April 2022 Sampling Event	Detection & Assessment Monitoring, March 29 to April 4, 2022	May 5, 2022	Appendix III, Appendix IV, Major Cations and Anions, & selected MNA Parameters	**pH:** UMW-2D, UMW-3D **Boron:** UMW-2D, UMW-3D, UMW-4D, UMW-5D, UMW-6D **Calcium:** UMW-2D, UMW-3D, UMW-4D **Chloride:** UMW-1D, UMW-2D, UMW-3D, UMW-4D, UMW-5D **Fluoride:** UMW-2D, UMW-3D, UMW-5D **Sulfate:** UMW-2D, UMW-3D, UMW-4D **TDS:** UMW-2D, UMW-3D, UMW-4D	**Molybdenum:** UMW-2D, UMW-3D, UMW-4D, UMW-5D	August 3, 2022
	Verification Sampling, June 7, 2022	June 17, 2022	Detected Appendix III parameters (See Note 2)			
October 2022 Sampling Event	Detection & Assessment Monitoring, October 18-19, 2022	November 10, 2022	Appendix III, Detected Appendix IV (See Note 3), & Major Cations and Anions	To be determined after statistical analysis and Verification Sampling are completed in 2023.		

Notes:

1) Testing was completed for Appendix IV analytes that were detected above the Practical Quantitation Limit (PQL) during the April 2021 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 March/April 2022 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 the CMA report on May 20, 2019. A public meeting was held on May 31, 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’s remedial plan consists of two 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.

In January 2021, Ameren commenced phase 1 of the corrective measures remedial plan by initiating closure at the SCPA. Capping and closure of the SCPA was fully completed in 2022 (closure certification on October 14, 2022). Therefore, the SCPA transitioned into the post-closure care requirements of the CCR Rule in October 2022. 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).

Once the SCPA was certified closed, phase 2 of the corrective measures remedial plan as outlined in the Remedy Selection Report began with the October 2022 Corrective Action Sampling event October 18-21, 2022. A statistical evaluation will be completed in 2023 to determine if there are any values in 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 2022 SCPA Sampling Events for Corrective Action Monitoring Well Network

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt Date	Parameters Collected
November 2021 Sampling Event	Phase 1 – Corrective Action Sampling November 8-12, 2021 (See Note 2)	December 27, 2021	Appendix III, Detected Appendix IV (See Note 1), & Major Cations and Anions
March/April 2022 Sampling Event	Phase 1 – Corrective Action Sampling March 29 to April 4, 2022	May 5, 2022	Appendix III, Appendix IV, Major Cations and Anions, & selected MNA parameters
October 2022Sampling Event	Phase 2 – Corrective Action Sampling October 18-21, 2022	November 15, 2022	Appendix III, Detected Appendix IV (See Note 3), & Major Cations and Anions

Notes:

1) Testing was completed for Appendix IV analytes that were detected above the PQL during the April 2021 sampling event.
2) Confirmatory testing was completed for monitoring well and Appendix IV analyte combinations that were determined to be outliers from the November 2021 Corrective Action Sampling.
3) Testing was completed for Appendix IV analytes that were detected above the PQL during the March-April 2022 sampling event.

Supplemental Corrective Measures

In addition to MNA as a Corrective Action Remedy at Sioux, Ameren received an Underground Injection Control Missouri State Operating Permit (UI-0000044, available at https://dnrservices.mo.gov/env/wpp/permits/issued/docs/UI0000044.pdf) and a pilot groundwater treatment study was completed. The results of this pilot treatment study displayed significant reductions in key CCR indicator parameters. Due to the success, Ameren expanded this technology around the SCPA, to supplement capping and MNA at the site. Drilling of the injection and extraction wells was completed in 2022 and the system is expected to be fully operational in 2023.

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1.0 INSTLLATION OR DECOMISSIONG OF MONITORING WELLS

There are currently two different networks used for monitoring the SCPA and these include the monitoring well network established under §257.91 for Detection and Assessment Monitoring and the network established under §257.98 for Corrective Action Monitoring, see **Figure 1**. No new wells were installed or decommissioned in 2022. 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 SCPA.

2.0 GROUNDWATER SAMPLING RESULTS AND DISCUSSION

The following sections discuss the sampling events completed for the SCPA CCR Unit in 2022. **Tables 4** and **5** provide a summary of the groundwater samples collected in 2022 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 8-11, 2021. Verification sampling and the statistical analysis to evaluate for SSIs for the November 2021 event were not completed until 2022 and are included in this report. Detections of Appendix III analytes triggered a verification sampling event, which was completed on February 8, 2022 and verified SSIs. **Table 6** summarizes the results and the statistical analysis of the November 2021 Detection Monitoring event.

Detection Monitoring samples were collected March 29 to April 4, 2022 and testing was completed for all Appendix III analytes, as well as major cations and anions. Detections of Appendix III analytes triggered verification sampling, which was completed June 7, 2022 and the testing results verified SSIs. **Table 7** summarizes the results and the statistical analysis of the March/April 2022 Detection Monitoring event.

A Detection Monitoring sampling event was completed October 18-19, 2022 and testing was performed for all Appendix III analytes, as well as major cations and anions. Statistical analyses to evaluate for SSIs in the October 2022 data were not completed in 2022 and will be included in the 2023 Annual Report. **Table 8** summarizes the results of the October 2022 Detection Monitoring event.

2.2 Assessment Monitoring Program

An Assessment Monitoring sampling event was completed November 8-11, 2021 and testing was completed for Appendix IV parameters 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. The statistical evaluation for this event was completed in 2022 and is included in this report. During review of the November 2021 data, it was discovered that there were outliers for lithium at some monitoring wells due to laboratory errors. Therefore, select samples were re-analyzed. These results are discussed more in Section 2.5. **Table 9** summarizes the results of the November 2021 Assessment Monitoring event. The results from this analysis and a table that displays the site-specific GWPS are provided in **Appendix B** and determined there were no new SSLs. The SSLs for the SCPA continue to be:

- Molybdenum at UMW-2D, UMW-3D, UMW-4D, and UMW-5D

An Assessment Monitoring sampling event was completed from March 29 to April 4, 2022 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 March/April 2022 Assessment Monitoring event. The results from this analysis and

a table that displays the site specific GWPS are provided in **Appendix C** and determined that there were no new SSLs.

An Assessment Monitoring sampling event was completed October 18-19, 2022 and testing was completed for Appendix IV analytes that were detected above the PQL during the March/April 2022 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 October 2022 Assessment Monitoring event; however, statistical analyses to evaluate SSLs were not completed in 2022. Results of the statistical evaluation will be included in the 2023 Annual Report.

2.3 Corrective Action Monitoring Program

A Corrective Action sampling event was completed November 8-12, 2021 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 2021 Corrective Action sampling event results is provided in **Table 12**. During review of the November 2021 data, it was discovered that there were outliers for lithium at some monitoring wells due to laboratory errors. Therefore, select samples were re-analyzed. For those samples that did not have sufficient sample volume to have the original sample re-analyzed, a confirmatory sample was collected on February 9, 2022. These results are discussed more in Section 2.5.

A Corrective Action sampling event was completed March 29 to April 4, 2022 and testing was completed for all Appendix III and IV analytes, major cations and anions, and other selected MNA parameters. A summary of the March/April 2022 Corrective Action sampling event results is provided in **Table 13**.

A Corrective Action sampling event was completed October 18-21, 2022 and testing was completed for Appendix III analytes, Appendix IV analytes that were detected above the PQL during the March/April 2022 sampling event from either the Assessment or Corrective Action Groundwater Monitoring Well Networks, and major cations and anions. **Table 14** summarizes the results of the October 2022 Corrective Action event. This was the first Corrective Action sampling event for phase 2 of Corrective Action (post closure evaluations) and statistical analyses to evaluate statistical exceedances of the GWPS will be completed in 2023. Results of the statistical evaluation will be included in the 2023 Annual Report.

2.4 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 D**. As shown on the potentiometric surface maps, groundwater flow direction within the uppermost aquifer is dynamic and influenced by seasonal changes in the water level in the adjacent Mississippi and Missouri Rivers, which affect water levels, gradients and flow directions in these water bodies. Groundwater in the alluvial aquifer will generally flow from the higher of the two rivers toward the lower elevation 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. At this facility, groundwater can flow north and south toward the Mississippi and Missouri Rivers, depending on river levels.

Groundwater flow direction and hydraulic gradient at the SEC were estimated for the alluvial aquifer wells using commercially available software to evaluate data since 2016. Results indicate that groundwater flow direction at the SEC is variable due to fluctuating river levels but has often flowed from north to south. The overall net groundwater flow direction in the alluvial aquifer at the SEC was slightly to the southeast due to reversals in flow as a result of variable river levels in the Missouri and Mississippi Rivers. Horizontal gradients calculated by the program range from 0.00006 to 0.0009 feet/foot with an estimated net annual groundwater movement of approximately four (4) feet per year in the prevailing downgradient direction.

2.5 Sampling Issues

During review of the November 2021 Corrective Action sampling data and the statistical evaluation of the November 2021 Assessment Monitoring event data (**Appendix B**), outliers were identified at multiple monitoring wells for lithium. The outliers were primarily caused by higher than usual dilution factors (laboratory error). The diluted high PQLs resulted in non-detect results for lithium with PQLs above the site GWPS of 40 micrograms per liter (µg/L) in multiple wells. Therefore, for samples with sufficient sample volume remaining, the laboratory re-analyzed them with lower dilution factors to determine if results were below the GWPS. The laboratory incorrectly concluded that there was insufficient sample volume to re-analyze the outlier for LMW-6S, therefore, a confirmatory sample was collected on February 15, 2022. However, the laboratory did have sufficient sample volume from the November 2021 sampling for LMW-6S. As a result, there are two results for the LMW-6S re-analyzing and confirmatory sampling. Both are non-detects with different PQLs. Results from the re-testing and confirmatory sampling displayed that the erroneous results were outliers since the re-test results were within historical ranges at each well. The results of these tests are included in **Table 15** and the laboratory data packets with revised results and confirmatory sampling results are provided in **Appendix A**.

No other notable sampling issues were encountered at the SCPA in 2022.

3.0 ACTIVITIES PLANNED FOR 2023

Detection and Assessment Monitoring are scheduled to continue on a semi-annual basis in the second and fourth quarters of 2023. Statistical analysis of the October 2022 Detection and Assessment Monitoring data will be completed in 2023 and will be included in the 2023 Annual Report.

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 2023. Statistical analysis of the October 2022 Corrective Action Monitoring data will be completed in 2023 and will be included in the 2023 Annual Report. Monitoring and statistical evaluation of the corrective measures will be completed in accordance with the corrective measures remedial plan discussed in the Remedy Selection Report. Additionally, the groundwater treatment system will be fully operational in 2023.

Tables

Table 3
Summary of Well Construction Details
SCPA Surface Impoundment
Sioux Energy Center, St. Charles 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								
UMW-1D*	12/15/2015	1121321.4	879420.3	444.95	445.4	383.9	373.7	71.7
UMW-2D	12/17/2015	1120266.7	878981.6	433.86	431.7	386.6	376.4	55.4
UMW-3D	12/16/2015	1120570.4	878251.1	431.67	430.1	384.3	374.1	56.0
UMW-4D	12/16/2015	1121077.9	877859.9	423.52	421.7	380.7	370.5	51.2
UMW-5D	12/17/2015	1121815.0	877799.1	446.66	444.8	384.8	374.6	70.2
UMW-6D	12/18/2015	1122312.0	878639.5	447.02	444.9	384.1	373.9	71.0
BMW-1D	12/8/2015	1121713.6	876740.9	428.28	426.0	383.1	372.9	53.2
BMW-3D	11/8/2016	1121798.8	875798.3	426.41	424.2	381.8	371.6	52.6
CORRECTIVE ACTION MONITORING WELL NETWORK								
LMW-1S*	12/15/2015	1121320.4	879427.6	445.07	445.4	414.8	404.6	40.8
LMW-2S	12/16/2015	1120332.8	879283.7	447.16	445.2	414.7	404.5	40.8
LMW-4S	12/8/2015	1119226.6	879561.5	429.40	427.3	412.4	402.2	25.1
LMW-5S	12/14/2015	1119250.6	880348.6	447.36	445.5	410.1	399.9	45.6
LMW-6S	12/14/2015	1119782.0	880867.8	446.00	444.1	414.1	403.9	40.2
BMW-1S	12/8/2015	1121709.2	876755.6	427.77	426.0	412.0	401.8	24.2
BMW-3S	11/8/2016	1121792.9	875809.5	426.69	424.1	410.2	400.0	24.2
UMW-7S (AM-1S)	7/11/2018	1122151.7	877672.3	425.56	423.3	408.5	398.2	25.1
UMW-7D (AM-1D)	7/11/2018	1122156.7	877672.7	425.47	423.5	378.7	368.4	55.1
PZ-1S	6/17/2018	1121157.5	877799.8	423.94	422.1	402.4	391.7	30.5
PZ-9D	6/19/2018	1119526.8	881125.3	434.30	432.4	377.2	366.5	65.9
UG-3	12/16/2007	1118608.5	880519.4	429.71	427.1	410.0	399.7	27.4
TP-2D	7/9/2018	1123221.1	881698.8	429.26	426.7	347.3	342.2	84.4
TP-3D	7/9/2018	1120614.0	882877.1	434.82	432.1	356.1	351.0	81.1
TP-4D	7/8/2018	1118472.8	882589.0	428.72	426.4	349.3	344.2	82.2
TP-5D**	7/6/2018	1118812.3	879517.5	429.00	429.9	352.5	347.4	80.9
TP-6S	7/11/2018	1119284.6	876381.5	428.07	426.1	408.1	403.0	23.0
TP-6D	7/11/2018	1119284.6	876381.5	428.06	426.1	345.6	340.5	85.6
TP-8D	7/14/2018	1114533.1	881307.7	431.30	428.8	351.7	346.6	82.3

Notes:

1) Horizontal Datum: State Plane Coordinates NAD83 (2000) Missouri East Zone feet.

2) FT MSL - Feet above mean sea level.

3) FT BGS - Feet below ground surface.

4) Vertical Datum: NAVD88 feet.

5) *UMW-1D and LMW-1S were modified on 04/29/2020.

6) **TP-5D was modified on 3/26/2021.

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Reviewed By: MNH

Table 4
Summary of Detection and Assessment Groundwater Network Sampling Dates
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

Groundwater Monitoring Wells	Date of Sample Collection				
	February 2022 Verification Sampling	March/April 2022 Sampling Event	June 2022 Verification Sampling	October 2022 Sampling Event	Total Number of Samples
CCR Rule Compliance Monitoring Well Network					
BMW-1D	-	3/29/2022	-	10/18/2022	2
BMW-3D	-	3/29/2022	-	10/18/2022	2
UMW-1D	-	4/4/2022	-	10/19/2022	2
UMW-2D	2/8/2022	3/31/2022	-	10/19/2022	3
UMW-3D	2/8/2022	3/31/2022	-	10/19/2022	3
UMW-4D	-	3/31/2022	-	10/19/2022	2
UMW-5D	-	3/31/2022	-	10/19/2022	2
UMW-6D	-	3/31/2022	6/7/2022	10/19/2022	3
Assessment or Detection Monitoring	Detection	Assessment/ Detection	Detection	Assessment/ Detection	NA

Notes:

1.) Detection Monitoring results provided in Tables 5-7.

2.) Verification Sampling results provided in Tables 5-6.

3.) Assessment Monitoring results provided in Tables 8-10.

4.) "-" No sample collected.

5.) NA - Not Applicable.

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Reviewed By: MNH

Table 5
Summary of Corrective Action Groundwater Network Sampling Dates
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

Groundwater Monitoring Wells	Date of Sample Collection			
	February 2022 Confirmatory Sampling	March/April 2022 Sampling Event	October 2022 Sampling Event	Total Number of Samples
Corrective Action Monitoring Well Network				
LMW-1S	-	3/31/2022	10/19/2022	2
LMW-2S	-	4/4/2022	10/19/2022	2
LMW-4S	-	4/4/2022	10/20/2022	2
LMW-5S	-	4/1/2022	10/18/2022	2
LMW-6S	2/15/2022	4/1/2022	10/20/2022	3
UMW-7S (AM-1S)	-	3/29/2022	10/18/2022	2
UMW-7D (AM-1D)	-	3/29/2022	10/18/2022	2
PZ-1S	-	3/31/2022	10/20/2022	2
PZ-9D	-	4/1/2022	10/19/2022	2
UG-3	-	4/1/2022	10/21/2022	2
TP-2D	-	4/1/2022	10/20/2022	2
TP-3D	-	4/1/2022	10/21/2022	2
TP-4D	-	4/1/2022	10/21/2022	2
TP-5D	-	4/1/2022	10/21/2022	2
TP-6S	-	3/29/2022	10/19/2022	2
TP-6D	-	3/29/2022	10/19/2022	2
TP-8D	-	4/4/2022	10/20/2022	2
BMW-1S	-	3/29/2022	10/18/2022	2
BMW-3S	-	3/29/2022	10/18/2022	2
Event Type	Corrective Action	Corrective Action	Corrective Action	NA

Notes:

1.) Corrective Action sampling results provided in Tables 12-15.

2.) NA - Not Applicable.

3.) "-" No sample collected.

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Reviewed By: MNH

Table 6
November 2021 Detection Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

ANALYTE	UNITS	PREDICTION LIMITS	BACKGROUND		GROUNDWATER MONITORING WELLS					
			BMW-1D	BMW-3D	UMW-1D	UMW-2D	UMW-3D	UMW-4D	UMW-5D	UMW-6D
November 2021 Detection Monitoring Event										
DATE	NA	NA	11/8/2021	11/8/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/10/2021
pH	SU	6.12-7.63	7.17	7.09	7.29	8.13	7.91	7.19	7.12	7.04
BORON, TOTAL	µg/L	240	123	51.7 J	195	21,300	32,200	30,000	19,500	702
CALCIUM, TOTAL	µg/L	146,231	139,000	113,000	64,300	199,000 J	260,000	218,000	99,200	80,800
CHLORIDE, TOTAL	mg/L	11.2	4.9 J	8.6	18.7	21.1	16.6	22.1	26.5	7.0
FLUORIDE, TOTAL	mg/L	0.3938	0.37	0.39	0.25	0.68	0.58	0.26	0.66	0.41
SULFATE, TOTAL	mg/L	54.84	38.6	25.5	42.4	480	712	628	120	52.9
TOTAL DISSOLVED SOLIDS	mg/L	522.7	489	415	304	938	1,310	1,170	570	344
February 2022 Verification Sampling Event										
DATE	NA	NA				2/8/2022	2/8/2022			
pH	SU	6.12-7.63					7.85			
BORON, TOTAL	µg/L	240								
CALCIUM, TOTAL	µg/L	146,231								
CHLORIDE, TOTAL	mg/L	11.2								
FLUORIDE, TOTAL	mg/L	0.3938				0.47	0.75			
SULFATE, TOTAL	mg/L	54.84								
TOTAL DISSOLVED SOLIDS	mg/L	522.7								

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. Prediction Limits calculated using Sanitas Software.
5. Values highlighted in yellow indicate a Statistically Significant Increase (SSI).
6. Only analytes/wells that were detected above the prediction limit and that had not already been verified were tested during Verification Sampling.

Prepared By: EMS
Checked By: BTT
Reviewed By: MNH

Table 7
March/April 2022 Detection Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

ANALYTE	UNITS	PREDICTION LIMITS	BACKGROUND		GROUNDWATER MONITORING WELLS					
			BMW-1D	BMW-3D	UMW-1D	UMW-2D	UMW-3D	UMW-4D	UMW-5D	UMW-6D
March-April 2022 Detection Monitoring Event										
DATE	NA	NA	3/29/2022	3/29/2022	4/4/2022	3/31/2022	3/31/2022	3/31/2022	3/31/2022	3/31/2022
pH	SU	6.12-7.63	7.06	7.02	7.45	7.93	7.79	7.09	7.21	7.10
BORON, TOTAL	µg/L	240	118	52.2 J	162	18,000	29,200	26,500	12,600	619
CALCIUM, TOTAL	µg/L	146,231	137,000	113,000	63,000	170,000	262,000	203,000	89,900	86,800
CHLORIDE, TOTAL	mg/L	11.2	4.3 J	7.9	18.3	22.4	15.5	21.5	24.7	8.4
FLUORIDE, TOTAL	mg/L	0.3938	0.26	0.28	0.23	0.56	0.77	ND	0.58	0.37
SULFATE, TOTAL	mg/L	54.84	30.9	20.6	39.5	413	773	549	26.8	55.7
TOTAL DISSOLVED SOLIDS	mg/L	522.7	457	413	290	833	1,360	1,090	427	336
June 2022 Verification Sampling Event										
DATE	NA	NA								6/7/2022
pH	SU	6.12-7.63								
BORON, TOTAL	µg/L	240								
CALCIUM, TOTAL	µg/L	146,231								
CHLORIDE, TOTAL	mg/L	11.2								
FLUORIDE, TOTAL	mg/L	0.3938								
SULFATE, TOTAL	mg/L	54.84								52.0
TOTAL DISSOLVED SOLIDS	mg/L	522.7								

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: EMS
Checked By: BTT
Reviewed By: MNH

Table 8
October 2022 Detection Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS					
ANALYTE	UNITS	BMW-1D	BMW-3D	UMW-1D	UMW-2D	UMW-3D	UMW-4D	UMW-5D	UMW-6D
October 2022 Detection Monitoring Event									
DATE	NA	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
pH	SU	7.14	7.12	7.35	8.15	7.89	7.21	7.14	7.03
BORON, TOTAL	µg/L	110	52.5 J	139	21,100	27,200	24,100	7,770	577
CALCIUM, TOTAL	µg/L	128,000	106,000	58,200	157,000	239,000	176,000	90,100	78,200
CHLORIDE, TOTAL	mg/L	5.3	10.2	18.3	22.0 J	15.2	55.6	26.7	10.5
FLUORIDE, TOTAL	mg/L	0.13 J	0.17 J	0.32	0.41 J	ND	0.35	0.47	0.31
SULFATE, TOTAL	mg/L	34.2	23.2	38.8	420	952	526	22.3	53.4
TOTAL DISSOLVED SOLIDS	mg/L	581	539	290	842	1,400	1,080	468	352

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: EMS
Checked By: JAB
Reviewed By: MNH

Table 9
November 2021 Assessment Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS					
ANALYTE	UNITS	BMW-1D	BMW-3D	UMW-1D	UMW-2D	UMW-3D	UMW-4D	UMW-5D	UMW-6D
FIELD PARAMETERS									
DATE	NA	11/8/2021	11/8/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/10/2021
DISSOLVED OXYGEN	mg/L	0.66	0.19	2.04	0.29	0.98	0.43	0.59	0.44
pH	SU	7.17	7.09	7.29	8.13	7.91	7.19	7.12	7.04
REDOX POTENTIAL	mV	-115.7	-122.9	23.9	-92.3	-117.2	-109.1	-121.5	-76.6
SPECIFIC CONDUCTIVITY	mS/cm	0.871	0.710	0.484	1.243	1.573	1.455	0.786	0.588
TURBIDITY	NTU	2.34	3.13	6.41	1.02	0.74	1.82	1.60	3.94
APPENDIX IV PARAMETERS									
ARSENIC, TOTAL	µg/L	0.25 J	ND	1.7	2.9	0.63 J	0.35 J	0.46 J	0.37 J
BARIUM, TOTAL	µg/L	348	658	136	69.4	71.0	65.9	304	115
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	ND	ND	ND	0.43 J	1.1	2.4	0.58	ND
CHROMIUM, TOTAL	µg/L	0.28 J	0.32 J	ND	0.29 J	0.32 J	0.28 J	0.35 J	0.27 J
COBALT, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	0.37	0.39	0.25	0.68	0.58	0.26	0.66	0.41
LITHIUM, TOTAL	µg/L	ND	ND	12.7	ND	ND	ND	29.5	10.5
MOLYBDENUM, TOTAL	µg/L	ND	ND	37.6	1,420	3,610	8,100	1,860	61.9
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	0.22 J	ND	0.26 J	0.20 J	0.24 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 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.
6. Statistical Analysis of the November 2021 Assessment Monitoring Data is provided in Appendix B.

Prepared By:EMS
Checked By: GTM
Reviewed By: MNH

Table 10
March/April 2022 Assessment Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS					
ANALYTE	UNITS	BMW-1D	BMW-3D	UMW-1D	UMW-2D	UMW-3D	UMW-4D	UMW-5D	UMW-6D
FIELD PARAMETERS									
DATE	NA	3/29/2022	3/29/2022	4/4/2022	3/31/2022	3/31/2022	3/31/2022	3/31/2022	3/31/2022
DISSOLVED OXYGEN	mg/L	0.62	0.27	0.21	0.22	5.69	0.05	0.25	0.23
pH	SU	7.06	7.02	7.45	7.93	7.79	7.09	7.21	7.10
REDOX POTENTIAL	mV	-140.4	-149.3	-110.8	-78.0	-140.9	-105.1	-148.3	-114.0
SPECIFIC CONDUCTIVITY	mS/cm	0.851	0.731	0.436	0.961	1.472	1.286	0.644	0.542
TURBIDITY	NTU	1.90	0.84	4.71	0.23	0.40	0.34	0.77	4.02
APPENDIX IV PARAMETERS									
ANTIMONY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	0.27 J	ND	1.6	2.9	0.70 J	0.34 J	0.37 J	0.46 J
BARIUM, TOTAL	µg/L	388	687	155	62.2	74.7	64.5	287	115
BERYLLIUM, TOTAL	µg/L	0.33 J	ND	ND	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	ND	ND	ND	0.40 J	0.95	1.7	0.19 J	ND
CHROMIUM, TOTAL	µg/L	0.35 J	0.43 J	0.65 J	ND	0.39 J	0.36 J	0.42 J	0.99 J
COBALT, TOTAL	µg/L	2.1 J	4.2 J	ND	ND	ND	ND	1.7 J	ND
FLUORIDE, TOTAL	mg/L	0.26	0.28	0.23	0.56	0.77	ND	0.58	0.37
LEAD, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
LITHIUM, TOTAL	µg/L	14.7	22.4	11.6	27.2	21.2	41.6	25.3	11.3
MERCURY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	1.9 J	ND	33.5	1,630	3,650	6,860	685	69.5
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	ND	0.20 J	0.19 J	0.21 J	ND
THALLIUM, TOTAL	µg/L	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, 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 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
6. Statistical Analysis of the March/April 2022 Assessment Monitoring Data is provided in Appendix C.

Prepared By:EMS
Checked By: GTM
Reviewed By: SCP

Table 11
October 2022 Assessment Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

		BACKGROUND		GROUNDWATER MONITORING WELLS					
ANALYTE	UNITS	BMW-1D	BMW-3D	UMW-1D	UMW-2D	UMW-3D	UMW-4D	UMW-5D	UMW-6D
FIELD PARAMETERS									
DATE	NA	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
DISSOLVED OXYGEN	mg/L	0.58	0.67	0.53	0.17	3.24	0.48	0.56	0.39
pH	SU	7.14	7.12	7.35	8.15	7.89	7.21	7.14	7.03
REDOX POTENTIAL	mV	-60.1	-60.2	-44.2	12.5	-21.7	-31.5	-112.9	-109.3
SPECIFIC CONDUCTIVITY	mS/cm	0.846	0.734	0.458	0.932	1.451	1.227	0.688	0.560
TURBIDITY	NTU	2.39	3.33	2.43	1.51	1.64	1.88	1.28	3.53
APPENDIX IV PARAMETERS									
ARSENIC, TOTAL	µg/L	0.27 J	ND	1.4	2.8	0.74 J	0.37 J	0.36 J	0.32 J
BARIUM, TOTAL	µg/L	357	644	131	60.0	68.7	56.6	306	114
CADMIUM, TOTAL	µg/L	ND	ND	ND	0.63	1.4	2.4	0.18 J	ND
COBALT, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	0.13 J	0.17 J	0.32	0.41 J	ND	0.35	0.47	0.31
LITHIUM, TOTAL	µg/L	16.1	23.2	14.5	25.2	20.4	37.8	27.1	14.4
MOLYBDENUM, TOTAL	µg/L	1.5 J	ND	37.1	1,670	3,810	6,470	502	67.4
RADIUM [226 + 228]	pCi/L	ND	1.312	ND	1.876 J	1.999	2.250	1.896	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	0.19 J	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. 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. 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: EMS
Checked By: JAB
Reviewed By: MNH

Table 12
November 2021 Corrective Action Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

ANALYTE	UNITS	BMW-1S	BMW-3S	LMW-1S	LMW-2S	LMW-4S	LMW-5S	LMW-6S	TP-6S	PZ-1S	UG-3	AM-1S	AM-1D	PZ-9D	TP-2D	TP-3D	TP-4D	TP-5D	TP-6D	TP-8D
FIELD PARAMETERS																				
DATE	NA	11/8/2021	11/8/2021	11/11/2021	11/10/2021	11/10/2021	11/9/2021	11/9/2021	11/10/2021	11/11/2021	11/9/2021	11/8/2021	11/8/2021	11/10/2021	11/12/2021	11/10/2021	11/8/2021	11/9/2021	11/10/2021	11/10/2021
DISSOLVED OXYGEN	mg/L	3.65	0.13	1.06	1.17	0.46	1.07	1.95	0.32	0.31	0.41	0.34	0.08	0.10	0.11	0.48	1.28	0.51	0.28	0.40
REDOX POTENTIAL	mV	-23.6	-33.3	102.1	35.2	-10.9	66.4	75.0	67.1	-110.3	66.0	-119.9	-134.9	-118.1	-94.5	-108.4	-111.4	-114.0	-117.7	-112.3
SPECIFIC CONDUCTIVITY	mS/cm	0.965	0.763	0.554	1.630	1.087	2.073	1.896	0.834	0.731	0.813	0.665	0.631	1.350	1.796	0.791	0.778	0.912	0.826	0.715
TURBIDITY	NTU	1.70	0.28	5.98	0.72	2.24	6.50	4.41	2.38	2.43	1.00	5.00	0.78	18.50	0.48	1.28	1.14	0.76	0.53	3.86
APPENDIX III PARAMETERS																				
BORON, TOTAL	µg/L	66.9 J	67.8 J	307	8,000	254	12,900	22,500 J	118	6,390	210	9,630	7,640	3,840	72.2 J	60.3 J	64.5 J	6,160	62.3 J	72.0 J
CALCIUM, TOTAL	µg/L	160,000	137,000	70,500	236,000	185,000	253,000 J	291,000	138,000	108,000	126,000	84,200	79,100	218,000	284,000	122,000	114,000	132,000	125,000	112,000
CHLORIDE, TOTAL	mg/L	7.4	12.0	18.9	155	2.5 J	21.8	3.3 J	11.2	19.3	24.5	26.6	28.9	16.7	74.4	9.3	10.0	27.3	15.8	15.0
pH	SU	6.86	6.99	7.36	6.87	6.70	7.11	7.07	6.76	6.79	6.71	7.24	7.34	7.00	6.92	6.93	6.93	6.96	6.97	7.00
SULFATE, TOTAL	mg/L	31.8	31.2	46.0	186	31.4	835	809	39.7	105	66.0	60.6	69.5	431	480	89.1	94.0	228	63.9	47.3
TOTAL DISSOLVED SOLIDS	mg/L	534	461	320	967	624	1,620	1,570	500	478	519	422	396	987	1,300	482	474	627	488	431
APPENDIX IV PARAMETERS																				
ARSENIC, TOTAL	µg/L	1.0	0.53 J	2.1	0.91 J	0.62 J	0.76 J	0.67 J	0.52 J	0.43 J	0.39 J	1.5	0.19 J	0.71 J	0.18 J	0.13 J	1.6	0.22 J	ND	1.4
BARIUM, TOTAL	µg/L	155	116	128	140	223	56.5	46.0	284	107	213	154	243	121	60.2	564	536	154	419	357
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	0.13 J	ND	0.11 J	0.55	0.17 J	0.98	0.75	ND	0.46 J	0.21 J	0.12 J	0.19 J	ND	ND	ND	ND	0.075 J	ND	ND
CHROMIUM, TOTAL	µg/L	0.42 J	ND	0.40 J	0.28 J	ND	0.30 J	0.36 J	0.27 J	0.35 J	ND	ND	0.37 J	1.0	0.24 J	0.34 J	ND	ND	0.31 J	0.40 J
COBALT, TOTAL	µg/L	ND	1.4 J	3.0 J	2.5 J	ND	ND	7.4	ND	ND	2.6 J	1.9 J	ND	ND	ND	1.2 J	1.4 J	ND	ND	ND
FLUORIDE, TOTAL	mg/L	ND	0.46	0.42	ND	0.22	0.55	ND	0.34	0.58	0.38	0.59	0.60	ND	ND	0.24	0.27	0.20 J	0.29	0.28
LITHIUM, TOTAL	µg/L	ND	ND	15.8	ND	ND	ND	ND	ND	ND	ND	29.7	34.0	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	ND	ND	78.0	764	ND	1,580	ND	6.9 J	1,440	ND	289	575	ND	ND	ND	ND	234	ND	2.9 J
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.025	2.182 J	ND	2.241	ND
SELENIUM, TOTAL	µg/L	0.39 J	0.23 J	2.5	ND	0.53 J	0.37 J	ND	0.58 J	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	0.33 J
ADDITIONAL PARAMETERS																				
ALKALINITY	mg/L	426	356	198	427	557	310	342	385	249	328	241	204	237	449	307	267	198	343	300
IRON, TOTAL	µg/L	ND	56.3	72.9	78.3	25.0 J	59.1	43.0 J	135	5,060	ND	1,840	3,020	13,300	16,200	7,700	6,260	8,750	7,860	6,110
MAGNESIUM, TOTAL	µg/L	29,800	23,500	17,400	39,500	40,500	47,100 J	71,300	28,500	18,600	24,000	18,000	17,000	49,600	79,000	28,900	25,800	31,000	30,900	24,500
MANGANESE, TOTAL	µg/L	895	364	276	486	269	1,410	509	244	1,070	614	747	368	1,410	1,290	642	427	984	508	425
POTASSIUM, TOTAL	µg/L	470 J	533	6,080	8,360	5,150	5,450	4,790	2,590	4,150	5,570	8,220	7,270	5,320	5,870	3,860	3,350	4,480	3,880	3,400
SODIUM, TOTAL	mg/L	4.8	5.7	17.6	60.9	11.9	157	97.5	5.6	25.0	24.5	24.3	23.4	19.8	26.9	6.6	7.3	23.7	5.5	5.9

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 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: EMS
Checked By: GTM
Reviewed By: MNH

Table 13
March/April 2022 Corrective Action Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

ANALYTE	UNITS	BMW-1S	BMW-3S	LMW-1S	LMW-2S	LMW-4S	LMW-5S	LMW-6S	TP-6S	PZ-1S	UG-3	AM-1S	AM-1D	PZ-9D	TP-2D	TP-3D	TP-4D	TP-5D	TP-6D	TP-8D
FIELD PARAMETERS																				
DATE	NA	3/29/2022	3/29/2022	3/31/2022	4/4/2022	4/4/2022	4/1/2022	4/1/2022	3/29/2022	3/31/2022	4/1/2022	3/29/2022	3/29/2022	4/1/2022	4/1/2022	4/1/2022	4/1/2022	4/1/2022	3/29/2022	4/4/2022
DISSOLVED OXYGEN	mg/L	0.10	0.33	1.74	0.27	0.60	0.30	1.20	0.46	0.07	0.31	0.08	0.15	0.64	0.22	1.17	0.17	0.14	0.04	0.22
REDOX POTENTIAL	mV	4.1	95.2	41.4	35.4	87.6	93.0	-18.7	38.2	-90.2	46.4	-79.4	-100.2	-109.3	-128.1	-125.8	-134.2	-139.8	-114.0	-86.6
SPECIFIC CONDUCTIVITY	mS/cm	0.954	0.864	0.529	1.343	0.987	1.942	1.699	0.856	0.598	0.909	0.581	0.569	1.147	1.610	0.703	0.696	0.800	0.752	0.645
TURBIDITY	NTU	0.46	0.71	8.54	0.57	1.07	4.70	5.74	1.02	1.57	1.82	4.50	2.24	9.90	3.26	3.69	1.61	0.47	0.40	1.68
APPENDIX III PARAMETERS																				
BORON, TOTAL	µg/L	68.0 J	70.7 J	231	7,520	594	16,300	26,100	99.5 J	2,830	184	1,660	7,520	4,450	122	98.6 J	87.1 J	8,210	61.4 J	89.5 J
CALCIUM, TOTAL	µg/L	173,000	147,000	73,000	201,000	175,000	264,000	260,000	134,000	90,400	120,000	80,400	75,700	180,000	265,000	109,000	105,000	102,000	119,000	102,000
CHLORIDE, TOTAL	mg/L	8.5	11.8	30.8 J	161	5.7 J	17.1 J	2.5	7.8	199	73.5	22.3	26.6	11.2	72.0	9.2	9.7	28.0 J	13.2	14.2
pH	SU	6.80	6.94	7.43	6.82	6.73	6.85	6.82	6.99	6.95	6.94	7.24	7.26	6.99	6.59	6.76	6.97	7.05	7.07	7.11
SULFATE, TOTAL	mg/L	44.9	47.8	16.7	249	60.2	899 J	705	35.2	27.4 J	18.6	34.5	40.0	332	500	84.2	112	254 J	47.6	42.4
TOTAL DISSOLVED SOLIDS	mg/L	591	508	334	981	647	1,610	1,470	487	395	612	358	349	895	1,330	526	534	627	463	441
APPENDIX IV PARAMETERS																				
ANTIMONY, TOTAL	µg/L	ND	ND	0.44 J	0.18 J	0.15 J	0.14 J	0.23 J	ND	ND	0.23 J	ND	0.23 J	ND	ND	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	0.98 J	0.59 J	2.2	0.81 J	0.59 J	0.80 J	0.67 J	0.52 J	0.34 J	0.38 J	1.3	0.20 J	0.60 J	0.18 J	ND	1.9	0.22 J	ND	1.5
BARIUM, TOTAL	µg/L	178	140	146	138	241	54.2	45.0	302	104	265	138	220	103	65.2	586	588	148	414	383
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	0.14 J	0.076 J	0.12 J	0.58	ND	1.1	0.69	0.066 J	0.26 J	0.38 J	0.10 J	0.14 J	ND	ND	ND	ND	0.23 J	ND	ND
CHROMIUM, TOTAL	µg/L	0.38 J	0.45 J	0.73 J	0.36 J	0.47 J	0.37 J	0.41 J	0.59 J	ND	0.65 J	0.42 J	0.41 J	0.61 J	0.44 J	0.43 J	0.43 J	ND	0.35 J	0.50 J
COBALT, TOTAL	µg/L	1.5 J	ND	4.2 J	3.4 J	ND	1.8 J	8.0	2.3 J	ND	5.9	2.9 J	ND	ND	ND	3.7 J	3.7 J	1.9 J	2.4 J	2.1 J
FLUORIDE, TOTAL	mg/L	0.30	0.36	0.27 J	ND	ND	0.39 J	0.19 J	0.27	ND	0.35	0.49	0.53	ND	ND	0.21	0.22	0.36	0.24	0.27
LEAD, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LITHIUM, TOTAL	µg/L	5.8 J	9.8 J	14.8	38.0	29.7	62.8	23.0	36.0	15.1	34.2	25.2	31.7	35.2	58.9	33.4	31.6	35.3	26.5	32.0
MERCURY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	2.6 J	2.4 J	60.4	592	ND	2,000	ND	3.0 J	682	3.1 J	183	478	21.8	ND	ND	ND	622	ND	2.1 J
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	1.660 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.899 J	1.659 J	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	0.35 J	2.6	ND	0.94 J	ND	ND	0.32 J	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
THALLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADDITIONAL PARAMETERS																				
ALKALINITY	mg/L	505	428	204	376	577	320	378	410	260	393	245	218	336	ND	326	291	161	353	339
IRON, FERRIC, TOTAL	mg/L	0.013 J	0.010 J	0.11 J	0.058	0.009 J	0.12 J	0.015 J	0.092	4.5	0.014 J	1.1	2.5	10.4	16.6	7.4	6.1	7.1	6.2	6.2
IRON, FERROUS, TOTAL	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	0.060 J	ND	ND	ND	0.35 J	0.36 J	0.13 J	ND	0.21 J	1.3 J	0.12 J
IRON, TOTAL	µg/L	ND	ND	105 J	58.1	ND	120 J	ND	92.0	4,510	ND	1,090	2,530	10,800	16,900	7,490	6,090	7,310	7,540	6,300
MAGNESIUM, TOTAL	µg/L	30,000	24,100	17,700	31,800	38,600	45,300	63,200	28,700	17,400	24,500	17,000	16,000	39,400	70,500	26,500	26,000	25,000	28,800	24,300
MANGANESE, TOTAL	µg/L	675	215	195 J	461	54.6	1,710	487	209	964	1,120	1,180	344	1,090	1,320	613	378	827	496	436
POTASSIUM, TOTAL	µg/L	470 J	569	5,830	9,500	4,960	5,090	4,930	2,420	3,150	5,970	7,380	6,650	4,660	6,260	3,830	3,480	4,450	3,850	3,340
SODIUM, TOTAL	mg/L	4.9	6.3	15.9	59.9	11.1	201 J	96.3	5.9	19.9	52.9	19.1	22.8	19.8	26.5	6.9	9.4	37.0	7.2	5.4
SULFIDE, TOTAL	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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, 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 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: EMS
Checked By: GTM
Reviewed By: MNH

Table 14
October 2022 Corrective Action Monitoring Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

ANALYTE	UNITS	BMW-1S	BMW-3S	LMW-1S	LMW-2S	LMW-4S	LMW-5S	LMW-6S	TP-6S	PZ-1S	UG-3	AM-1S	AM-1D	PZ-9D	TP-2D	TP-3D	TP-4D	TP-5D	TP-6D	TP-8D
FIELD PARAMETERS																				
DATE	NA	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/20/2022	10/18/2022	10/20/2022	10/19/2022	10/20/2022	10/21/2022	10/18/2022	10/18/2022	10/19/2022	10/20/2022	10/21/2022	10/21/2022	10/21/2022	10/19/2022	10/20/2022
DISSOLVED OXYGEN	mg/L	0.15	0.29	0.98	0.48	0.33	0.94	1.49	0.16	0.22	0.28	0.16	0.91	0.53	0.18	0.15	0.12	0.17	0.09	0.11
REDOX POTENTIAL	mV	-0.3	-2.2	137.8	56.8	158.2	100.1	120.5	35.1	-10.2	182.6	-34.6	-50.7	-44.6	3.4	-94.6	-116.1	-133.7	-111.4	-18.9
SPECIFIC CONDUCTIVITY	mS/cm	0.967	0.779	0.599	1.358	1.070	1.727	1.817	0.755	0.610	0.820	0.574	0.596	1.088	1.690	0.781	0.782	0.886	0.742	0.716
TURBIDITY	NTU	2.46	1.16	3.85	1.44	2.21	3.19	3.39	0.66	0.86	1.59	4.19	4.31	16.80	0.60	2.16	1.48	0.50	1.39	0.22
APPENDIX III PARAMETERS																				
BORON, TOTAL	µg/L	73.0 J	84.2 J	339	8,550	375	12,700	21,600	119	3,230	302	1,670	7,150	3,860	76.5 J	59.5 J	60.1 J	8,250	65.7 J	74.0 J
CALCIUM, TOTAL	µg/L	168,000	131,000	85,100	205,000	185,000	238,000	278,000	136,000	90,600	126,000	72,900	73,500	198,000	273,000	121,000	120,000	116,000	124,000	118,000
CHLORIDE, TOTAL	mg/L	9.2	11.7	36.2	149	3.1	22.7	2.7	7.2	24.4	39.5	27.7	32.8	11.6	80.3	9.8	10.1	37.9	23.1	26.5
pH	SU	6.84	7.01	7.26	6.80	6.55	6.90	6.55	6.88	7.11	6.94	7.30	7.36	7.04	6.86	6.64	6.97	7.10	6.86	7.08
SULFATE, TOTAL	mg/L	61.1	27.8	83.5	243	37.0	868	605	38.7	58.5	44.1	24.6	40.6	346	501	86.5	123	256	57.4	32.5
TOTAL DISSOLVED SOLIDS	mg/L	711	467	383	977	724	1,400	936	496	419	496	57.0	66.5 J	888	1,330	474	513	688	492	465 J
APPENDIX IV PARAMETERS																				
ARSENIC, TOTAL	µg/L	1.1	0.52 J	1.9	1.0	0.63 J	0.67 J	0.79 J	0.60 J	0.31 J	0.41 J	1.3	0.19 J	0.71 J	0.20 J	0.17 J	2.0	0.25 J	0.15 J	1.3
BARIUM, TOTAL	µg/L	173	110	150	130	232	50.6	47.2	287	93.9	220	129	214	114	58.7	570	571	147	420	382
CADMIUM, TOTAL	µg/L	0.11 J	ND	0.082 J	0.61	0.22 J	0.79	1.0	ND	0.24 J	0.24 J	0.071 J	0.16 J	ND	ND	ND	ND	0.23 J	ND	ND
COBALT, TOTAL	µg/L	2.3 J	ND	2.5 J	3.3 J	ND	1.2 J	8.5	ND	ND	4.6 J	1.8 J	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	0.20 J	0.22	0.28	ND	ND	0.51	ND	ND	0.59	ND	0.48	0.48	ND	ND	0.28	0.30	0.13 J	ND	ND
LITHIUM, TOTAL	µg/L	6.3 J	10.9	17.3	34.0	27.8	43.0	22.6	36.5	16.0	27.1	26.6	33.5	36.0	45.2	35.0	32.1	34.1	28.5	31.8
MOLYBDENUM, TOTAL	µg/L	3.0 J	1.2 J	55.7	628	1.8 J	1,220	1.4 J	3.4 J	707	2.8 J	151	461	10.3 J	ND	1.1 J	1.3 J	677	ND	1.5 J
RADIUM [226 + 228]	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.234	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	1.7	ND	0.79 J	ND	ND	0.21 J	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADDITIONAL PARAMETERS																				
ALKALINITY	mg/L	479	390	216	372	592	338	556	405	251	353	241	219	342	462	340	288	178	351	330
IRON, TOTAL	µg/L	32.9 J	20.0 J	98.9	150	17.0 J	58.1	23.8 J	178	4,960	10.9 J	899	2,640	11,700	16,000	7,630	6,200	7,610	7,820	6,210
MAGNESIUM, TOTAL	µg/L	33,400	23,900	20,900	38,100	43,600	47,500	66,400	29,200	16,800	24,000	15,500	15,600	48,400	72,700	30,300	28,800	28,600	31,500	26,100
MANGANESE, TOTAL	µg/L	1,550	210	150	625	203	1,330	509	256	739	744	1,080	340	1,240	1,280	657	411	895	523	444
POTASSIUM, TOTAL	µg/L	431 J	525	6,060	8,160	5,070	5,730	4,970	2,590	3,210	5,330	7,920	6,740	5,170	6,000	4,000	3,400	4,870	3,910	3,960
SODIUM, TOTAL	mg/L	5.0	5.5	16.6	67.6	10.8	142	99.6	5.8	20.8	27.6	17.0	22.6	19.3	25.3	6.8	9.2	40.8	5.6	6.6

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 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: EMS
Checked By: JAB
Reviewed By: MNH

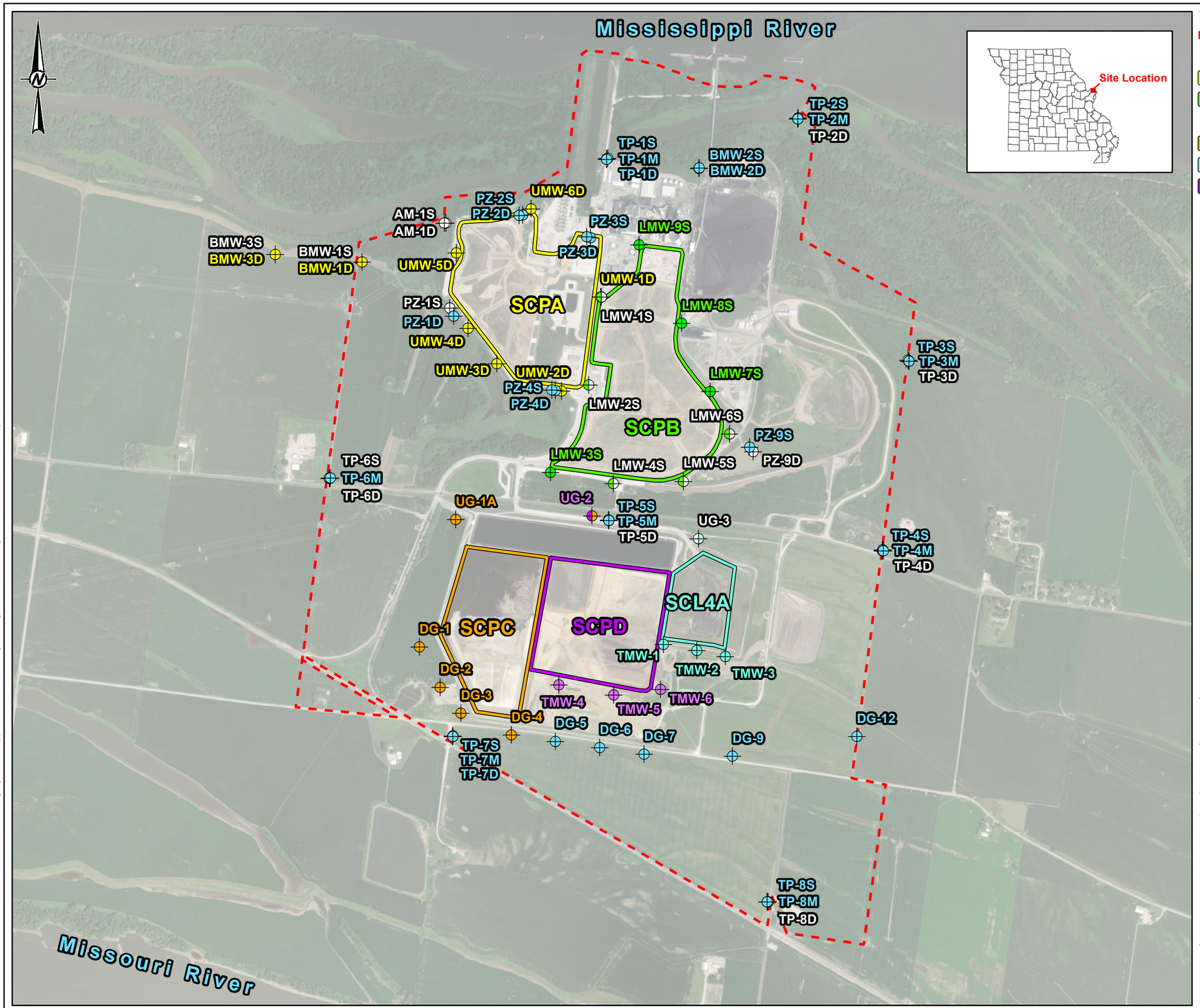
Table 15
November 2021 Re-testing and February 2022 Confirmatory Sampling Results
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

Monitoring Network	Well ID	Sample Date	Units	Lithium, Total	
				Result	PQL
Assessment Monitoring	BMW-1D	11/8/2021	µg/L	ND	30.0
	BMW-3D	11/8/2021	µg/L	ND	30.0
	UMW-2D	11/11/2021	µg/L	27.5 J	30.0
	UMW-3D	11/11/2021	µg/L	ND	30.0
	UMW-4D	11/11/2021	µg/L	34.8	30.0
Corrective Action Monitoring	BMW-1S	11/8/2021	µg/L	ND	30.0
	BMW-3S	11/8/2021	µg/L	ND	30.0
	LMW-2S	11/10/2021	µg/L	29.5 J	30.0
	LMW-4S	11/10/2021	µg/L	ND	30.0
	LMW-5S	11/9/2021	µg/L	46.3	30.0
	LMW-6S	11/9/2021	µg/L	ND	30.0
	LMW-6S[3]	2/15/2022	ug/L	ND	50.0
	PZ-1S	11/11/2021	µg/L	ND	30.0
	PZ-9D	11/10/2021	µg/L	29.1 J	30.0
	TP-2D	11/12/2021	µg/L	39.9	30.0
	TP-3D	11/10/2021	µg/L	24.1 J	30.0
	TP-4D	11/8/2021	µg/L	ND	30.0
	TP-5D	11/9/2021	µg/L	23.9 J	30.0
	TP-6S	11/10/2021	µg/L	27.7 J	30.0
	TP-6D	11/10/2021	µg/L	ND	30.0
	TP-8D	11/10/2021	µg/L	ND	30.0
	UG-3	11/9/2021	µg/L	ND	30.0

NOTES:
1. Unit Abbreviations: µg/L - micrograms per liter.
2. 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.
3. LMW-6S re-sampled in February 2022 due to the laboratory's uncertainty (error) regarding having sufficient sample volume to re-analyze the sample collected in November 2021.

Prepared By: JAB
Checked By: GTM
Reviewed By: MNH

Figures



LEGEND

- Sioux Energy Center Property Boundary

CCR Units

- SCPA - Closed Bottom Ash Surface Impoundment
- SCPB - Closed Fly Ash Surface Impoundment

Utility Waste Landfill (UWL)

- SCPC - WFGD Surface Impoundment
- SCL4A - Dry CCR Disposal Area
- SCPD - WFGD Surface Impoundment

Monitoring Well Networks

- Corrective Action Monitoring Well
- SCPA Detection and Assessment Monitoring Well
- SCPB and Corrective Action Monitoring Well
- SCPB Detection Monitoring Well
- SCPC Detection Monitoring Well
- SCPD and SCPC Detection Monitoring Well
- SCPD Detection Monitoring Well
- SCL4A and Corrective Action Monitoring Well
- SCL4A Detection Monitoring Well
- Monitoring Well Used for Water Level Elevation Measurements Only

0 1,000 2,000 3,000

Feet

NOTE(S)

1.) ALL BOUNDARIES AND LOCATIONS ARE APPROXIMATE.
2.) WFGD - WET FLUE GAS DESULFURIZATION
3.) CCR - COAL COMBUSTION RESIDUALS

REFERENCE(S)

1.) AMEREN MISSOURI SIOUX ENERGY CENTER, SIOUX PROPERTY CONTROL MAP, FEBRUARY 2011.
2.) COORDINATE SYSTEM: NAD 1983 STATE PLANE MISSOURI EAST FIPS 2,401 FEET.

CLIENT
AMEREN MISSOURI
SIOUX ENERGY CENTER

PROJECT
GROUNDWATER MONITORING PROGRAM

TITLE
SIOUX ENERGY CENTER GROUNDWATER MONITORING PROGRAMS AND SAMPLE LOCATION MAP

CONSULTANT
GOLDER

YYYY-MM-DD	2022-12-12
DESIGNED	JSI
PREPARED	EMS
REVIEWED	GTM/JSI
APPROVED	MNH

PROJECT NO.	CONTROL	REV.	FIGURE
1531406-04	1240	0	1

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

1in 0

PATH: C:\Users\Echneider\Golder Associates\1531406\01.02 - Ameren CCR GW Monitoring Program 2020 - APF (1)\5 Technical Work\0003-SEC\3.5-Figures-Drawings\PRODUCTION\MNA Eval\Figure XX - CCR WELL PROGRAMS - MNA - Copy.mxd PRINTED ON: 2022-12-12 AT: 8:34:56 AM

APPENDIX A

Laboratory Analytical Data

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

February 28, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN SCPA
Pace Project No.: 60385853

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between November 10, 2021 and November 12, 2021. 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 - Indianapolis
- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

REV-1, 2/28/21: Lithium reanalyzed at lower dilution to meet action limit.

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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: AMEREN SCPA
Pace Project No.: 60385853

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
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 #: PA014572018-1
New Hampshire/TNI Certification #: 297617
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 #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
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
Wyoming Certification #: 8TMS-L

Pace Analytical Services Indianapolis
7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: AMEREN SCPA
Pace Project No.: 60385853

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60385853001	**S-BMW-1D**	Water	11/08/21 15:48	11/10/21 05:17
60385853002	**S-BMW-3D**	Water	11/08/21 14:15	11/10/21 05:17
60385853003	**S-UMW-1D**	Water	11/11/21 10:10	11/12/21 04:32
60385853004	**S-UMW-2D**	Water	11/11/21 11:54	11/12/21 04:32
60385853005	**S-UMW-3D**	Water	11/11/21 14:04	11/12/21 04:32
60385853006	**S-UMW-4D**	Water	11/11/21 14:58	11/12/21 04:32
60385853007	**S-UMW-5D**	Water	11/11/21 12:14	11/12/21 04:32
60385853008	**S-UMW-6D**	Water	11/10/21 14:34	11/12/21 04:32
60385853009	**S-UMW-DUP-1**	Water	11/10/21 00:00	11/12/21 04:32
60385853010	**S-UMW-FB-1**	Water	11/11/21 10:40	11/12/21 04:32
60385853011	**S-UMW-MS-1**	Water	11/11/21 11:54	11/12/21 04:32
60385853012	**S-UMW-MSD-1**	Water	11/11/21 11:54	11/12/21 04:32

Pace Analytical Services, LLC
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(913)599-5665

SAMPLE ANALYTE COUNT

Project: AMEREN SCPA
Pace Project No.: 60385853

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385853001	**S-BMW-1D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853002	**S-BMW-3D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853003	**S-UMW-1D**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853004	**S-UMW-2D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853005	**S-UMW-3D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853006	**S-UMW-4D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K

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

SAMPLE ANALYTE COUNT

Project: AMEREN SCPA
Pace Project No.: 60385853

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853007	**S-UMW-5D**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853008	**S-UMW-6D**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853009	**S-UMW-DUP-1**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853010	**S-UMW-FB-1**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385853011	**S-UMW-MS-1**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60385853012	**S-UMW-MSD-1**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AMEREN SCPA
Pace Project No.: 60385853

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory

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

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ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-BMW-1D **Lab ID: 60385853001** Collected: 11/08/21 15:48 Received: 11/10/21 05:17 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	1.8	1	12/03/21 10:02	12/07/21 18:08	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:08	7440-41-7	
Boron	**123**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:08	7440-42-8	
Calcium	**139000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:29	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:08	7440-48-4	
Iron	**9140**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:08	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/08/22 13:08	02/09/22 18:28	7439-93-2	D3
Magnesium	**28900**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:08	7439-95-4	
Manganese	**874**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:08	7439-96-5	
Molybdenum	**3.0J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:08	7439-98-7	B
Potassium	**2740**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:08	7440-09-7	
Sodium	**6090**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.25J**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:38	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:38	7440-43-9	
Chromium	**0.28J**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:38	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:38	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**389**	mg/L	2.0	2.0	1		11/16/21 11:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**489**	mg/L	10.0	10.0	1		11/15/21 09:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**4.9**	mg/L	1.0	0.39	1		11/22/21 09:04	16887-00-6	B
Fluoride	**0.37**	mg/L	0.20	0.086	1		11/22/21 09:04	16984-48-8	
Sulfate	**38.6**	mg/L	5.0	2.1	5		11/22/21 09:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-BMW-3D **Lab ID: 60385853002** Collected: 11/08/21 14:15 Received: 11/10/21 05:17 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	**658**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:10	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:10	7440-41-7	
Boron	**51.7J**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:10	7440-42-8	
Calcium	**113000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:31	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:10	7440-48-4	
Iron	**7570**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:10	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/08/22 13:08	02/09/22 18:30	7439-93-2	D3
Magnesium	**25400**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:10	7439-95-4	
Manganese	**513**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:10	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:10	7439-98-7	
Potassium	**3530**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:10	7440-09-7	
Sodium	**5720**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:10	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.11**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:40	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:40	7440-43-9	
Chromium	**0.32J**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:40	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:40	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**333**	mg/L	2.0	2.0	1		11/16/21 11:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**415**	mg/L	5.0	5.0	1		11/15/21 09:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**8.6**	mg/L	1.0	0.39	1		11/22/21 09:51	16887-00-6	
Fluoride	**0.39**	mg/L	0.20	0.086	1		11/22/21 09:51	16984-48-8	
Sulfate	**25.5**	mg/L	2.0	0.84	2		11/22/21 10:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-1D **Lab ID: 60385853003** Collected: 11/11/21 10:10 Received: 11/12/21 04:32 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	1.8	1	12/06/21 10:43	12/07/21 19:22	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:22	7440-41-7	
Boron	**195**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:22	7440-42-8	
Calcium	**64300**	ug/L	200	75.4	1	12/06/21 10:43	12/07/21 19:22	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:22	7440-48-4	
Iron	**339**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:22	7439-89-6	
Lithium	**12.7**	ug/L	10.0	7.7	1	12/06/21 10:43	12/07/21 19:22	7439-93-2	
Magnesium	**17200**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:22	7439-95-4	
Manganese	**117**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:22	7439-96-5	
Molybdenum	**37.6**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:22	7439-98-7	
Potassium	**4190**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:22	7440-09-7	
Sodium	**13600**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:22	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.7**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:42	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:42	7440-43-9	
Chromium	**0.64J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:42	7440-47-3	
Selenium	**0.22J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:42	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**184**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**304**	mg/L	5.0	5.0	1		11/18/21 09:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**18.7**	mg/L	1.0	0.39	1		11/24/21 00:37	16887-00-6	
Fluoride	**0.25**	mg/L	0.20	0.086	1		11/24/21 00:37	16984-48-8	
Sulfate	**42.4**	mg/L	10.0	4.2	10		11/24/21 00:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-2D **Lab ID: 60385853004** Collected: 11/11/21 11:54 Received: 11/12/21 04:32 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	**69.4**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:25	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:25	7440-41-7	
Boron	**21300**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:25	7440-42-8	M1
Calcium	**199000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:26	7440-70-2	M1
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:25	7440-48-4	
Iron	**285**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:25	7439-89-6	
Lithium	**27.5J**	ug/L	30.0	23.0	3	02/08/22 13:08	02/09/22 18:33	7439-93-2	
Magnesium	**5200**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:25	7439-95-4	
Manganese	**177**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:25	7439-96-5	
Molybdenum	**1420**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:25	7439-98-7	
Potassium	**25100**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:25	7440-09-7	
Sodium	**58100**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:25	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**2.9**	ug/L	1.0	0.11	1	12/06/21 15:08	12/07/21 17:23	7440-38-2	
Cadmium	**0.43J**	ug/L	0.50	0.062	1	12/06/21 15:08	12/07/21 17:23	7440-43-9	
Chromium	**0.29J**	ug/L	1.0	0.23	1	12/06/21 15:08	12/07/21 17:23	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/06/21 15:08	12/07/21 17:23	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**141**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**938**	mg/L	10.0	10.0	1		11/18/21 09:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**21.1**	mg/L	5.0	1.9	5		11/24/21 00:10	16887-00-6	B
Fluoride	**0.68**	mg/L	0.20	0.086	1		11/24/21 01:00	16984-48-8	
Sulfate	**480**	mg/L	50.0	21.0	50		11/24/21 00:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-3D **Lab ID: 60385853005** Collected: 11/11/21 14:04 Received: 11/12/21 04:32 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	**71.0**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:31	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:31	7440-41-7	
Boron	**32200**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:31	7440-42-8	
Calcium	**260000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:32	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:31	7440-48-4	
Iron	**1010**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:31	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/08/22 13:08	02/09/22 18:40	7439-93-2	D3
Magnesium	**11900**	ug/L	500	314	10	12/06/21 10:43	12/08/21 13:32	7439-95-4	
Manganese	**604**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:31	7439-96-5	
Molybdenum	**3610**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:31	7439-98-7	
Potassium	**18400**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:31	7440-09-7	
Sodium	**83700**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:31	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.63J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:44	7440-38-2	
Cadmium	**1.1**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:44	7440-43-9	
Chromium	**0.32J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:44	7440-47-3	
Selenium	**0.26J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:44	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**117**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1310**	mg/L	13.3	13.3	1		11/18/21 09:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**16.6**	mg/L	1.0	0.39	1		12/03/21 11:18	16887-00-6	
Fluoride	**0.58**	mg/L	0.20	0.086	1		12/03/21 11:18	16984-48-8	
Sulfate	**712**	mg/L	100	42.1	100		12/02/21 15:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-4D **Lab ID: 60385853006** Collected: 11/11/21 14:58 Received: 11/12/21 04:32 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	**65.9**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:33	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:33	7440-41-7	
Boron	**30000**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:33	7440-42-8	
Calcium	**218000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:34	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:33	7440-48-4	
Iron	**7750**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:33	7439-89-6	
Lithium	**34.8**	ug/L	30.0	23.0	3	02/08/22 13:08	02/09/22 18:48	7439-93-2	
Magnesium	**27000**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:33	7439-95-4	
Manganese	**1590**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:33	7439-96-5	
Molybdenum	**8100**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:33	7439-98-7	
Potassium	**16800**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:33	7440-09-7	
Sodium	**75400**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:33	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.35J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:46	7440-38-2	
Cadmium	**2.4**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:46	7440-43-9	
Chromium	**0.28J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:46	7440-47-3	
Selenium	**0.20J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:46	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**170**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1170**	mg/L	13.3	13.3	1		11/18/21 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**22.1**	mg/L	2.0	0.78	2		11/22/21 18:22	16887-00-6	
Fluoride	**0.26**	mg/L	0.20	0.086	1		11/22/21 18:08	16984-48-8	
Sulfate	**628**	mg/L	50.0	21.0	50		11/22/21 18:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-5D **Lab ID: 60385853007** Collected: 11/11/21 12:14 Received: 11/12/21 04:32 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	**304**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:35	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:35	7440-41-7	
Boron	**19500**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:35	7440-42-8	
Calcium	**99200**	ug/L	200	75.4	1	12/06/21 10:43	12/07/21 19:35	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:35	7440-48-4	
Iron	**3790**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:35	7439-89-6	
Lithium	**29.5**	ug/L	10.0	7.7	1	12/06/21 10:43	12/07/21 19:35	7439-93-2	
Magnesium	**21100**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:35	7439-95-4	
Manganese	**418**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:35	7439-96-5	
Molybdenum	**1860**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:35	7439-98-7	
Potassium	**10900**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:35	7440-09-7	
Sodium	**33600**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:35	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.46J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:48	7440-38-2	
Cadmium	**0.58**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:48	7440-43-9	
Chromium	**0.35J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:48	7440-47-3	
Selenium	**0.24J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:48	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**244**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**570**	mg/L	10.0	10.0	1		11/18/21 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**26.5**	mg/L	5.0	1.9	5		11/22/21 19:02	16887-00-6	B
Fluoride	**0.66**	mg/L	0.20	0.086	1		11/22/21 18:49	16984-48-8	
Sulfate	**120**	mg/L	20.0	8.4	20		11/24/21 02:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-6D **Lab ID: 60385853008** Collected: 11/10/21 14:34 Received: 11/12/21 04:32 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	**115**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:41	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:41	7440-41-7	
Boron	**702**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:41	7440-42-8	
Calcium	**80800**	ug/L	200	75.4	1	12/06/21 10:43	12/07/21 19:41	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:41	7440-48-4	
Iron	**4720**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:41	7439-89-6	
Lithium	**10.5**	ug/L	10.0	7.7	1	12/06/21 10:43	12/07/21 19:41	7439-93-2	
Magnesium	**19400**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:41	7439-95-4	
Manganese	**563**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:41	7439-96-5	
Molybdenum	**61.9**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:41	7439-98-7	
Potassium	**4430**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:41	7440-09-7	
Sodium	**8360**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:41	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.37J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:57	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:57	7440-43-9	
Chromium	**0.27J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:57	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:57	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**223**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**344**	mg/L	5.0	5.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**7.0**	mg/L	1.0	0.39	1		11/22/21 19:15	16887-00-6	B
Fluoride	**0.41**	mg/L	0.20	0.086	1		11/22/21 19:15	16984-48-8	
Sulfate	**52.9**	mg/L	10.0	4.2	10		11/22/21 19:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-DUP-1 **Lab ID: 60385853009** Collected: 11/10/21 00:00 Received: 11/12/21 04:32 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	1.8	1	12/06/21 10:43	12/07/21 19:43	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:43	7440-41-7	
Boron	**736**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:43	7440-42-8	
Calcium	**81000**	ug/L	200	75.4	1	12/06/21 10:43	12/07/21 19:43	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:43	7440-48-4	
Iron	**4650**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:43	7439-89-6	
Lithium	**10.7**	ug/L	10.0	7.7	1	12/06/21 10:43	12/07/21 19:43	7439-93-2	
Magnesium	**19200**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:43	7439-95-4	
Manganese	**546**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:43	7439-96-5	
Molybdenum	**69.2**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:43	7439-98-7	
Potassium	**4310**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:43	7440-09-7	
Sodium	**8530**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:43	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.37J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:59	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:59	7440-43-9	
Chromium	**<0.23**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:59	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:59	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**226**	mg/L	2.0	2.0	1		11/17/21 10:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**344**	mg/L	5.0	5.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**7.4**	mg/L	1.0	0.39	1		11/22/21 19:42	16887-00-6	
Fluoride	**0.41**	mg/L	0.20	0.086	1		11/22/21 19:42	16984-48-8	
Sulfate	**53.9**	mg/L	10.0	4.2	10		11/24/21 02:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-FB-1 **Lab ID: 60385853010** Collected: 11/11/21 10:40 Received: 11/12/21 04:32 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	**<1.8**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:45	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:45	7440-41-7	
Boron	**<8.6**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:45	7440-42-8	
Calcium	**<75.4**	ug/L	200	75.4	1	12/06/21 10:43	12/07/21 19:45	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:45	7440-48-4	
Iron	**<21.4**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:45	7439-89-6	
Lithium	**<7.7**	ug/L	10.0	7.7	1	12/06/21 10:43	12/07/21 19:45	7439-93-2	
Magnesium	**<31.4**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:45	7439-95-4	
Manganese	**<0.74**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:45	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:45	7439-98-7	
Potassium	**<146**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:45	7440-09-7	
Sodium	**<254**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:45	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.11**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:55	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:55	7440-43-9	
Chromium	**0.45J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:55	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:55	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**2.2**	mg/L	2.0	2.0	1		11/17/21 12:02		
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		11/18/21 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.39**	mg/L	1.0	0.39	1		11/22/21 20:09	16887-00-6	
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/22/21 20:09	16984-48-8	
Sulfate	**<0.42**	mg/L	1.0	0.42	1		11/22/21 20:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 759536
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: 60385853001, 60385853002

METHOD BLANK: 3038952 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	12/07/21 18:04	
Beryllium	ug/L	<0.39	1.0	0.39	12/07/21 18:04	
Boron	ug/L	<8.6	100	8.6	12/07/21 18:04	
Calcium	ug/L	<75.4	200	75.4	12/07/21 18:04	
Cobalt	ug/L	<0.95	5.0	0.95	12/07/21 18:04	
Iron	ug/L	<21.4	50.0	21.4	12/07/21 18:04	
Magnesium	ug/L	<31.4	50.0	31.4	12/07/21 18:04	
Manganese	ug/L	<0.74	5.0	0.74	12/07/21 18:04	
Molybdenum	ug/L	2.4J	20.0	2.2	12/07/21 18:04	
Potassium	ug/L	<146	500	146	12/07/21 18:04	
Sodium	ug/L	<254	500	254	12/07/21 18:04	

LABORATORY CONTROL SAMPLE: 3038953

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	979	98	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	1000	100	85-115	
Calcium	ug/L	10000	9980	100	85-115	
Cobalt	ug/L	1000	987	99	85-115	
Iron	ug/L	10000	10000	100	85-115	
Magnesium	ug/L	10000	10100	101	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	1020	102	85-115	
Potassium	ug/L	10000	10000	100	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038956 3038957

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L		1000	1000	1070	1080	103	103	70-130	0	20	
Beryllium	ug/L		1000	1000	1050	1050	105	105	70-130	1	20	
Boron	ug/L	22500	1000	1000	25100	24300	259	181	70-130	3	20	M1
Calcium	ug/L	291000	10000	10000	304000	303000	131	123	70-130	0	20	M1
Cobalt	ug/L		1000	1000	1010	1020	100	101	70-130	0	20	
Iron	ug/L	43.0J	10000	10000	10500	10300	105	103	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038956 3038957

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	71300	10000	10000	84000	82600	127	113	70-130	2	20	
Manganese	ug/L	509	1000	1000	1590	1550	108	104	70-130	3	20	
Molybdenum	ug/L		1000	1000	1080	1080	108	108	70-130	0	20	
Potassium	ug/L	4790	10000	10000	15800	15300	110	105	70-130	3	20	
Sodium	ug/L	97500	10000	10000	115000	111000	170	130	70-130	4	20	M1

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 759881
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: 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

METHOD BLANK: 3040508 Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	12/07/21 19:00	
Beryllium	ug/L	<0.39	1.0	0.39	12/07/21 19:00	
Boron	ug/L	<8.6	100	8.6	12/07/21 19:00	
Calcium	ug/L	<75.4	200	75.4	12/07/21 19:00	
Cobalt	ug/L	<0.95	5.0	0.95	12/07/21 19:00	
Iron	ug/L	<21.4	50.0	21.4	12/07/21 19:00	
Lithium	ug/L	<7.7	10.0	7.7	12/07/21 19:00	
Magnesium	ug/L	<31.4	50.0	31.4	12/07/21 19:00	
Manganese	ug/L	<0.74	5.0	0.74	12/07/21 19:00	
Molybdenum	ug/L	<2.2	20.0	2.2	12/07/21 19:00	
Potassium	ug/L	<146	500	146	12/07/21 19:00	
Sodium	ug/L	<254	500	254	12/07/21 19:00	

LABORATORY CONTROL SAMPLE: 3040509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	933	93	85-115	
Beryllium	ug/L	1000	957	96	85-115	
Boron	ug/L	1000	927	93	85-115	
Calcium	ug/L	10000	9390	94	85-115	
Cobalt	ug/L	1000	929	93	85-115	
Iron	ug/L	10000	9420	94	85-115	
Lithium	ug/L	1000	884	88	85-115	
Magnesium	ug/L	10000	9460	95	85-115	
Manganese	ug/L	1000	940	94	85-115	
Molybdenum	ug/L	1000	958	96	85-115	
Potassium	ug/L	10000	9300	93	85-115	
Sodium	ug/L	10000	9460	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040510 3040511

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L		1000	1000	997	1020	94	96	70-130	2	20	
Beryllium	ug/L		1000	1000	965	988	96	99	70-130	2	20	
Boron	ug/L	12900	1000	1000	14000	14500	113	157	70-130	3	20	M1

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040510 3040511

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	ug/L	253000	10000	10000	268000	275000	144	216	70-130	3	20	M1
Cobalt	ug/L		1000	1000	929	938	93	94	70-130	1	20	
Iron	ug/L	59.1	10000	10000	9550	9870	95	98	70-130	3	20	
Lithium	ug/L	46.3			880	906				3	20	
Magnesium	ug/L	47100	10000	10000	62700	64600	156	174	70-130	3	20	M1
Manganese	ug/L	1410	1000	1000	2370	2440	96	103	70-130	3	20	
Molybdenum	ug/L		1000	1000	2590	2620	101	104	70-130	1	20	
Potassium	ug/L	5450	10000	10000	14900	15600	94	101	70-130	4	20	
Sodium	ug/L	157000	10000	10000	168000	175000	116	180	70-130	4	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040512 3040513

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	69.4	1000	1000	898	1050	83	98	70-130	16	20	
Beryllium	ug/L	<0.39	1000	1000	858	1000	86	100	70-130	16	20	
Boron	ug/L	21300	1000	1000	22400	23000	111	170	70-130	3	20	M1
Calcium	ug/L	199000	10000	10000	214000	215000	145	154	70-130	0	20	M1
Cobalt	ug/L	<0.95	1000	1000	817	966	82	97	70-130	17	20	
Iron	ug/L	285	10000	10000	8590	10200	83	99	70-130	17	20	
Lithium	ug/L	27.5J			755	868				14	20	
Magnesium	ug/L	5200	10000	10000	13400	15000	82	98	70-130	11	20	
Manganese	ug/L	177	1000	1000	1010	1170	83	99	70-130	15	20	
Molybdenum	ug/L	1420	1000	1000	2300	2480	89	106	70-130	7	20	
Potassium	ug/L	25100	10000	10000	33500	35800	84	107	70-130	7	20	
Sodium	ug/L	58100	10000	10000	67000	69200	89	111	70-130	3	20	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 770154 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385853001, 60385853002, 60385853004, 60385853005, 60385853006

METHOD BLANK: 3075357 — Matrix: Water
Associated Lab Samples: 60385853001, 60385853002, 60385853004, 60385853005, 60385853006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	<7.7	10.0	7.7	02/09/22 18:23	

LABORATORY CONTROL SAMPLE: 3075358

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075359 3075360

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	27.5J	1000	1000	962	1040	93	101	70-130	8	20	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 758170
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: 60385853001, 60385853002

METHOD BLANK: 3034261 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 14:11	
Cadmium	ug/L	<0.062	0.50	0.062	11/30/21 14:11	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 14:11	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 14:11	

LABORATORY CONTROL SAMPLE: 3034262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	41.0	103	85-115	
Cadmium	ug/L	40	40.3	101	85-115	
Chromium	ug/L	40	40.5	101	85-115	
Selenium	ug/L	40	41.4	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034263 3034264

Parameter	Units	60386031001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	4.3	40	40	43.2	42.6	97	96	70-130	2	20	
Cadmium	ug/L	<0.062	40	40	36.7	36.3	92	91	70-130	1	20	
Chromium	ug/L	0.45J	40	40	39.9	39.3	99	97	70-130	2	20	
Selenium	ug/L	0.19J	40	40	37.2	36.5	93	91	70-130	2	20	

MATRIX SPIKE SAMPLE: 3034265

Parameter	Units	60386031003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20.0	40	41.4	53	70-130	M1
Cadmium	ug/L	<0.062	40	38.2	95	70-130	
Chromium	ug/L	0.25J	40	39.9	99	70-130	
Selenium	ug/L	<0.18	40	38.8	97	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 759537
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: 60385853003, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

METHOD BLANK: 3038958 Matrix: Water
Associated Lab Samples: 60385853003, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	12/07/21 15:54	
Cadmium	ug/L	<0.062	0.50	0.062	12/07/21 15:54	
Chromium	ug/L	<0.23	1.0	0.23	12/07/21 15:54	
Selenium	ug/L	<0.18	1.0	0.18	12/07/21 15:54	

LABORATORY CONTROL SAMPLE: 3038959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1090	109	85-115	
Cadmium	ug/L	1000	1060	106	85-115	
Chromium	ug/L	1000	961	96	85-115	
Selenium	ug/L	1000	1060	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038960 3038961

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L		1000	1000	1050	1070	105	107	70-130	2	20	
Cadmium	ug/L		1000	1000	975	967	97	97	70-130	1	20	
Chromium	ug/L		1000	1000	946	951	95	95	70-130	0	20	
Selenium	ug/L		1000	1000	983	980	98	98	70-130	0	20	

MATRIX SPIKE SAMPLE: 3038962

Parameter	Units	60385860022 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	<0.11	1000	1090	109	70-130	
Cadmium	ug/L	<0.062	1000	1030	103	70-130	
Chromium	ug/L	0.31J	1000	977	98	70-130	
Selenium	ug/L	<0.18	1000	1010	101	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 759891
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: 60385853004

METHOD BLANK: 3040552 Matrix: Water
Associated Lab Samples: 60385853004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	12/07/21 17:06	
Cadmium	ug/L	<0.062	0.50	0.062	12/07/21 17:06	
Chromium	ug/L	<0.23	1.0	0.23	12/07/21 17:06	
Selenium	ug/L	<0.18	1.0	0.18	12/07/21 17:06	

LABORATORY CONTROL SAMPLE: 3040553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.5	99	85-115	
Cadmium	ug/L	40	39.6	99	85-115	
Chromium	ug/L	40	39.4	98	85-115	
Selenium	ug/L	40	39.4	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040554 3040555

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L		40	40	40.9	40.5	101	100	70-130	1	20	
Cadmium	ug/L		40	40	37.3	37.0	91	91	70-130	1	20	
Chromium	ug/L		40	40	39.5	39.0	98	97	70-130	1	20	
Selenium	ug/L		40	40	37.8	37.0	94	92	70-130	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040556 3040557

Parameter	Units	60386287003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	8.3	40	40	49.1	49.0	102	102	70-130	0	20	
Cadmium	ug/L	<0.062	40	40	37.0	36.8	92	92	70-130	0	20	
Chromium	ug/L	0.58J	40	40	39.7	39.4	98	97	70-130	1	20	
Selenium	ug/L	<0.18	40	40	38.0	38.3	95	96	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3041447 3041448

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	2.9	40	40	43.9	43.2	102	101	70-130	1	20	
Cadmium	ug/L	0.43J	40	40	37.5	37.0	93	91	70-130	1	20	
Chromium	ug/L	0.29J	40	40	39.3	38.8	98	96	70-130	1	20	
Selenium	ug/L	<0.18	40	40	37.7	37.7	94	94	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 650629
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60385853001, 60385853002

METHOD BLANK: 2998630 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/16/21 11:50	

LABORATORY CONTROL SAMPLE: 2998631

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.1	98	90-110	

SAMPLE DUPLICATE: 2998644

Parameter	Units	50302739001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	215000 ug/L	212	1	20	

SAMPLE DUPLICATE: 2998645

Parameter	Units	50302739002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	206000 ug/L	198	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 650882 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009

METHOD BLANK: 2999813 Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/17/21 10:43	

LABORATORY CONTROL SAMPLE: 2999814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.2	96	90-110	

SAMPLE DUPLICATE: 2999815

Parameter	Units	60385866002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	347	364	5	20	

SAMPLE DUPLICATE: 2999816

Parameter	Units	60385853004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	141	143	1	20	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 650884
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60385853010

METHOD BLANK: 2999817 Matrix: Water
Associated Lab Samples: 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/17/21 12:02	

LABORATORY CONTROL SAMPLE: 2999818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.2	98	90-110	

SAMPLE DUPLICATE: 2999819

Parameter	Units	50302535001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	329	372	12	20	

SAMPLE DUPLICATE: 2999820

Parameter	Units	50302637005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	215	219	2	20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 756220
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385853001, 60385853002

METHOD BLANK: 3026260 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/15/21 09:44	

LABORATORY CONTROL SAMPLE: 3026261

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	981	98	80-120	

SAMPLE DUPLICATE: 3026262

Parameter	Units	60385853001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	489	484	1	10	

SAMPLE DUPLICATE: 3026263

Parameter	Units	60385573006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	371	349	6	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 756844
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385853008, 60385853009

METHOD BLANK: 3028772 Matrix: Water
Associated Lab Samples: 60385853008, 60385853009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/17/21 10:01	

LABORATORY CONTROL SAMPLE: 3028773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	978	98	80-120	

SAMPLE DUPLICATE: 3028774

Parameter	Units	60385860016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	967	1010	4	10	

SAMPLE DUPLICATE: 3028775

Parameter	Units	60385870004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	841	871	4	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 757164 — Analysis Method: SM 2540C
QC Batch Method: SM 2540C — Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853010

METHOD BLANK: 3029977 — Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/18/21 09:51	

LABORATORY CONTROL SAMPLE: 3029978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	986	99	80-120	

SAMPLE DUPLICATE: 3029979

Parameter	Units	60385853004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	938	945	1	10	

SAMPLE DUPLICATE: 3029980

Parameter	Units	60386062004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	834	848	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 757720
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: 60385853001, 60385853002

METHOD BLANK: 3032270 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/22/21 07:09	
Fluoride	mg/L	<0.086	0.20	0.086	11/22/21 07:09	
Sulfate	mg/L	<0.42	1.0	0.42	11/22/21 07:09	

METHOD BLANK: 3035149 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.69J	1.0	0.39	11/23/21 16:29	
Fluoride	mg/L	<0.086	0.20	0.086	11/23/21 16:29	
Sulfate	mg/L	<0.42	1.0	0.42	11/23/21 16:29	

METHOD BLANK: 3035264 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/24/21 08:56	
Fluoride	mg/L	<0.086	0.20	0.086	11/24/21 08:56	
Sulfate	mg/L	<0.42	1.0	0.42	11/24/21 08:56	

LABORATORY CONTROL SAMPLE: 3032271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

LABORATORY CONTROL SAMPLE: 3035150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	5	5.2	103	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

LABORATORY CONTROL SAMPLE: 3035265

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	2.7	109	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032272 3032273

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.8	25	25	45.8	46.3	96	98	80-120	1	15	
Fluoride	mg/L	0.55	2.5	2.5	3.0	3.0	97	99	80-120	1	15	
Sulfate	mg/L	835	500	500	1440	1410	121	116	80-120	2	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032274 3032275

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.3	5	5	8.6	7.5	107	86	80-120	13	15	
Fluoride	mg/L	<0.086	2.5	2.5	2.9	2.9	116	115	80-120	1	15	
Sulfate	mg/L	809	500	500	1330	1350	104	108	80-120	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 757722 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385853003, 60385853004, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

METHOD BLANK: 3032281 — Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/22/21 07:13	
Fluoride	mg/L	<0.086	0.20	0.086	11/22/21 07:13	
Sulfate	mg/L	<0.42	1.0	0.42	11/22/21 07:13	

METHOD BLANK: 3035156 — Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.65J	1.0	0.39	11/23/21 22:43	
Fluoride	mg/L	<0.086	0.20	0.086	11/23/21 22:43	
Sulfate	mg/L	<0.42	1.0	0.42	11/23/21 22:43	

METHOD BLANK: 3036336 — Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/25/21 10:33	
Fluoride	mg/L	<0.086	0.20	0.086	11/25/21 10:33	
Sulfate	mg/L	<0.42	1.0	0.42	11/25/21 10:33	

METHOD BLANK: 3036538 — Matrix: Water
Associated Lab Samples: 60385853003, 60385853004, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.71J	1.0	0.39	11/27/21 09:35	
Fluoride	mg/L	<0.086	0.20	0.086	11/27/21 09:35	
Sulfate	mg/L	<0.42	1.0	0.42	11/27/21 09:35	

LABORATORY CONTROL SAMPLE: 3032282

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	97	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

LABORATORY CONTROL SAMPLE: 3032282

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3035157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 3036337

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	2.7	108	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

LABORATORY CONTROL SAMPLE: 3036539

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	5	4.7	94	90-110	

MATRIX SPIKE SAMPLE: 3032283

Parameter	Units	60385860024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	16.3	25	42.2	104	80-120	
Fluoride	mg/L	0.29	2.5	3.2	117	80-120	
Sulfate	mg/L	70.7	25	99.6	116	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032284 3032285

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.1	25	25	45.9	46.1	99	100	80-120	0	15	
Fluoride	mg/L	0.68	2.5	2.5	3.2	3.2	99	101	80-120	1	15	
Sulfate	mg/L	480	250	250	748	744	107	106	80-120	1	15	

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 759333
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: 60385853005

METHOD BLANK: 3038112 Matrix: Water
Associated Lab Samples: 60385853005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	12/02/21 07:21	
Fluoride	mg/L	<0.086	0.20	0.086	12/02/21 07:21	
Sulfate	mg/L	<0.42	1.0	0.42	12/02/21 07:21	

METHOD BLANK: 3039838 Matrix: Water
Associated Lab Samples: 60385853005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.67J	1.0	0.39	12/03/21 10:10	
Fluoride	mg/L	<0.086	0.20	0.086	12/03/21 10:10	
Sulfate	mg/L	<0.42	1.0	0.42	12/03/21 10:10	

LABORATORY CONTROL SAMPLE: 3038113

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

LABORATORY CONTROL SAMPLE: 3039839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038114 3038115

Parameter	Units	60387159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	600	500	500	1100	1190	100	119	80-120	8	15	
Fluoride	mg/L	ND	250	250	329	355	130	140	80-120	7	15	M1
Sulfate	mg/L	ND	500	500	565	608	93	102	80-120	7	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SCPA
Pace Project No.: 60385853

MATRIX SPIKE SAMPLE: 3038116

Parameter	Units	60387159010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	77.4	50	127	98	80-120	
Fluoride	mg/L	ND	25	24.7	99	80-120	
Sulfate	mg/L	73.1	50	122	98	80-120	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-BMW-1D **Lab ID: 60385853001** Collected: 11/08/21 15:48 Received: 11/10/21 05:17 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	**0.206 ± 0.556 (1.03) C:NA T:95%**	pCi/L	12/15/21 12:25	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.959 ± 0.609 (1.18) C:74% T:95%**	pCi/L	12/16/21 14:21	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-BMW-3D **Lab ID: 60385853002** Collected: 11/08/21 14:15 Received: 11/10/21 05:17 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	**0.489 ± 0.534 (0.840) C:NA T:96%**	pCi/L	12/15/21 12:39	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.945 ± 0.510 (0.952) C:75% T:94%**	pCi/L	12/16/21 14:21	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-1D **Lab ID: 60385853003** Collected: 11/11/21 10:10 Received: 11/12/21 04:32 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	**-0.233 ± 0.403 (1.02) C:NA T:91%**	pCi/L	12/15/21 12:39	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.490 ± 0.475 (0.978) C:59% T:89%**	pCi/L	12/16/21 14:27	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-2D **Lab ID: 60385853004** Collected: 11/11/21 11:54 Received: 11/12/21 04:32 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	**0.176 ± 0.475 (0.881) C:NA T:93%**	pCi/L	12/15/21 12:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0675 ± 0.362 (0.824) C:68% T:93%**	pCi/L	12/16/21 14:27	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-3D **Lab ID: 60385853005** Collected: 11/11/21 14:04 Received: 11/12/21 04:32 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	**-0.0692 ± 0.316 (0.745) C:NA T:93%**	pCi/L	12/15/21 12:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.04 ± 0.415 (0.633) C:73% T:95%**	pCi/L	12/16/21 14:27	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-4D **Lab ID: 60385853006** Collected: 11/11/21 14:58 Received: 11/12/21 04:32 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 ± 0.344 (0.771) C:NA T:95%**	pCi/L	12/15/21 12:39	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.58 ± 0.753 (1.27) C:66% T:94%**	pCi/L	12/16/21 18:42	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-5D **Lab ID: 60385853007** Collected: 11/11/21 12:14 Received: 11/12/21 04:32 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	**0.484 ± 0.503 (0.749) C:NA T:86%**	pCi/L	12/15/21 12:39	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.10 ± 0.666 (1.24) C:66% T:96%**	pCi/L	12/16/21 18:43	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-6D **Lab ID: 60385853008** Collected: 11/10/21 14:34 Received: 11/12/21 04:32 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	**0.0712 ± 0.325 (0.661) C:NA T:90%**	pCi/L	12/15/21 12:39	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.953 ± 0.709 (1.41) C:70% T:93%**	pCi/L	12/16/21 18:44	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-DUP-1 **Lab ID: 60385853009** Collected: 11/10/21 00:00 Received: 11/12/21 04:32 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	**-0.0756 ± 0.345 (0.814) C:NA T:96%**	pCi/L	12/15/21 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.843 ± 0.601 (1.16) C:66% T:95%**	pCi/L	12/16/21 18:46	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-FB-1 **Lab ID: 60385853010** Collected: 11/11/21 10:40 Received: 11/12/21 04:32 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 ± 0.360 (0.806) C:NA T:89%**	pCi/L	12/15/21 12:52	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.326 ± 0.480 (1.03) C:71% T:96%**	pCi/L	12/16/21 18:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-MS-1 **Lab ID: 60385853011** Collected: 11/11/21 11:54 Received: 11/12/21 04:32 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	**78.19 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/15/21 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**78.68 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/16/21 18:49	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

Sample: S-UMW-MSD-1 **Lab ID: 60385853012** Collected: 11/11/21 11:54 Received: 11/12/21 04:32 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	**104.55 %REC 28.85 RPD ± NA (NA) C:NA T:NA**	pCi/L	12/15/21 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**102.72 %REC 26.51 RPD ± NA (NA) C:NA T:NA**	pCi/L	12/16/21 18:32	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 475141
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: 60385853001, 60385853002, 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010, 60385853011, 60385853012

METHOD BLANK: 2295296 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002, 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010, 60385853011, 60385853012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.452 ± 0.296 (0.550) C:75% T:90%	pCi/L	12/16/21 11:22	

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 - RADIOCHEMISTRY

Project: AMEREN SCPA
Pace Project No.: 60385853

QC Batch: 475140
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: 60385853001, 60385853002, 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010, 60385853011, 60385853012

METHOD BLANK: 2295295 Matrix: Water
Associated Lab Samples: 60385853001, 60385853002, 60385853003, 60385853004, 60385853005, 60385853006, 60385853007, 60385853008, 60385853009, 60385853010, 60385853011, 60385853012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.186 ± 0.283 (0.743) C:NA T:87%	pCi/L	12/15/21 12:25	

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 SCPA
Pace Project No.: 60385853

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

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
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 SCPA
Pace Project No.: 60385853

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385853001	S-BMW-1D	EPA 200.7	759536	EPA 200.7	759739
60385853001	S-BMW-1D	EPA 200.7	770154	EPA 200.7	770290
60385853002	S-BMW-3D	EPA 200.7	759536	EPA 200.7	759739
60385853002	S-BMW-3D	EPA 200.7	770154	EPA 200.7	770290
60385853003	S-UMW-1D	EPA 200.7	759881	EPA 200.7	760025
60385853004	S-UMW-2D	EPA 200.7	759881	EPA 200.7	760025
60385853004	S-UMW-2D	EPA 200.7	770154	EPA 200.7	770290
60385853005	S-UMW-3D	EPA 200.7	759881	EPA 200.7	760025
60385853005	S-UMW-3D	EPA 200.7	770154	EPA 200.7	770290
60385853006	S-UMW-4D	EPA 200.7	759881	EPA 200.7	760025
60385853006	S-UMW-4D	EPA 200.7	770154	EPA 200.7	770290
60385853007	S-UMW-5D	EPA 200.7	759881	EPA 200.7	760025
60385853008	S-UMW-6D	EPA 200.7	759881	EPA 200.7	760025
60385853009	S-UMW-DUP-1	EPA 200.7	759881	EPA 200.7	760025
60385853010	S-UMW-FB-1	EPA 200.7	759881	EPA 200.7	760025
60385853001	S-BMW-1D	EPA 200.8	758170	EPA 200.8	758548
60385853002	S-BMW-3D	EPA 200.8	758170	EPA 200.8	758548
60385853003	S-UMW-1D	EPA 200.8	759537	EPA 200.8	759736
60385853004	S-UMW-2D	EPA 200.8	759891	EPA 200.8	760108
60385853005	S-UMW-3D	EPA 200.8	759537	EPA 200.8	759736
60385853006	S-UMW-4D	EPA 200.8	759537	EPA 200.8	759736
60385853007	S-UMW-5D	EPA 200.8	759537	EPA 200.8	759736
60385853008	S-UMW-6D	EPA 200.8	759537	EPA 200.8	759736
60385853009	S-UMW-DUP-1	EPA 200.8	759537	EPA 200.8	759736
60385853010	S-UMW-FB-1	EPA 200.8	759537	EPA 200.8	759736
60385853001	S-BMW-1D	EPA 903.1	475140		
60385853002	S-BMW-3D	EPA 903.1	475140		
60385853003	S-UMW-1D	EPA 903.1	475140		
60385853004	S-UMW-2D	EPA 903.1	475140		
60385853005	S-UMW-3D	EPA 903.1	475140		
60385853006	S-UMW-4D	EPA 903.1	475140		
60385853007	S-UMW-5D	EPA 903.1	475140		
60385853008	S-UMW-6D	EPA 903.1	475140		
60385853009	S-UMW-DUP-1	EPA 903.1	475140		
60385853010	S-UMW-FB-1	EPA 903.1	475140		
60385853011	S-UMW-MS-1	EPA 903.1	475140		
60385853012	S-UMW-MSD-1	EPA 903.1	475140		
60385853001	S-BMW-1D	EPA 904.0	475141		
60385853002	S-BMW-3D	EPA 904.0	475141		
60385853003	S-UMW-1D	EPA 904.0	475141		
60385853004	S-UMW-2D	EPA 904.0	475141		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SCPA
Pace Project No.: 60385853

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385853005	S-UMW-3D	EPA 904.0	475141		
60385853006	S-UMW-4D	EPA 904.0	475141		
60385853007	S-UMW-5D	EPA 904.0	475141		
60385853008	S-UMW-6D	EPA 904.0	475141		
60385853009	S-UMW-DUP-1	EPA 904.0	475141		
60385853010	S-UMW-FB-1	EPA 904.0	475141		
60385853011	S-UMW-MS-1	EPA 904.0	475141		
60385853012	S-UMW-MSD-1	EPA 904.0	475141		
60385853001	S-BMW-1D	SM 2320B	650629		
60385853002	S-BMW-3D	SM 2320B	650629		
60385853003	S-UMW-1D	SM 2320B	650882		
60385853004	S-UMW-2D	SM 2320B	650882		
60385853005	S-UMW-3D	SM 2320B	650882		
60385853006	S-UMW-4D	SM 2320B	650882		
60385853007	S-UMW-5D	SM 2320B	650882		
60385853008	S-UMW-6D	SM 2320B	650882		
60385853009	S-UMW-DUP-1	SM 2320B	650882		
60385853010	S-UMW-FB-1	SM 2320B	650884		
60385853001	S-BMW-1D	SM 2540C	756220		
60385853002	S-BMW-3D	SM 2540C	756220		
60385853003	S-UMW-1D	SM 2540C	757164		
60385853004	S-UMW-2D	SM 2540C	757164		
60385853005	S-UMW-3D	SM 2540C	757164		
60385853006	S-UMW-4D	SM 2540C	757164		
60385853007	S-UMW-5D	SM 2540C	757164		
60385853008	S-UMW-6D	SM 2540C	756844		
60385853009	S-UMW-DUP-1	SM 2540C	756844		
60385853010	S-UMW-FB-1	SM 2540C	757164		
60385853001	S-BMW-1D	EPA 300.0	757720		
60385853002	S-BMW-3D	EPA 300.0	757720		
60385853003	S-UMW-1D	EPA 300.0	757722		
60385853004	S-UMW-2D	EPA 300.0	757722		
60385853005	S-UMW-3D	EPA 300.0	759333		
60385853006	S-UMW-4D	EPA 300.0	757722		
60385853007	S-UMW-5D	EPA 300.0	757722		
60385853008	S-UMW-6D	EPA 300.0	757722		
60385853009	S-UMW-DUP-1	EPA 300.0	757722		
60385853010	S-UMW-FB-1	EPA 300.0	757722		

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Sample Condition Upon Receipt

WO# : 60385853

60385853

Client Name: Golder Assoc.

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 ☑ ZPLC

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

Cooler Temperature (°C): **As-read** 2.1, 13.3, 2.2 **Corr. Factor** -0.2 **Corrected** 1.9, 13.1, 2.0, 14.3, 1.6

Date and initials of person examining contents: CL 11/12

Temperature should be above freezing to 6°C 14.5, 1.8

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	TDS 11/15
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	all coolers out of temp have only Radium
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# 603173	☑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: _____

REVIEWED
By jchurch at 12:31 pm, 11/12/21

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Golder Associates	Report To:	Jeffrey Ingram	Attention:	
Address:	13515 Barrett Parkway Dr., Ste 260	Copy To:	Ryan Feldmann/Eric Schneider	Company Name:	
	Ballwin, MO 63021			Address:	
Email To:	jeffrey_ingram@golder.com	Purchase Order No.:		Pace Quote Reference:	
Phone:	636-724-9191 Fax: 636-724-9323	Project Name:	Ameren SCPA	Pace Project Manager:	Jamie Church
Requested Due Date/TAT:	Standard	Project Number:	153-140603.0003A (COC #7)	Pace Profile #:	9285

REGULATORY AGENCY

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

Site Location STATE: MO

Requested Analysis Filtered (Y/N)

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N		N	N						60385853
1	S-UMW-1D	WT	G																												
2	S-UMW-2D	WT	G																												
3	S-UMW-3D	WT	G																												
4	S-UMW-4D	WT	G																												
5	S-UMW-5D	WT	G																												
6	S-UMW-6D	WT	G																												
7	S-BMW-1D	WT	G			11-8-21	1548		4	1		3							/	/	/	/	/		/	/						
8	S-BMW-3D	WT	G			〃	1415		〃	〃		〃							/	/	/	/	/		/	/						
9	S-UMW-DUP-1	WT	G																												
10	S-UMW-FB-1	WT	G																												
11	S-UMW-MS-1	WT	G																												
12	S-UMW-MSD-1	WT	G																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields / Golder	11/9/21	1530	Angel Mc	11/9	15 35	
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr,Se	Angel Mc	11/9	1535	Mary M	11-10-21	0517	1.9 3.1 2.0 1.3 1.6

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Sierra Shields		
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY):	11/9/21

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.

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Sample Condition Upon Receipt

WO# : 60385853

60385853

Client Name: Golder Assoc.

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 ☑ ZPLC

Thermometer Used: T249 1.6, 13.5, 0.9 **Type of Ice:** Wet Blue None 1.4, 13.3, 0.7, 12.3

Cooler Temperature (°C): **As-read** 1.6, 20.1 **Corr. Factor** -0.2 **Corrected** 1.4, 1.8, 12.1

Date and initials of person examining contents: 11.13.21 EL

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	TDS 11/17
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	All coolers out of temp had only Radium
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 W t	☐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# 603173	☑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:

REVIEWED
By jchurch at 1:16 pm, 11/13/21

Project Manager Review: _____ Date: _____

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.

Page: 1 of 1

Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA
Project Number:	153-140603.0003A (COC #7)

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228						Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N		N	N							60385853
1	S-UMW-1D	WT	G			11-11-21	1010		4	1		3							/	/	/	/	/		/	/						
2	S-UMW-2D	WT	G			11-11-21	1154		4	1		3							/	/	/	/	/		/	/						
3	S-UMW-3D	WT	G				1404		1	1		1							/	/	/	/	/		/	/						
4	S-UMW-4D	WT	G			1	1458		1	1		1							/	/	/	/	/		/	/						
5	S-UMW-5D	WT	G			11-11-21	1214		4	1		3							/	/	/	/	/		/	/						
6	S-UMW-6D	WT	G			11-10-21	1434		4	1		3							/	/	/	/	/		/	/						
7	S-BMW-1D	WT	G																												
8	S-BMW-3D	WT	G																												
9	S-UMW-DUP-1	WT	G			11-10-21	—		4	1		3							/	/	/	/	/		/	/						
10	S-UMW-FB-1	WT	G			11-11-21	1040		1	1		1							/	/	/	/	/		/	/						
11	S-UMW-MS-1	WT	G			11-11-21	1154		1	1		1							/	/	/	/	/		/	/						
12	S-UMW-MSD-1	WT	G			1	1		1	1		1							/	/	/	/	/		/	/						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields / Golder	11/11/21	1640	Lynch / Pace	11/12	0432
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr,Se						

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
13.3	Y	Y	Y
0.7			
1.4			
1.4			
1.8			
12.1			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sierra Shields

SIGNATURE of SAMPLER: Sierra Shields

DATE Signed (MM/DD/YY): 11/11/21

*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.

MEMORANDUM

DATE January 12, 2023 **Project No.** 153140603

TO Project File
WSP USA Inc.

CC Amanda Derhake, Jeff Ingram

FROM Rahel Pommerenke **EMAIL rahel.pommerenke@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA – DETECTION MONITORING AND ASSESSMENT MONITORING - DATA PACKAGE 60385853REV1

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 MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).
- When duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).

WSP USA Inc.
701 Emerson Road, Suite 250,
Creve Coeur, Missouri, USA 63141
T: +1 314 984-8800 F: +1 314 984-8770

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: WSP USA Inc.
Project Manager: J. Ingram
Project Name: Ameren- Sioux - SCPA
Project Number: 153140603
Reviewer: R.Pommerenke
Validation Date: 1/12/2023

Laboratory: Pace Analytical Services - Kansas City
SDG #: 60385853rev1
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); SM2320B (Alkalinity); SM2540C (TDS); EPA 300.0 (Anions); EPA 903.1/904.0 (Radium 226/228)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names S-BMW-1D, S-BMW-3D, S-UMW-1D, S-UMW-2D, S-UMW-3D, S-UMW-4D, S-UMW-5D, S-UMW-6D, S-UMW-DUP-1, S-UMW-FB-1, S-UMW-MS-1, S-UMW-MSD-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			11/8/2021 - 11/11/2021
b) Sampling team indicated?	x			SSS/BTT/ETF
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, Sp.Cond, ORP, Temp, DO, Turb
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: _____

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			See Notes

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			Seenotes

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			S-UMW-DUP-1 @ S-UMW-6D
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			Max RPD: 12% [< 20%]

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:

Lithium was reanalyzed at a lower dilution to meet action limit.

Sample Receipt checklists provided by the lab indicate that the coolers received out of temperature only contained radium samples.
No qualification necessary.

Calcium, lithium, magnesium, chloride, and sulfate were diluted in at least one sample, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

3038952: Molybdenum (2.4J), associated with samples -001, -002. Associated results <RL were qualified as non-detect.

3035149: Chloride (0.69J), associated with samples -001, -002. Associated results <10x blank qualified as estimates.

3035156: Chloride (0.65J), associated with samples -003, -004, -006 through -010. Associated results >10x blank, >RL, or ND, no qualification necessary.

3036538: Chloride (0.71J), associated with samples -003, -004, -006 through -010. Associated results >10x blank, >RL, or ND, no qualification necessary.

3039838: Chloride (0.67J), associated with samples -005. Associated result >RL and 10x blank, no qualification necessary.

S-UMW-FB-1 @ S-UMW-1D: Chromium (0.45J), alkalinity (2.2). Results <RL were qualified.

Duplicates:

S-UMW-DUP-1 @ S-UMW-6D: Chromium detected in sample, ND in duplicate. Results were qualified.

Laboratory ran multiple sample duplicates for alkalinity, TDS.

MS/MSD:

3038956/3038957: MS/MSD % recovery high for boron, calcium, sodium. MS/MSD performed on unrelated sample, no qualification necessary.

3040510/3040511: MSD % recovery high for boron, sodium; MS/MSD % recovery high for calcium, magnesium. MS/MSD performed on unrelated sample, no qualification necessary.

3040512/3040513: MSD % recovery high for boron; MS/MSD % recovery high for calcium. Associated with sample -004. Only 1 QC indicator outside of control limits for boron and calcium sample result >4x spike concentration, no qualification necessary.

3034265: MS % recovery low for arsenic. MS performed on unrelated sample, no qualification necessary.

3032272/3032273: MS % recovery high for sulfate. MS/MSD performed on unrelated sample, no qualification necessary.

3038114/3038115: MS/MSD % recovery high for fluoride. MS/MSD performed on unrelated sample, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-BMW-1D	Molybdenum	20.0	U	Detected in blank, RL>Result>MDL
"	Chloride	4.9	J	Detected in blank, 10x blank > result
S-UMW-1D	Chromium	1.0	U	Detected in blank, RL>Result>MDL
S-UMW-6D	Chromium	0.27	J	Detected in sample, ND in duplicate
S-UMW-DUP-1	"	0.23	UJ	"

Signature: _____ Date: 1/12/2023

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

March 14, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between November 10, 2021 and November 13, 2021. 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 - Indianapolis
- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

REV-1, 3/3/21: Lithium reanalyzed at lower dilution to meet action limit.

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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

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

CERTIFICATIONS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
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 #: PA014572018-1
New Hampshire/TNI Certification #: 297617
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 #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
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
Wyoming Certification #: 8TMS-L

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60385860005	**S-AM-1S**	Water	11/08/21 11:15	11/10/21 05:17
60385860006	**S-AM-1D**	Water	11/08/21 12:20	11/10/21 05:17
60385860007	**S-TP-4D**	Water	11/08/21 11:38	11/10/21 05:17
60385860008	**S-TP-5D**	Water	11/09/21 13:25	11/10/21 05:17
60385860010	**S-CA-DUP-1**	Water	11/08/21 00:00	11/10/21 05:17
60385860011	**S-CA-FB-1**	Water	11/08/21 12:50	11/10/21 05:17
60385860012	**S-CA-FB-2**	Water	11/09/21 14:00	11/10/21 05:17
60385860013	**S-MS-1**	Water	11/09/21 10:47	11/10/21 05:17
60385860014	**S-MSD-1**	Water	11/09/21 10:47	11/10/21 05:17
60385860018	**S-PZ-1S**	Water	11/11/21 14:50	11/12/21 04:32
60385860019	**S-PZ-9D**	Water	11/10/21 11:35	11/12/21 04:32
60385860020	**S-TP-3D**	Water	11/10/21 12:32	11/12/21 04:32
60385860021	**S-TP-6S**	Water	11/10/21 10:03	11/12/21 04:32
60385860022	**S-TP-6D**	Water	11/10/21 11:00	11/12/21 04:32
60385860023	**S-TP-8D**	Water	11/10/21 13:50	11/12/21 04:32
60385860024	**S-CA-DUP-2**	Water	11/10/21 00:00	11/12/21 04:32
60385860025	**S-TP-2D**	Water	11/12/21 11:31	11/13/21 03:30
60385860009	**S-UG-3**	Water	11/09/21 10:20	11/10/21 05:17
60385860001	**S-BMW-1S**	Water	11/08/21 14:41	11/10/21 05:17
60385860002	**S-BMW-3S**	Water	11/08/21 15:15	11/10/21 05:17
60385860003	**S-LMW-5S**	Water	11/09/21 10:47	11/10/21 05:17
60385860004	**S-LMW-6S**	Water	11/09/21 12:27	11/10/21 05:17
60385860015	**S-LMW-1S**	Water	11/11/21 10:07	11/12/21 04:32
60385860016	**S-LMW-2S**	Water	11/10/21 15:46	11/12/21 04:32
60385860017	**S-LMW-4S**	Water	11/10/21 15:11	11/12/21 04:32

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

SAMPLE ANALYTE COUNT

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385860005	**S-AM-1S**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860006	**S-AM-1D**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860007	**S-TP-4D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860008	**S-TP-5D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860010	**S-CA-DUP-1**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860011	**S-CA-FB-1**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K

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

SAMPLE ANALYTE COUNT

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860012	**S-CA-FB-2**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860013	**S-MS-1**	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60385860014	**S-MSD-1**	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60385860018	**S-PZ-1S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860019	**S-PZ-9D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860020	**S-TP-3D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385860021	**S-TP-6S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860022	**S-TP-6D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860023	**S-TP-8D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860024	**S-CA-DUP-2**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860025	**S-TP-2D**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	LDB	3	PASI-K
60385860009	**S-UG-3**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860001	**S-BMW-1S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860002	**S-BMW-3S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	MRV	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860003	**S-LMW-5S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860004	**S-LMW-6S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860015	**S-LMW-1S**	EPA 200.7	MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860016	**S-LMW-2S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
60385860017	**S-LMW-4S**	EPA 200.7	JLH, MA1	12	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K

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

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-AM-1S **Lab ID: 60385860005** Collected: 11/08/21 11:15 Received: 11/10/21 05:17 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	**154**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:27	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:27	7440-41-7	
Boron	**9630**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:27	7440-42-8	
Calcium	**84200**	ug/L	200	75.4	1	12/03/21 10:02	12/07/21 18:27	7440-70-2	
Cobalt	**1.9J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:27	7440-48-4	
Iron	**1840**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:27	7439-89-6	
Lithium	**29.7**	ug/L	10.0	7.7	1	12/03/21 10:02	12/07/21 18:27	7439-93-2	
Magnesium	**18000**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:27	7439-95-4	
Manganese	**747**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:27	7439-96-5	
Molybdenum	**289**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:27	7439-98-7	
Potassium	**8220**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:27	7440-09-7	
Sodium	**24300**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:27	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.5**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:50	7440-38-2	
Cadmium	**0.12J**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:50	7440-43-9	
Chromium	**0.29J**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:50	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:50	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**241**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**422**	mg/L	5.0	5.0	1		11/15/21 09:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**26.6**	mg/L	5.0	1.9	5		11/22/21 14:59	16887-00-6	B
Fluoride	**0.59**	mg/L	0.20	0.086	1		11/23/21 17:14	16984-48-8	
Sulfate	**60.6**	mg/L	5.0	2.1	5		11/22/21 14:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-AM-1D **Lab ID: 60385860006** Collected: 11/08/21 12:20 Received: 11/10/21 05:17 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	**243**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:29	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:29	7440-41-7	
Boron	**7640**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:29	7440-42-8	
Calcium	**79100**	ug/L	200	75.4	1	12/03/21 10:02	12/07/21 18:29	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:29	7440-48-4	
Iron	**3020**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:29	7439-89-6	
Lithium	**34.0**	ug/L	10.0	7.7	1	12/03/21 10:02	12/07/21 18:29	7439-93-2	
Magnesium	**17000**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:29	7439-95-4	
Manganese	**368**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:29	7439-96-5	
Molybdenum	**575**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:29	7439-98-7	
Potassium	**7270**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:29	7440-09-7	
Sodium	**23400**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:29	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.19J**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:51	7440-38-2	
Cadmium	**0.19J**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:51	7440-43-9	
Chromium	**0.37J**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:51	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:51	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**204**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**396**	mg/L	5.0	5.0	1		11/15/21 09:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**28.9**	mg/L	5.0	1.9	5		11/22/21 15:23	16887-00-6	B
Fluoride	**0.60**	mg/L	0.20	0.086	1		11/23/21 17:26	16984-48-8	
Sulfate	**69.5**	mg/L	5.0	2.1	5		11/22/21 15:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-4D **Lab ID: 60385860007** Collected: 11/08/21 11:38 Received: 11/10/21 05:17 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	**536**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:31	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:31	7440-41-7	
Boron	**64.5J**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:31	7440-42-8	
Calcium	**114000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:44	7440-70-2	
Cobalt	**1.4J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:31	7440-48-4	
Iron	**6260**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:31	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 10:56	7439-93-2	D3
Magnesium	**25800**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:31	7439-95-4	
Manganese	**427**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:31	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:31	7439-98-7	
Potassium	**3350**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:31	7440-09-7	
Sodium	**7250**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:31	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.6**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:53	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:53	7440-43-9	
Chromium	**<0.23**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:53	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:53	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**267**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**474**	mg/L	10.0	10.0	1		11/15/21 09:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**10**	mg/L	1.0	0.39	1		11/23/21 17:37	16887-00-6	
Fluoride	**0.27**	mg/L	0.20	0.086	1		11/23/21 17:37	16984-48-8	
Sulfate	**94.0**	mg/L	10.0	4.2	10		11/22/21 15:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-5D **Lab ID: 60385860008** Collected: 11/09/21 13:25 Received: 11/10/21 05:17 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	**154**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:33	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:33	7440-41-7	
Boron	**6160**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:33	7440-42-8	
Calcium	**132000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:46	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:33	7440-48-4	
Iron	**8750**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:33	7439-89-6	
Lithium	**23.9J**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 10:58	7439-93-2	D3
Magnesium	**31000**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:33	7439-95-4	
Manganese	**984**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:33	7439-96-5	
Molybdenum	**234**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:33	7439-98-7	
Potassium	**4480**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:33	7440-09-7	
Sodium	**23700**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:33	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.22J**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:55	7440-38-2	
Cadmium	**0.075J**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:55	7440-43-9	
Chromium	**0.36J**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:55	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:55	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**198**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**627**	mg/L	10.0	10.0	1		11/16/21 09:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**27.3**	mg/L	5.0	1.9	5		11/22/21 16:10	16887-00-6	B
Fluoride	**0.20J**	mg/L	0.20	0.086	1		11/22/21 15:58	16984-48-8	CH
Sulfate	**228**	mg/L	20.0	8.4	20		11/22/21 16:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-DUP-1 **Lab ID: 60385860010** Collected: 11/08/21 00:00 Received: 11/10/21 05:17 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	**546**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:37	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:37	7440-41-7	
Boron	**60.6J**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:37	7440-42-8	
Calcium	**112000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:55	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:37	7440-48-4	
Iron	**6310**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:37	7439-89-6	
Lithium	**<76.7**	ug/L	100	76.7	10	12/03/21 10:02	12/08/21 12:55	7439-93-2	
Magnesium	**26100**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:37	7439-95-4	
Manganese	**431**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:37	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:37	7439-98-7	
Potassium	**3320**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:37	7440-09-7	
Sodium	**7320**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:37	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.6**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:58	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:58	7440-43-9	
Chromium	**<0.23**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:58	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:58	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**269**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**476**	mg/L	10.0	10.0	1		11/15/21 09:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.9**	mg/L	1.0	0.39	1		11/23/21 18:11	16887-00-6	
Fluoride	**0.27**	mg/L	0.20	0.086	1		11/23/21 18:11	16984-48-8	
Sulfate	**98.8**	mg/L	20.0	8.4	20		11/23/21 18:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-FB-1 **Lab ID: 60385860011** Collected: 11/08/21 12:50 Received: 11/10/21 05:17 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	**<1.8**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:39	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:39	7440-41-7	
Boron	**<8.6**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:39	7440-42-8	
Calcium	**<75.4**	ug/L	200	75.4	1	12/03/21 10:02	12/07/21 18:39	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:39	7440-48-4	
Iron	**<21.4**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:39	7439-89-6	
Lithium	**<7.7**	ug/L	10.0	7.7	1	12/03/21 10:02	12/07/21 18:39	7439-93-2	
Magnesium	**<31.4**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:39	7439-95-4	
Manganese	**<0.74**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:39	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:39	7439-98-7	
Potassium	**<146**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:39	7440-09-7	
Sodium	**<254**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:39	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.11**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:11	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:11	7440-43-9	
Chromium	**0.32J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:11	7440-47-3	
Selenium	**0.19J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:11	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**<2.0**	mg/L	2.0	2.0	1		11/16/21 11:33		
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		11/15/21 09:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**<0.39**	mg/L	1.0	0.39	1		11/22/21 17:45	16887-00-6	
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/22/21 17:45	16984-48-8	
Sulfate	**<0.42**	mg/L	1.0	0.42	1		11/22/21 17:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
Lenexa, KS 66219
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-FB-2 **Lab ID: 60385860012** Collected: 11/09/21 14:00 Received: 11/10/21 05:17 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	**<1.8**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:41	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:41	7440-41-7	
Boron	**<8.6**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:41	7440-42-8	
Calcium	**<75.4**	ug/L	200	75.4	1	12/03/21 10:02	12/07/21 18:41	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:41	7440-48-4	
Iron	**<21.4**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:41	7439-89-6	
Lithium	**<7.7**	ug/L	10.0	7.7	1	12/03/21 10:02	12/07/21 18:41	7439-93-2	
Magnesium	**<31.4**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:41	7439-95-4	
Manganese	**<0.74**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:41	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:41	7439-98-7	
Potassium	**<146**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:41	7440-09-7	
Sodium	**<254**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:41	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.11**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:12	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:12	7440-43-9	
Chromium	**0.31J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:12	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:12	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**<2.0**	mg/L	2.0	2.0	1		11/16/21 11:33		
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		11/16/21 09:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**0.58J**	mg/L	1.0	0.39	1		11/23/21 06:51	16887-00-6	B
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/23/21 06:51	16984-48-8	
Sulfate	**<0.42**	mg/L	1.0	0.42	1		11/23/21 06:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-PZ-1S **Lab ID: 60385860018** Collected: 11/11/21 14:50 Received: 11/12/21 04:32 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	1.8	1	12/03/21 10:02	12/07/21 18:53	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:53	7440-41-7	
Boron	**6390**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:53	7440-42-8	
Calcium	**108000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 13:01	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:53	7440-48-4	
Iron	**5060**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:53	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:07	7439-93-2	D3
Magnesium	**18600**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:53	7439-95-4	
Manganese	**1070**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:53	7439-96-5	
Molybdenum	**1440**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:53	7439-98-7	
Potassium	**4150**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:53	7440-09-7	
Sodium	**25000**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:53	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.43J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:20	7440-38-2	
Cadmium	**0.46J**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:20	7440-43-9	
Chromium	**0.35J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:20	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:20	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**249**	mg/L	2.0	2.0	1		11/19/21 13:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**478**	mg/L	5.0	5.0	1		11/18/21 09:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**19.3**	mg/L	1.0	0.39	1		11/22/21 09:27	16887-00-6	
Fluoride	**0.58**	mg/L	0.20	0.086	1		11/22/21 09:27	16984-48-8	
Sulfate	**105**	mg/L	50.0	21.0	50		11/22/21 10:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-PZ-9D **Lab ID: 60385860019** Collected: 11/10/21 11:35 Received: 11/12/21 04:32 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	**121**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:56	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:56	7440-41-7	
Boron	**3840**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:56	7440-42-8	
Calcium	**218000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 13:03	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:56	7440-48-4	
Iron	**13300**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:56	7439-89-6	
Lithium	**29.1J**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:10	7439-93-2	D3
Magnesium	**49600**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:56	7439-95-4	
Manganese	**1410**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:56	7439-96-5	
Molybdenum	**8.3J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:56	7439-98-7	B
Potassium	**5320**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:56	7440-09-7	
Sodium	**19800**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:56	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.71J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:22	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:22	7440-43-9	
Chromium	**1.0**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:22	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:22	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**237**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**987**	mg/L	10.0	10.0	1		11/17/21 10:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**16.7**	mg/L	1.0	0.39	1		11/22/21 10:20	16887-00-6	
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/22/21 10:20	16984-48-8	
Sulfate	**431**	mg/L	50.0	21.0	50		11/22/21 10:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-3D **Lab ID: 60385860020** Collected: 11/10/21 12:32 Received: 11/12/21 04:32 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	**564**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:58	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:58	7440-41-7	
Boron	**60.3J**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:58	7440-42-8	
Calcium	**122000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 13:05	7440-70-2	
Cobalt	**1.2J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:58	7440-48-4	
Iron	**7700**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:58	7439-89-6	
Lithium	**24.1J**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:12	7439-93-2	D3
Magnesium	**28900**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:58	7439-95-4	
Manganese	**642**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:58	7439-96-5	
Molybdenum	**2.6J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:58	7439-98-7	B
Potassium	**3860**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:58	7440-09-7	
Sodium	**6600**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:58	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.13J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:24	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:24	7440-43-9	
Chromium	**0.34J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:24	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:24	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**307**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**482**	mg/L	10.0	10.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.3**	mg/L	1.0	0.39	1		11/22/21 10:47	16887-00-6	
Fluoride	**0.24**	mg/L	0.20	0.086	1		11/22/21 10:47	16984-48-8	
Sulfate	**89.1**	mg/L	10.0	4.2	10		11/22/21 11:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-6S **Lab ID: 60385860021** Collected: 11/10/21 10:03 Received: 11/12/21 04:32 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	1.8	1	12/06/21 10:43	12/07/21 19:10	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:10	7440-41-7	
Boron	**118**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:10	7440-42-8	
Calcium	**138000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:13	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:10	7440-48-4	
Iron	**135**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:10	7439-89-6	
Lithium	**27.7J**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:15	7439-93-2	D3
Magnesium	**28500**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:10	7439-95-4	
Manganese	**244**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:10	7439-96-5	
Molybdenum	**6.9J**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:10	7439-98-7	
Potassium	**2590**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:10	7440-09-7	
Sodium	**5640**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:10	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.52J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:25	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:25	7440-43-9	
Chromium	**0.27J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:25	7440-47-3	
Selenium	**0.58J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:25	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**385**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**500**	mg/L	10.0	10.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**11.2**	mg/L	1.0	0.39	1		11/22/21 11:14	16887-00-6	
Fluoride	**0.34**	mg/L	0.20	0.086	1		11/22/21 11:14	16984-48-8	
Sulfate	**39.7**	mg/L	5.0	2.1	5		11/22/21 11:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-6D **Lab ID: 60385860022** Collected: 11/10/21 11:00 Received: 11/12/21 04:32 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	**419**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:16	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:16	7440-41-7	
Boron	**62.3J**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:16	7440-42-8	
Calcium	**125000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:20	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:16	7440-48-4	
Iron	**7860**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:16	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:26	7439-93-2	D3
Magnesium	**30900**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:16	7439-95-4	
Manganese	**508**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:16	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:16	7439-98-7	
Potassium	**3880**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:16	7440-09-7	
Sodium	**5520**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:16	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.11**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:33	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:33	7440-43-9	
Chromium	**0.31J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:33	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:33	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**343**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**488**	mg/L	10.0	10.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**15.8**	mg/L	1.0	0.39	1		11/22/21 11:41	16887-00-6	
Fluoride	**0.29**	mg/L	0.20	0.086	1		11/22/21 11:41	16984-48-8	
Sulfate	**63.9**	mg/L	10.0	4.2	10		11/22/21 11:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-8D **Lab ID: 60385860023** Collected: 11/10/21 13:50 Received: 11/12/21 04:32 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	**357**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:18	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:18	7440-41-7	
Boron	**72.0J**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:18	7440-42-8	
Calcium	**112000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:22	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:18	7440-48-4	
Iron	**6110**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:18	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:29	7439-93-2	D3
Magnesium	**24500**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:18	7439-95-4	
Manganese	**425**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:18	7439-96-5	
Molybdenum	**2.9J**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:18	7439-98-7	
Potassium	**3400**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:18	7440-09-7	
Sodium	**5890**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:18	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.4**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:38	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:38	7440-43-9	
Chromium	**0.40J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:38	7440-47-3	
Selenium	**0.33J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:38	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**300**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**431**	mg/L	10.0	10.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**15.0**	mg/L	1.0	0.39	1		11/22/21 12:07	16887-00-6	
Fluoride	**0.28**	mg/L	0.20	0.086	1		11/22/21 12:07	16984-48-8	
Sulfate	**47.3**	mg/L	5.0	2.1	5		11/23/21 23:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-DUP-2 **Lab ID: 60385860024** Collected: 11/10/21 00:00 Received: 11/12/21 04:32 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	**407**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:20	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:20	7440-41-7	
Boron	**60.0J**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:20	7440-42-8	
Calcium	**128000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:24	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:20	7440-48-4	
Iron	**7890**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:20	7439-89-6	
Lithium	**<76.7**	ug/L	100	76.7	10	12/06/21 10:43	12/08/21 13:24	7439-93-2	
Magnesium	**31100**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:20	7439-95-4	
Manganese	**512**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:20	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:20	7439-98-7	
Potassium	**3880**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:20	7440-09-7	
Sodium	**5520**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:20	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.14J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:40	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:40	7440-43-9	
Chromium	**0.30J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:40	7440-47-3	
Selenium	**0.21J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:40	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**337**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**503**	mg/L	10.0	10.0	1		11/17/21 10:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**16.3**	mg/L	1.0	0.39	1		11/23/21 23:51	16887-00-6	
Fluoride	**0.29**	mg/L	0.20	0.086	1		11/23/21 23:51	16984-48-8	
Sulfate	**70.7**	mg/L	5.0	2.1	5		11/24/21 00:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-2D **Lab ID: 60385860025** Collected: 11/12/21 11:31 Received: 11/13/21 03:30 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	**60.2**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:47	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:47	7440-41-7	
Boron	**72.2J**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:47	7440-42-8	
Calcium	**284000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:36	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:47	7440-48-4	
Iron	**16200**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:47	7439-89-6	
Lithium	**39.9**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:31	7439-93-2	
Magnesium	**79000**	ug/L	500	314	10	12/06/21 10:43	12/08/21 13:36	7439-95-4	
Manganese	**1290**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:47	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:47	7439-98-7	
Potassium	**5870**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:47	7440-09-7	
Sodium	**26900**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:47	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.18J**	ug/L	1.0	0.11	1	12/06/21 15:08	12/07/21 17:34	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	12/06/21 15:08	12/07/21 17:34	7440-43-9	
Chromium	**0.24J**	ug/L	1.0	0.23	1	12/06/21 15:08	12/07/21 17:34	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/06/21 15:08	12/07/21 17:34	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**449**	mg/L	2.0	2.0	1		11/19/21 13:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1300**	mg/L	20.0	20.0	1		11/19/21 10:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**74.4**	mg/L	10.0	3.9	10		11/18/21 17:10	16887-00-6	B
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/18/21 16:56	16984-48-8	
Sulfate	**480**	mg/L	50.0	21.0	50		11/18/21 17:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-UG-3 **Lab ID: 60385860009** Collected: 11/09/21 10:20 Received: 11/10/21 05:17 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	**213**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:35	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:35	7440-41-7	
Boron	**210**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:35	7440-42-8	
Calcium	**126000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:48	7440-70-2	
Cobalt	**2.6J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:35	7440-48-4	
Iron	**<21.4**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:35	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:00	7439-93-2	D3
Magnesium	**24000**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:35	7439-95-4	
Manganese	**614**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:35	7439-96-5	
Molybdenum	**5.2J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:35	7439-98-7	B
Potassium	**5570**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:35	7440-09-7	
Sodium	**24500**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:35	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.39J**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:57	7440-38-2	
Cadmium	**0.21J**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:57	7440-43-9	
Chromium	**<0.23**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:57	7440-47-3	
Selenium	**1.8**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:57	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**328**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**519**	mg/L	10.0	10.0	1		11/16/21 09:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**24.5**	mg/L	2.0	0.78	2		11/23/21 18:00	16887-00-6	
Fluoride	**0.38**	mg/L	0.20	0.086	1		11/23/21 17:48	16984-48-8	
Sulfate	**66.0**	mg/L	10.0	4.2	10		11/22/21 17:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-BMW-1S **Lab ID: 60385860001** Collected: 11/08/21 14:41 Received: 11/10/21 05:17 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	**155**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:12	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:12	7440-41-7	
Boron	**66.9J**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:12	7440-42-8	
Calcium	**160000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:34	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:12	7440-48-4	
Iron	**<21.4**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:12	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 10:18	7439-93-2	D3
Magnesium	**29800**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:12	7439-95-4	
Manganese	**895**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:12	7439-96-5	
Molybdenum	**3.2J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:12	7439-98-7	B
Potassium	**470J**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:12	7440-09-7	
Sodium	**4840**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:12	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.0**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:41	7440-38-2	
Cadmium	**0.13J**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:41	7440-43-9	
Chromium	**0.42J**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:41	7440-47-3	
Selenium	**0.39J**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:41	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**426**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**534**	mg/L	10.0	10.0	1		11/15/21 09:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**7.4**	mg/L	1.0	0.39	1		11/22/21 10:15	16887-00-6	
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/22/21 10:15	16984-48-8	
Sulfate	**31.8**	mg/L	5.0	2.1	5		11/22/21 10:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-BMW-3S **Lab ID: 60385860002** Collected: 11/08/21 15:15 Received: 11/10/21 05:17 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	**116**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:14	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:14	7440-41-7	
Boron	**67.8J**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:14	7440-42-8	
Calcium	**137000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:36	7440-70-2	
Cobalt	**1.4J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:14	7440-48-4	
Iron	**56.3**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:14	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 10:27	7439-93-2	D3
Magnesium	**23500**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:14	7439-95-4	
Manganese	**364**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:14	7439-96-5	
Molybdenum	**2.3J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:14	7439-98-7	B
Potassium	**533**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:14	7440-09-7	
Sodium	**5710**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:14	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.53J**	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:48	7440-38-2	
Cadmium	**<0.062**	ug/L	0.50	0.062	1	11/27/21 16:56	11/30/21 14:48	7440-43-9	
Chromium	**<0.23**	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:48	7440-47-3	
Selenium	**0.23J**	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:48	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**356**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**461**	mg/L	10.0	10.0	1		11/15/21 09:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**12.0**	mg/L	1.0	0.39	1		11/22/21 10:38	16887-00-6	
Fluoride	**0.46**	mg/L	0.20	0.086	1		11/22/21 10:38	16984-48-8	
Sulfate	**31.2**	mg/L	5.0	2.1	5		11/22/21 10:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-5S **Lab ID: 60385860003** Collected: 11/09/21 10:47 Received: 11/10/21 05:17 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	**56.5**	ug/L	5.0	1.8	1	12/06/21 10:43	12/07/21 19:04	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/06/21 10:43	12/07/21 19:04	7440-41-7	
Boron	**12900**	ug/L	100	8.6	1	12/06/21 10:43	12/07/21 19:04	7440-42-8	M1
Calcium	**253000**	ug/L	2000	754	10	12/06/21 10:43	12/08/21 13:07	7440-70-2	M1
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/06/21 10:43	12/07/21 19:04	7440-48-4	
Iron	**59.1**	ug/L	50.0	21.4	1	12/06/21 10:43	12/07/21 19:04	7439-89-6	
Lithium	**46.3**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 10:30	7439-93-2	
Magnesium	**47100**	ug/L	50.0	31.4	1	12/06/21 10:43	12/07/21 19:04	7439-95-4	M1
Manganese	**1410**	ug/L	5.0	0.74	1	12/06/21 10:43	12/07/21 19:04	7439-96-5	
Molybdenum	**1580**	ug/L	20.0	2.2	1	12/06/21 10:43	12/07/21 19:04	7439-98-7	
Potassium	**5450**	ug/L	500	146	1	12/06/21 10:43	12/07/21 19:04	7440-09-7	
Sodium	**157000**	ug/L	500	254	1	12/06/21 10:43	12/07/21 19:04	7440-23-5	M1
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.76J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 15:59	7440-38-2	
Cadmium	**0.98**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 15:59	7440-43-9	
Chromium	**0.30J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 15:59	7440-47-3	
Selenium	**0.37J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 15:59	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**310**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1620**	mg/L	13.3	13.3	1		11/16/21 09:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**21.8**	mg/L	5.0	1.9	5		11/22/21 11:38	16887-00-6	B
Fluoride	**0.55**	mg/L	0.20	0.086	1		11/22/21 11:02	16984-48-8	
Sulfate	**835**	mg/L	100	42.1	100		11/22/21 12:37	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-6S **Lab ID: 60385860004** Collected: 11/09/21 12:27 Received: 11/10/21 05:17 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	**46.0**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:16	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:16	7440-41-7	
Boron	**22500**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:16	7440-42-8	M1
Calcium	**291000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:38	7440-70-2	M1
Cobalt	**7.4**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:16	7440-48-4	
Iron	**43.0J**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:16	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 10:42	7439-93-2	D3
Magnesium	**71300**	ug/L	500	314	10	12/03/21 10:02	12/08/21 12:38	7439-95-4	
Manganese	**509**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:16	7439-96-5	
Molybdenum	**<2.2**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:16	7439-98-7	
Potassium	**4790**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:16	7440-09-7	
Sodium	**97500**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:16	7440-23-5	M1
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.67J**	ug/L	1.0	0.11	1	12/06/21 15:08	12/07/21 17:12	7440-38-2	
Cadmium	**0.75**	ug/L	0.50	0.062	1	12/06/21 15:08	12/07/21 17:12	7440-43-9	
Chromium	**0.36J**	ug/L	1.0	0.23	1	12/06/21 15:08	12/07/21 17:12	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/06/21 15:08	12/07/21 17:12	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**342**	mg/L	2.0	2.0	1		11/16/21 11:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1570**	mg/L	13.3	13.3	1		11/16/21 09:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**3.3**	mg/L	1.0	0.39	1		11/22/21 13:12	16887-00-6	B
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/22/21 13:12	16984-48-8	CH
Sulfate	**809**	mg/L	100	42.1	100		11/22/21 13:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-1S **Lab ID: 60385860015** Collected: 11/11/21 10:07 Received: 11/12/21 04:32 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	**128**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:43	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:43	7440-41-7	
Boron	**307**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:43	7440-42-8	
Calcium	**70500**	ug/L	200	75.4	1	12/03/21 10:02	12/07/21 18:43	7440-70-2	
Cobalt	**3.0J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:43	7440-48-4	
Iron	**72.9**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:43	7439-89-6	
Lithium	**15.8**	ug/L	10.0	7.7	1	12/03/21 10:02	12/07/21 18:43	7439-93-2	
Magnesium	**17400**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:43	7439-95-4	
Manganese	**276**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:43	7439-96-5	
Molybdenum	**78.0**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:43	7439-98-7	
Potassium	**6080**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:43	7440-09-7	
Sodium	**17600**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:43	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**2.1**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:14	7440-38-2	
Cadmium	**0.11J**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:14	7440-43-9	
Chromium	**0.40J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:14	7440-47-3	
Selenium	**2.5**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:14	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**198**	mg/L	2.0	2.0	1		11/19/21 13:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**320**	mg/L	5.0	5.0	1		11/17/21 10:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**18.9**	mg/L	2.0	0.78	2		11/22/21 08:07	16887-00-6	
Fluoride	**0.42**	mg/L	0.20	0.086	1		11/22/21 07:53	16984-48-8	
Sulfate	**46.0**	mg/L	10.0	4.2	10		11/22/21 08:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-2S **Lab ID: 60385860016** Collected: 11/10/21 15:46 Received: 11/12/21 04:32 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	1.8	1	12/03/21 10:02	12/07/21 18:45	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:45	7440-41-7	
Boron	**8000**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:45	7440-42-8	
Calcium	**236000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:57	7440-70-2	
Cobalt	**2.5J**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:45	7440-48-4	
Iron	**78.3**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:45	7439-89-6	
Lithium	**29.5J**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:03	7439-93-2	D3
Magnesium	**39500**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:45	7439-95-4	
Manganese	**486**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:45	7439-96-5	
Molybdenum	**764**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:45	7439-98-7	
Potassium	**8360**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:45	7440-09-7	
Sodium	**60900**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:45	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.91J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:16	7440-38-2	
Cadmium	**0.55**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:16	7440-43-9	
Chromium	**0.28J**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:16	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:16	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**427**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**967**	mg/L	13.3	13.3	1		11/17/21 10:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**155**	mg/L	20.0	7.8	20		11/22/21 08:47	16887-00-6	
Fluoride	**<0.086**	mg/L	0.20	0.086	1		11/22/21 08:33	16984-48-8	
Sulfate	**186**	mg/L	20.0	8.4	20		11/22/21 08:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-4S **Lab ID: 60385860017** Collected: 11/10/21 15:11 Received: 11/12/21 04:32 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	**223**	ug/L	5.0	1.8	1	12/03/21 10:02	12/07/21 18:51	7440-39-3	
Beryllium	**<0.39**	ug/L	1.0	0.39	1	12/03/21 10:02	12/07/21 18:51	7440-41-7	
Boron	**254**	ug/L	100	8.6	1	12/03/21 10:02	12/07/21 18:51	7440-42-8	
Calcium	**185000**	ug/L	2000	754	10	12/03/21 10:02	12/08/21 12:59	7440-70-2	
Cobalt	**<0.95**	ug/L	5.0	0.95	1	12/03/21 10:02	12/07/21 18:51	7440-48-4	
Iron	**25.0J**	ug/L	50.0	21.4	1	12/03/21 10:02	12/07/21 18:51	7439-89-6	
Lithium	**<23.0**	ug/L	30.0	23.0	3	02/09/22 12:30	02/11/22 11:05	7439-93-2	D3
Magnesium	**40500**	ug/L	50.0	31.4	1	12/03/21 10:02	12/07/21 18:51	7439-95-4	
Manganese	**269**	ug/L	5.0	0.74	1	12/03/21 10:02	12/07/21 18:51	7439-96-5	
Molybdenum	**2.5J**	ug/L	20.0	2.2	1	12/03/21 10:02	12/07/21 18:51	7439-98-7	B
Potassium	**5150**	ug/L	500	146	1	12/03/21 10:02	12/07/21 18:51	7440-09-7	
Sodium	**11900**	ug/L	500	254	1	12/03/21 10:02	12/07/21 18:51	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.62J**	ug/L	1.0	0.11	1	12/03/21 10:02	12/07/21 16:18	7440-38-2	
Cadmium	**0.17J**	ug/L	0.50	0.062	1	12/03/21 10:02	12/07/21 16:18	7440-43-9	
Chromium	**<0.23**	ug/L	1.0	0.23	1	12/03/21 10:02	12/07/21 16:18	7440-47-3	
Selenium	**0.53J**	ug/L	1.0	0.18	1	12/03/21 10:02	12/07/21 16:18	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**557**	mg/L	2.0	2.0	1		11/19/21 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**624**	mg/L	10.0	10.0	1		11/17/21 10:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.5**	mg/L	1.0	0.39	1		11/22/21 09:00	16887-00-6	B
Fluoride	**0.22**	mg/L	0.20	0.086	1		11/22/21 09:00	16984-48-8	
Sulfate	**31.4**	mg/L	5.0	2.1	5		11/22/21 09:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 759536
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: 60385860001, 60385860002, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020

METHOD BLANK: 3038952 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	12/07/21 18:04	
Beryllium	ug/L	<0.39	1.0	0.39	12/07/21 18:04	
Boron	ug/L	<8.6	100	8.6	12/07/21 18:04	
Calcium	ug/L	<75.4	200	75.4	12/07/21 18:04	
Cobalt	ug/L	<0.95	5.0	0.95	12/07/21 18:04	
Iron	ug/L	<21.4	50.0	21.4	12/07/21 18:04	
Lithium	ug/L	<7.7	10.0	7.7	12/07/21 18:04	
Magnesium	ug/L	<31.4	50.0	31.4	12/07/21 18:04	
Manganese	ug/L	<0.74	5.0	0.74	12/07/21 18:04	
Molybdenum	ug/L	2.4J	20.0	2.2	12/07/21 18:04	
Potassium	ug/L	<146	500	146	12/07/21 18:04	
Sodium	ug/L	<254	500	254	12/07/21 18:04	

LABORATORY CONTROL SAMPLE: 3038953

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	979	98	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	1000	100	85-115	
Calcium	ug/L	10000	9980	100	85-115	
Cobalt	ug/L	1000	987	99	85-115	
Iron	ug/L	10000	10000	100	85-115	
Lithium	ug/L	1000	927	93	85-115	
Magnesium	ug/L	10000	10100	101	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	1020	102	85-115	
Potassium	ug/L	10000	10000	100	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038956 3038957

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	46.0	1000	1000	1070	1080	103	103	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038956 3038957

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Beryllium	ug/L	<0.39	1000	1000	1050	1050	105	105	70-130	1	20	
Boron	ug/L	22500	1000	1000	25100	24300	259	181	70-130	3	20	M1
Calcium	ug/L	291000	10000	10000	304000	303000	131	123	70-130	0	20	M1
Cobalt	ug/L	7.4	1000	1000	1010	1020	100	101	70-130	0	20	
Iron	ug/L	43.0J	10000	10000	10500	10300	105	103	70-130	2	20	
Lithium	ug/L	<23.0			931	922				1	20	
Magnesium	ug/L	71300	10000	10000	84000	82600	127	113	70-130	2	20	
Manganese	ug/L	509	1000	1000	1590	1550	108	104	70-130	3	20	
Molybdenum	ug/L	<2.2	1000	1000	1080	1080	108	108	70-130	0	20	
Potassium	ug/L	4790	10000	10000	15800	15300	110	105	70-130	3	20	
Sodium	ug/L	97500	10000	10000	115000	111000	170	130	70-130	4	20	M1

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 759881
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: 60385860003, 60385860021, 60385860022, 60385860023, 60385860024, 60385860025

METHOD BLANK: 3040508 Matrix: Water
Associated Lab Samples: 60385860003, 60385860021, 60385860022, 60385860023, 60385860024, 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	12/07/21 19:00	
Beryllium	ug/L	<0.39	1.0	0.39	12/07/21 19:00	
Boron	ug/L	<8.6	100	8.6	12/07/21 19:00	
Calcium	ug/L	<75.4	200	75.4	12/07/21 19:00	
Cobalt	ug/L	<0.95	5.0	0.95	12/07/21 19:00	
Iron	ug/L	<21.4	50.0	21.4	12/07/21 19:00	
Lithium	ug/L	<7.7	10.0	7.7	12/07/21 19:00	
Magnesium	ug/L	<31.4	50.0	31.4	12/07/21 19:00	
Manganese	ug/L	<0.74	5.0	0.74	12/07/21 19:00	
Molybdenum	ug/L	<2.2	20.0	2.2	12/07/21 19:00	
Potassium	ug/L	<146	500	146	12/07/21 19:00	
Sodium	ug/L	<254	500	254	12/07/21 19:00	

LABORATORY CONTROL SAMPLE: 3040509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	933	93	85-115	
Beryllium	ug/L	1000	957	96	85-115	
Boron	ug/L	1000	927	93	85-115	
Calcium	ug/L	10000	9390	94	85-115	
Cobalt	ug/L	1000	929	93	85-115	
Iron	ug/L	10000	9420	94	85-115	
Lithium	ug/L	1000	884	88	85-115	
Magnesium	ug/L	10000	9460	95	85-115	
Manganese	ug/L	1000	940	94	85-115	
Molybdenum	ug/L	1000	958	96	85-115	
Potassium	ug/L	10000	9300	93	85-115	
Sodium	ug/L	10000	9460	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040510 3040511

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	56.5	1000	1000	997	1020	94	96	70-130	2	20	
Beryllium	ug/L	<0.39	1000	1000	965	988	96	99	70-130	2	20	
Boron	ug/L	12900	1000	1000	14000	14500	113	157	70-130	3	20	M1
Calcium	ug/L	253000	10000	10000	268000	275000	144	216	70-130	3	20	M1

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040510 3040511

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	ug/L	<0.95	1000	1000	929	938	93	94	70-130	1	20	
Iron	ug/L	59.1	10000	10000	9550	9870	95	98	70-130	3	20	
Lithium	ug/L	46.3			880	906				3	20	
Magnesium	ug/L	47100	10000	10000	62700	64600	156	174	70-130	3	20	M1
Manganese	ug/L	1410	1000	1000	2370	2440	96	103	70-130	3	20	
Molybdenum	ug/L	1580	1000	1000	2590	2620	101	104	70-130	1	20	
Potassium	ug/L	5450	10000	10000	14900	15600	94	101	70-130	4	20	
Sodium	ug/L	157000	10000	10000	168000	175000	116	180	70-130	4	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040512 3040513

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	69.4	1000	1000	898	1050	83	98	70-130	16	20	
Beryllium	ug/L	<0.39	1000	1000	858	1000	86	100	70-130	16	20	
Boron	ug/L	21300	1000	1000	22400	23000	111	170	70-130	3	20	M1
Calcium	ug/L	199000	10000	10000	214000	215000	145	154	70-130	0	20	M1
Cobalt	ug/L	<0.95	1000	1000	817	966	82	97	70-130	17	20	
Iron	ug/L	285	10000	10000	8590	10200	83	99	70-130	17	20	
Lithium	ug/L	27.5J			755	868				14	20	
Magnesium	ug/L	5200	10000	10000	13400	15000	82	98	70-130	11	20	
Manganese	ug/L	177	1000	1000	1010	1170	83	99	70-130	15	20	
Molybdenum	ug/L	1420	1000	1000	2300	2480	89	106	70-130	7	20	
Potassium	ug/L	25100	10000	10000	33500	35800	84	107	70-130	7	20	
Sodium	ug/L	58100	10000	10000	67000	69200	89	111	70-130	3	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 770152 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860004, 60385860007, 60385860008, 60385860009, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860025

METHOD BLANK: 3075348 — Matrix: Water
Associated Lab Samples: 60385860004, 60385860007, 60385860008, 60385860009, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	<7.7	10.0	7.7	02/11/22 10:37	

LABORATORY CONTROL SAMPLE: 3075349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	1000	917	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075350 3075351

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	<23.0	1000	1000	998	1010	98	99	70-130	1	20	

MATRIX SPIKE SAMPLE: 3075352

Parameter	Units	60385860021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	27.7J	1000	829	80	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 770155
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: 60385860001, 60385860002, 60385860003

METHOD BLANK: 3075361 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	<7.7	10.0	7.7	02/11/22 10:13	

LABORATORY CONTROL SAMPLE: 3075362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	1000	978	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075363 3075364

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	46.3	1000	1000	1060	1060	101	101	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 758170
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: 60385860001, 60385860002, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010

METHOD BLANK: 3034261 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 14:11	
Cadmium	ug/L	<0.062	0.50	0.062	11/30/21 14:11	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 14:11	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 14:11	

LABORATORY CONTROL SAMPLE: 3034262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	41.0	103	85-115	
Cadmium	ug/L	40	40.3	101	85-115	
Chromium	ug/L	40	40.5	101	85-115	
Selenium	ug/L	40	41.4	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034263 3034264

Parameter	Units	60386031001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	4.3	40	40	43.2	42.6	97	96	70-130	2	20	
Cadmium	ug/L	<0.062	40	40	36.7	36.3	92	91	70-130	1	20	
Chromium	ug/L	0.45J	40	40	39.9	39.3	99	97	70-130	2	20	
Selenium	ug/L	0.19J	40	40	37.2	36.5	93	91	70-130	2	20	

MATRIX SPIKE SAMPLE: 3034265

Parameter	Units	60386031003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20.0	40	41.4	53	70-130	M1
Cadmium	ug/L	<0.062	40	38.2	95	70-130	
Chromium	ug/L	0.25J	40	39.9	99	70-130	
Selenium	ug/L	<0.18	40	38.8	97	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 759537
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: 60385860003, 60385860011, 60385860012, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

METHOD BLANK: 3038958 Matrix: Water
Associated Lab Samples: 60385860003, 60385860011, 60385860012, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	12/07/21 15:54	
Cadmium	ug/L	<0.062	0.50	0.062	12/07/21 15:54	
Chromium	ug/L	<0.23	1.0	0.23	12/07/21 15:54	
Selenium	ug/L	<0.18	1.0	0.18	12/07/21 15:54	

LABORATORY CONTROL SAMPLE: 3038959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1090	109	85-115	
Cadmium	ug/L	1000	1060	106	85-115	
Chromium	ug/L	1000	961	96	85-115	
Selenium	ug/L	1000	1060	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3038960 3038961

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	0.76J	1000	1000	1050	1070	105	107	70-130	2	20	
Cadmium	ug/L	0.98	1000	1000	975	967	97	97	70-130	1	20	
Chromium	ug/L	0.30J	1000	1000	946	951	95	95	70-130	0	20	
Selenium	ug/L	0.37J	1000	1000	983	980	98	98	70-130	0	20	

MATRIX SPIKE SAMPLE: 3038962

Parameter	Units	60385860022 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	<0.11	1000	1090	109	70-130	
Cadmium	ug/L	<0.062	1000	1030	103	70-130	
Chromium	ug/L	0.31J	1000	977	98	70-130	
Selenium	ug/L	<0.18	1000	1010	101	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 759891
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: 60385860004, 60385860025

METHOD BLANK: 3040552 Matrix: Water
Associated Lab Samples: 60385860004, 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	12/07/21 17:06	
Cadmium	ug/L	<0.062	0.50	0.062	12/07/21 17:06	
Chromium	ug/L	<0.23	1.0	0.23	12/07/21 17:06	
Selenium	ug/L	<0.18	1.0	0.18	12/07/21 17:06	

LABORATORY CONTROL SAMPLE: 3040553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.5	99	85-115	
Cadmium	ug/L	40	39.6	99	85-115	
Chromium	ug/L	40	39.4	98	85-115	
Selenium	ug/L	40	39.4	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040554 3040555

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	0.67J	40	40	40.9	40.5	101	100	70-130	1	20	
Cadmium	ug/L	0.75	40	40	37.3	37.0	91	91	70-130	1	20	
Chromium	ug/L	0.36J	40	40	39.5	39.0	98	97	70-130	1	20	
Selenium	ug/L	<0.18	40	40	37.8	37.0	94	92	70-130	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3040556 3040557

Parameter	Units	60386287003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	8.3	40	40	49.1	49.0	102	102	70-130	0	20	
Cadmium	ug/L	<0.062	40	40	37.0	36.8	92	92	70-130	0	20	
Chromium	ug/L	0.58J	40	40	39.7	39.4	98	97	70-130	1	20	
Selenium	ug/L	<0.18	40	40	38.0	38.3	95	96	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3041447 3041448

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	2.9	40	40	43.9	43.2	102	101	70-130	1	20	
Cadmium	ug/L	0.43J	40	40	37.5	37.0	93	91	70-130	1	20	
Chromium	ug/L	0.29J	40	40	39.3	38.8	98	96	70-130	1	20	
Selenium	ug/L	<0.18	40	40	37.7	37.7	94	94	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 650630
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012

METHOD BLANK: 2998639 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/16/21 11:33	

LABORATORY CONTROL SAMPLE: 2998640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.8	98	90-110	

SAMPLE DUPLICATE: 2998641

Parameter	Units	60385860003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	310	316	2	20	

SAMPLE DUPLICATE: 2998642

Parameter	Units	60385860004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	342	357	4	20	

SAMPLE DUPLICATE: 2998643

Parameter	Units	60385861001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	286	298	4	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 651335
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60385860016, 60385860017, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

METHOD BLANK: 3001987 Matrix: Water
Associated Lab Samples: 60385860016, 60385860017, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/19/21 10:07	

LABORATORY CONTROL SAMPLE: 3001988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.6	99	90-110	

SAMPLE DUPLICATE: 3001989

Parameter	Units	50302819004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	296	303	2	20	

SAMPLE DUPLICATE: 3001990

Parameter	Units	50302828014 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	536	560	4	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 651462
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60385860015, 60385860018, 60385860025

METHOD BLANK: 3002719 Matrix: Water
Associated Lab Samples: 60385860015, 60385860018, 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/19/21 13:19	

LABORATORY CONTROL SAMPLE: 3002720

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.7	97	90-110	

SAMPLE DUPLICATE: 3002721

Parameter	Units	50302779001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	463	461	0	20	

SAMPLE DUPLICATE: 3002722

Parameter	Units	50302828001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	590	591	0	20	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 756220 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860001, 60385860002, 60385860005, 60385860006, 60385860007

METHOD BLANK: 3026260 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860005, 60385860006, 60385860007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/15/21 09:44	

LABORATORY CONTROL SAMPLE: 3026261

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	981	98	80-120	

SAMPLE DUPLICATE: 3026262

Parameter	Units	60385853001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	489	484	1	10	

SAMPLE DUPLICATE: 3026263

Parameter	Units	60385573006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	371	349	6	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 756223
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860010, 60385860011

METHOD BLANK: 3026270 Matrix: Water
Associated Lab Samples: 60385860010, 60385860011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/15/21 09:48	

LABORATORY CONTROL SAMPLE: 3026271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	984	98	80-120	

SAMPLE DUPLICATE: 3026272

Parameter	Units	60385860010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	476	474	0	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 756566 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860003, 60385860004, 60385860008, 60385860009, 60385860012

METHOD BLANK: 3027452 Matrix: Water
Associated Lab Samples: 60385860003, 60385860004, 60385860008, 60385860009, 60385860012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/16/21 09:52	

LABORATORY CONTROL SAMPLE: 3027453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	981	98	80-120	

SAMPLE DUPLICATE: 3027454

Parameter	Units	60385860003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1620	1630	0	10	

SAMPLE DUPLICATE: 3027455

Parameter	Units	60385860004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1570	1600	2	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 756844 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860016, 60385860017, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

METHOD BLANK: 3028772 Matrix: Water
Associated Lab Samples: 60385860016, 60385860017, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/17/21 10:01	

LABORATORY CONTROL SAMPLE: 3028773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	978	98	80-120	

SAMPLE DUPLICATE: 3028774

Parameter	Units	60385860016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	967	1010	4	10	

SAMPLE DUPLICATE: 3028775

Parameter	Units	60385870004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	841	871	4	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 756845
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860015

METHOD BLANK: 3028779 Matrix: Water
Associated Lab Samples: 60385860015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/17/21 10:04	

LABORATORY CONTROL SAMPLE: 3028780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	978	98	80-120	

SAMPLE DUPLICATE: 3028781

Parameter	Units	60385632002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	408	414	1	10	

SAMPLE DUPLICATE: 3028782

Parameter	Units	60385803004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3520	3480	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 757164
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860018

METHOD BLANK: 3029977 Matrix: Water
Associated Lab Samples: 60385860018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/18/21 09:51	

LABORATORY CONTROL SAMPLE: 3029978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	986	99	80-120	

SAMPLE DUPLICATE: 3029979

Parameter	Units	60385853004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	938	945	1	10	

SAMPLE DUPLICATE: 3029980

Parameter	Units	60386062004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	834	848	2	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 757386
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385860025

METHOD BLANK: 3030795 Matrix: Water
Associated Lab Samples: 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/19/21 10:00	

LABORATORY CONTROL SAMPLE: 3030796

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	993	99	80-120	

SAMPLE DUPLICATE: 3030797

Parameter	Units	60386031001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	976	988	1	10	

SAMPLE DUPLICATE: 3030798

Parameter	Units	60386287003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	926	917	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 757095
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: 60385860025

METHOD BLANK: 3029711 Matrix: Water
Associated Lab Samples: 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/18/21 06:44	
Fluoride	mg/L	<0.086	0.20	0.086	11/18/21 06:44	
Sulfate	mg/L	<0.42	1.0	0.42	11/18/21 06:44	

METHOD BLANK: 3030649 Matrix: Water
Associated Lab Samples: 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/18/21 09:37	
Fluoride	mg/L	<0.086	0.20	0.086	11/18/21 09:37	
Sulfate	mg/L	<0.42	1.0	0.42	11/18/21 09:37	

METHOD BLANK: 3032082 Matrix: Water
Associated Lab Samples: 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/19/21 06:45	
Fluoride	mg/L	<0.086	0.20	0.086	11/19/21 06:45	
Sulfate	mg/L	<0.42	1.0	0.42	11/19/21 06:45	

METHOD BLANK: 3032286 Matrix: Water
Associated Lab Samples: 60385860025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.79J	1.0	0.39	11/20/21 13:49	
Fluoride	mg/L	<0.086	0.20	0.086	11/20/21 13:49	
Sulfate	mg/L	<0.42	1.0	0.42	11/20/21 13:49	

LABORATORY CONTROL SAMPLE: 3029712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

LABORATORY CONTROL SAMPLE: 3029712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.4	108	90-110	

LABORATORY CONTROL SAMPLE: 3030650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	5	5.5	109	90-110	

LABORATORY CONTROL SAMPLE: 3032083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	5	5.2	104	90-110	

LABORATORY CONTROL SAMPLE: 3032287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.3	107	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	5	5.4	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029713 3029714

Parameter	Units	60385386016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.2	5	5	11.1	11.2	96	99	80-120	1	15	
Fluoride	mg/L	0.24	2.5	2.5	2.8	2.9	103	106	80-120	3	15	
Sulfate	mg/L	29.3	25	25	53.9	53.8	98	98	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029715 3029716

Parameter	Units	60385386023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	18.9	10	10	29.5	30.0	105	110	80-120	2	15	
Fluoride	mg/L	0.36	5	5	5.5	5.8	103	108	80-120	4	15	
Sulfate	mg/L	246	100	100	354	344	107	98	80-120	3	15	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 757720
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: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012

METHOD BLANK: 3032270 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/22/21 07:09	
Fluoride	mg/L	<0.086	0.20	0.086	11/22/21 07:09	
Sulfate	mg/L	<0.42	1.0	0.42	11/22/21 07:09	

METHOD BLANK: 3035149 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.69J	1.0	0.39	11/23/21 16:29	
Fluoride	mg/L	<0.086	0.20	0.086	11/23/21 16:29	
Sulfate	mg/L	<0.42	1.0	0.42	11/23/21 16:29	

METHOD BLANK: 3035264 Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/24/21 08:56	
Fluoride	mg/L	<0.086	0.20	0.086	11/24/21 08:56	
Sulfate	mg/L	<0.42	1.0	0.42	11/24/21 08:56	

LABORATORY CONTROL SAMPLE: 3032271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

LABORATORY CONTROL SAMPLE: 3035150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

LABORATORY CONTROL SAMPLE: 3035150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	5	5.2	103	90-110	

LABORATORY CONTROL SAMPLE: 3035265

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	2.7	109	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032272 3032273

Parameter	Units	60385860003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.8	25	25	45.8	46.3	96	98	80-120	1	15	
Fluoride	mg/L	0.55	2.5	2.5	3.0	3.0	97	99	80-120	1	15	
Sulfate	mg/L	835	500	500	1440	1410	121	116	80-120	2	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032274 3032275

Parameter	Units	60385860004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.3	5	5	8.6	7.5	107	86	80-120	13	15	
Fluoride	mg/L	<0.086	2.5	2.5	2.9	2.9	116	115	80-120	1	15	
Sulfate	mg/L	809	500	500	1330	1350	104	108	80-120	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 757722
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: 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

METHOD BLANK: 3032281 Matrix: Water
Associated Lab Samples: 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/22/21 07:13	
Fluoride	mg/L	<0.086	0.20	0.086	11/22/21 07:13	
Sulfate	mg/L	<0.42	1.0	0.42	11/22/21 07:13	

METHOD BLANK: 3035156 Matrix: Water
Associated Lab Samples: 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.65J	1.0	0.39	11/23/21 22:43	
Fluoride	mg/L	<0.086	0.20	0.086	11/23/21 22:43	
Sulfate	mg/L	<0.42	1.0	0.42	11/23/21 22:43	

METHOD BLANK: 3036336 Matrix: Water
Associated Lab Samples: 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/25/21 10:33	
Fluoride	mg/L	<0.086	0.20	0.086	11/25/21 10:33	
Sulfate	mg/L	<0.42	1.0	0.42	11/25/21 10:33	

METHOD BLANK: 3036538 Matrix: Water
Associated Lab Samples: 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020, 60385860021, 60385860022, 60385860023, 60385860024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.71J	1.0	0.39	11/27/21 09:35	
Fluoride	mg/L	<0.086	0.20	0.086	11/27/21 09:35	
Sulfate	mg/L	<0.42	1.0	0.42	11/27/21 09:35	

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QUALITY CONTROL DATA

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

LABORATORY CONTROL SAMPLE: 3032282

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	97	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3035157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 3036337

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	2.7	108	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

LABORATORY CONTROL SAMPLE: 3036539

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	5	4.7	94	90-110	

MATRIX SPIKE SAMPLE: 3032283

Parameter	Units	60385860024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	16.3	25	42.2	104	80-120	
Fluoride	mg/L	0.29	2.5	3.2	117	80-120	
Sulfate	mg/L	70.7	25	99.6	116	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032284 3032285

Parameter	Units	60385853004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.1	25	25	45.9	46.1	99	100	80-120	0	15	
Fluoride	mg/L	0.68	2.5	2.5	3.2	3.2	99	101	80-120	1	15	
Sulfate	mg/L	480	250	250	748	744	107	106	80-120	1	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-AM-1S **Lab ID: 60385860005** Collected: 11/08/21 11:15 Received: 11/10/21 05:17 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	**0.161 ± 0.605 (1.01) C:NA T:88%**	pCi/L	12/14/21 16:34	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.320 ± 0.408 (0.866) C:75% T:80%**	pCi/L	12/16/21 14:31	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-AM-1D **Lab ID: 60385860006** Collected: 11/08/21 12:20 Received: 11/10/21 05:17 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 ± 0.469 (0.977) C:NA T:81%**	pCi/L	12/14/21 16:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.312 ± 0.384 (0.813) C:79% T:80%**	pCi/L	12/16/21 14:31	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-4D **Lab ID: 60385860007** Collected: 11/08/21 11:38 Received: 11/10/21 05:17 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	**1.50 ± 0.828 (0.998) C:NA T:85%**	pCi/L	12/14/21 16:34	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.682 ± 0.409 (0.753) C:78% T:83%**	pCi/L	12/16/21 14:31	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-5D **Lab ID: 60385860008** Collected: 11/09/21 13:25 Received: 11/10/21 05:17 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 ± 0.615 (1.08) C:NA T:89%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.358 ± 0.317 (0.638) C:80% T:91%**	pCi/L	12/16/21 14:31	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-DUP-1 **Lab ID: 60385860010** Collected: 11/08/21 00:00 Received: 11/10/21 05:17 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	**0.220 ± 0.674 (1.12) C:NA T:84%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.64 ± 0.642 (1.03) C:70% T:85%**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-FB-1 **Lab ID: 60385860011** Collected: 11/08/21 12:50 Received: 11/10/21 05:17 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	**0.208 ± 0.637 (1.06) C:NA T:92%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.450 ± 0.395 (0.801) C:74% T:89%**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-FB-2 **Lab ID: 60385860012** Collected: 11/09/21 14:00 Received: 11/10/21 05:17 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	**-0.0777 ± 0.576 (1.03) C:NA T:97%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.00794 ± 0.380 (0.878) C:73% T:92%**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-MS-1 **Lab ID: 60385860013** Collected: 11/09/21 10:47 Received: 11/10/21 05:17 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	**101.01 %REC ± NA (NA) C:NA T:NA%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**73.02 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-MSD-1 **Lab ID: 60385860014** Collected: 11/09/21 10:47 Received: 11/10/21 05:17 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	**98.15 %REC 2.88 RPD ± NA (NA) C:NA T:NA%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**96.95 %REC 28.16 RPD ± NA (NA) C:NA T:NA**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-PZ-1S **Lab ID: 60385860018** Collected: 11/11/21 14:50 Received: 11/12/21 04:32 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	**-0.296 ± 0.487 (0.988) C:NA T:87%**	pCi/L	12/14/21 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.420 ± 0.466 (0.976) C:75% T:77%**	pCi/L	12/16/21 14:33	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-PZ-9D **Lab ID: 60385860019** Collected: 11/10/21 11:35 Received: 11/12/21 04:32 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	**0.287 ± 0.506 (0.807) C:NA T:93%**	pCi/L	12/14/21 17:12	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.653 ± 0.401 (0.742) C:70% T:90%**	pCi/L	12/16/21 14:33	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-3D **Lab ID: 60385860020** Collected: 11/10/21 12:32 Received: 11/12/21 04:32 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	**0.855 ± 0.539 (0.613) C:NA T:88%**	pCi/L	12/14/21 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.17 ± 0.548 (0.936) C:73% T:80%**	pCi/L	12/16/21 14:33	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-6S **Lab ID: 60385860021** Collected: 11/10/21 10:03 Received: 11/12/21 04:32 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	**0.0732 ± 0.380 (0.788) C:NA T:92%**	pCi/L	12/15/21 12:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.889 ± 0.393 (0.633) C:69% T:95%**	pCi/L	12/16/21 11:23	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-6D **Lab ID: 60385860022** Collected: 11/10/21 11:00 Received: 11/12/21 04:32 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	**0.531 ± 0.455 (0.617) C:NA T:96%**	pCi/L	12/15/21 12:25	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.71 ± 0.728 (1.29) C:72% T:86%**	pCi/L	12/16/21 11:12	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-8D **Lab ID: 60385860023** Collected: 11/10/21 13:50 Received: 11/12/21 04:32 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	**0.203 ± 0.480 (0.888) C:NA T:94%**	pCi/L	12/15/21 12:25	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.763 ± 0.484 (0.937) C:69% T:91%**	pCi/L	12/16/21 11:12	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-CA-DUP-2 **Lab ID: 60385860024** Collected: 11/10/21 00:00 Received: 11/12/21 04:32 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	**0.736 ± 0.739 (1.15) C:NA T:85%**	pCi/L	12/15/21 12:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.41 ± 0.564 (0.940) C:68% T:96%**	pCi/L	12/16/21 11:12	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-TP-2D **Lab ID: 60385860025** Collected: 11/12/21 11:31 Received: 11/13/21 03:30 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	**0.215 ± 0.421 (0.770) C:NA T:94%**	pCi/L	12/15/21 12:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.65 ± 0.860 (1.63) C:75% T:93%**	pCi/L	12/16/21 14:21	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-UG-3 **Lab ID: 60385860009** Collected: 11/09/21 10:20 Received: 11/10/21 05:17 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	**0.0299 ± 0.606 (1.06) C:NA T:79%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.189 ± 0.376 (0.828) C:77% T:81%**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-BMW-1S **Lab ID: 60385860001** Collected: 11/08/21 14:41 Received: 11/10/21 05:17 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	**-0.151 ± 0.436 (0.839) C:NA T:89%**	pCi/L	12/14/21 16:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.639 ± 0.389 (0.703) C:80% T:81%**	pCi/L	12/16/21 14:30	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-BMW-3S **Lab ID: 60385860002** Collected: 11/08/21 15:15 Received: 11/10/21 05:17 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 ± 0.459 (0.912) C:NA T:88%**	pCi/L	12/14/21 16:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.580 ± 0.407 (0.781) C:80% T:77%**	pCi/L	12/16/21 14:30	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-5S **Lab ID: 60385860003** Collected: 11/09/21 10:47 Received: 11/10/21 05:17 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	**0.1000 ± 0.291 (0.503) C:NA T:95%**	pCi/L	12/14/21 16:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.569 ± 0.355 (0.653) C:79% T:86%**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-6S **Lab ID: 60385860004** Collected: 11/09/21 12:27 Received: 11/10/21 05:17 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	**-0.318 ± 0.424 (0.884) C:NA T:92%**	pCi/L	12/14/21 16:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.531 ± 0.372 (0.714) C:78% T:92%**	pCi/L	12/16/21 14:31	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-1S **Lab ID: 60385860015** Collected: 11/11/21 10:07 Received: 11/12/21 04:32 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	**-0.0982 ± 0.436 (0.818) C:NA T:92%**	pCi/L	12/14/21 16:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.891 ± 0.461 (0.803) C:74% T:80%**	pCi/L	12/16/21 14:32	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-2S **Lab ID: 60385860016** Collected: 11/10/21 15:46 Received: 11/12/21 04:32 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	**0.429 ± 0.460 (0.660) C:NA T:88%**	pCi/L	12/14/21 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.342 ± 0.411 (0.868) C:74% T:85%**	pCi/L	12/16/21 14:32	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Sample: S-LMW-4S **Lab ID: 60385860017** Collected: 11/10/21 15:11 Received: 11/12/21 04:32 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 ± 0.613 (1.07) C:NA T:86%**	pCi/L	12/14/21 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.650 ± 0.406 (0.753) C:72% T:84%**	pCi/L	12/16/21 14:32	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 475141
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: 60385860021, 60385860022, 60385860023, 60385860024, 60385860025

METHOD BLANK: 2295296 Matrix: Water
Associated Lab Samples: 60385860021, 60385860022, 60385860023, 60385860024, 60385860025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.452 ± 0.296 (0.550) C:75% T:90%	pCi/L	12/16/21 11:22	

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 SPCA-CA
Pace Project No.: 60385860

QC Batch: 475137
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: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012, 60385860013, 60385860014, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020

METHOD BLANK: 2295290
Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012, 60385860013, 60385860014, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.229 ± 0.298 (0.643) C:NA T:88%	pCi/L	12/14/21 16:34	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

QC Batch: 475138
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: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012, 60385860013, 60385860014, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020

METHOD BLANK: 2295291
Matrix: Water
Associated Lab Samples: 60385860001, 60385860002, 60385860003, 60385860004, 60385860005, 60385860006, 60385860007, 60385860008, 60385860009, 60385860010, 60385860011, 60385860012, 60385860013, 60385860014, 60385860015, 60385860016, 60385860017, 60385860018, 60385860019, 60385860020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.210 ± 0.300 (0.644) C:77% T:92%	pCi/L	12/16/21 14:30	

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 SPCA-CA
Pace Project No.: 60385860

QC Batch: 475140
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: 60385860021, 60385860022, 60385860023, 60385860024, 60385860025

METHOD BLANK: 2295295 Matrix: Water
Associated Lab Samples: 60385860021, 60385860022, 60385860023, 60385860024, 60385860025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.186 ± 0.283 (0.743) C:NA T:87%	pCi/L	12/15/21 12:25	

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QUALIFIERS

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

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

B	Analyte was detected in the associated method blank.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
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 SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385860001	S-BMW-1S	EPA 200.7	759536	EPA 200.7	759739
60385860001	S-BMW-1S	EPA 200.7	770155	EPA 200.7	770398
60385860002	S-BMW-3S	EPA 200.7	759536	EPA 200.7	759739
60385860002	S-BMW-3S	EPA 200.7	770155	EPA 200.7	770398
60385860003	S-LMW-5S	EPA 200.7	759881	EPA 200.7	760025
60385860003	S-LMW-5S	EPA 200.7	770155	EPA 200.7	770398
60385860004	S-LMW-6S	EPA 200.7	759536	EPA 200.7	759739
60385860004	S-LMW-6S	EPA 200.7	770152	EPA 200.7	770399
60385860005	S-AM-1S	EPA 200.7	759536	EPA 200.7	759739
60385860006	S-AM-1D	EPA 200.7	759536	EPA 200.7	759739
60385860007	S-TP-4D	EPA 200.7	759536	EPA 200.7	759739
60385860007	S-TP-4D	EPA 200.7	770152	EPA 200.7	770399
60385860008	S-TP-5D	EPA 200.7	759536	EPA 200.7	759739
60385860008	S-TP-5D	EPA 200.7	770152	EPA 200.7	770399
60385860009	S-UG-3	EPA 200.7	759536	EPA 200.7	759739
60385860009	S-UG-3	EPA 200.7	770152	EPA 200.7	770399
60385860010	S-CA-DUP-1	EPA 200.7	759536	EPA 200.7	759739
60385860011	S-CA-FB-1	EPA 200.7	759536	EPA 200.7	759739
60385860012	S-CA-FB-2	EPA 200.7	759536	EPA 200.7	759739
60385860015	S-LMW-1S	EPA 200.7	759536	EPA 200.7	759739
60385860016	S-LMW-2S	EPA 200.7	759536	EPA 200.7	759739
60385860016	S-LMW-2S	EPA 200.7	770152	EPA 200.7	770399
60385860017	S-LMW-4S	EPA 200.7	759536	EPA 200.7	759739
60385860017	S-LMW-4S	EPA 200.7	770152	EPA 200.7	770399
60385860018	S-PZ-1S	EPA 200.7	759536	EPA 200.7	759739
60385860018	S-PZ-1S	EPA 200.7	770152	EPA 200.7	770399
60385860019	S-PZ-9D	EPA 200.7	759536	EPA 200.7	759739
60385860019	S-PZ-9D	EPA 200.7	770152	EPA 200.7	770399
60385860020	S-TP-3D	EPA 200.7	759536	EPA 200.7	759739
60385860020	S-TP-3D	EPA 200.7	770152	EPA 200.7	770399
60385860021	S-TP-6S	EPA 200.7	759881	EPA 200.7	760025
60385860021	S-TP-6S	EPA 200.7	770152	EPA 200.7	770399
60385860022	S-TP-6D	EPA 200.7	759881	EPA 200.7	760025
60385860022	S-TP-6D	EPA 200.7	770152	EPA 200.7	770399
60385860023	S-TP-8D	EPA 200.7	759881	EPA 200.7	760025

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385860023	S-TP-8D	EPA 200.7	770152	EPA 200.7	770399
60385860024	S-CA-DUP-2	EPA 200.7	759881	EPA 200.7	760025
60385860025	S-TP-2D	EPA 200.7	759881	EPA 200.7	760025
60385860025	S-TP-2D	EPA 200.7	770152	EPA 200.7	770399
60385860001	S-BMW-1S	EPA 200.8	758170	EPA 200.8	758548
60385860002	S-BMW-3S	EPA 200.8	758170	EPA 200.8	758548
60385860003	S-LMW-5S	EPA 200.8	759537	EPA 200.8	759736
60385860004	S-LMW-6S	EPA 200.8	759891	EPA 200.8	760108
60385860005	S-AM-1S	EPA 200.8	758170	EPA 200.8	758548
60385860006	S-AM-1D	EPA 200.8	758170	EPA 200.8	758548
60385860007	S-TP-4D	EPA 200.8	758170	EPA 200.8	758548
60385860008	S-TP-5D	EPA 200.8	758170	EPA 200.8	758548
60385860009	S-UG-3	EPA 200.8	758170	EPA 200.8	758548
60385860010	S-CA-DUP-1	EPA 200.8	758170	EPA 200.8	758548
60385860011	S-CA-FB-1	EPA 200.8	759537	EPA 200.8	759736
60385860012	S-CA-FB-2	EPA 200.8	759537	EPA 200.8	759736
60385860015	S-LMW-1S	EPA 200.8	759537	EPA 200.8	759736
60385860016	S-LMW-2S	EPA 200.8	759537	EPA 200.8	759736
60385860017	S-LMW-4S	EPA 200.8	759537	EPA 200.8	759736
60385860018	S-PZ-1S	EPA 200.8	759537	EPA 200.8	759736
60385860019	S-PZ-9D	EPA 200.8	759537	EPA 200.8	759736
60385860020	S-TP-3D	EPA 200.8	759537	EPA 200.8	759736
60385860021	S-TP-6S	EPA 200.8	759537	EPA 200.8	759736
60385860022	S-TP-6D	EPA 200.8	759537	EPA 200.8	759736
60385860023	S-TP-8D	EPA 200.8	759537	EPA 200.8	759736
60385860024	S-CA-DUP-2	EPA 200.8	759537	EPA 200.8	759736
60385860025	S-TP-2D	EPA 200.8	759891	EPA 200.8	760108
60385860001	S-BMW-1S	EPA 903.1	475137		
60385860002	S-BMW-3S	EPA 903.1	475137		
60385860003	S-LMW-5S	EPA 903.1	475137		
60385860004	S-LMW-6S	EPA 903.1	475137		
60385860005	S-AM-1S	EPA 903.1	475137		
60385860006	S-AM-1D	EPA 903.1	475137		
60385860007	S-TP-4D	EPA 903.1	475137		
60385860008	S-TP-5D	EPA 903.1	475137		
60385860009	S-UG-3	EPA 903.1	475137		
60385860010	S-CA-DUP-1	EPA 903.1	475137		
60385860011	S-CA-FB-1	EPA 903.1	475137		
60385860012	S-CA-FB-2	EPA 903.1	475137		
60385860013	S-MS-1	EPA 903.1	475137		
60385860014	S-MSD-1	EPA 903.1	475137		
60385860015	S-LMW-1S	EPA 903.1	475137		
60385860016	S-LMW-2S	EPA 903.1	475137		
60385860017	S-LMW-4S	EPA 903.1	475137		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385860018	S-PZ-1S	EPA 903.1	475137		
60385860019	S-PZ-9D	EPA 903.1	475137		
60385860020	S-TP-3D	EPA 903.1	475137		
60385860021	S-TP-6S	EPA 903.1	475140		
60385860022	S-TP-6D	EPA 903.1	475140		
60385860023	S-TP-8D	EPA 903.1	475140		
60385860024	S-CA-DUP-2	EPA 903.1	475140		
60385860025	S-TP-2D	EPA 903.1	475140		
60385860001	S-BMW-1S	EPA 904.0	475138		
60385860002	S-BMW-3S	EPA 904.0	475138		
60385860003	S-LMW-5S	EPA 904.0	475138		
60385860004	S-LMW-6S	EPA 904.0	475138		
60385860005	S-AM-1S	EPA 904.0	475138		
60385860006	S-AM-1D	EPA 904.0	475138		
60385860007	S-TP-4D	EPA 904.0	475138		
60385860008	S-TP-5D	EPA 904.0	475138		
60385860009	S-UG-3	EPA 904.0	475138		
60385860010	S-CA-DUP-1	EPA 904.0	475138		
60385860011	S-CA-FB-1	EPA 904.0	475138		
60385860012	S-CA-FB-2	EPA 904.0	475138		
60385860013	S-MS-1	EPA 904.0	475138		
60385860014	S-MSD-1	EPA 904.0	475138		
60385860015	S-LMW-1S	EPA 904.0	475138		
60385860016	S-LMW-2S	EPA 904.0	475138		
60385860017	S-LMW-4S	EPA 904.0	475138		
60385860018	S-PZ-1S	EPA 904.0	475138		
60385860019	S-PZ-9D	EPA 904.0	475138		
60385860020	S-TP-3D	EPA 904.0	475138		
60385860021	S-TP-6S	EPA 904.0	475141		
60385860022	S-TP-6D	EPA 904.0	475141		
60385860023	S-TP-8D	EPA 904.0	475141		
60385860024	S-CA-DUP-2	EPA 904.0	475141		
60385860025	S-TP-2D	EPA 904.0	475141		
60385860001	S-BMW-1S	SM 2320B	650630		
60385860002	S-BMW-3S	SM 2320B	650630		
60385860003	S-LMW-5S	SM 2320B	650630		
60385860004	S-LMW-6S	SM 2320B	650630		
60385860005	S-AM-1S	SM 2320B	650630		
60385860006	S-AM-1D	SM 2320B	650630		
60385860007	S-TP-4D	SM 2320B	650630		
60385860008	S-TP-5D	SM 2320B	650630		
60385860009	S-UG-3	SM 2320B	650630		
60385860010	S-CA-DUP-1	SM 2320B	650630		
60385860011	S-CA-FB-1	SM 2320B	650630		
60385860012	S-CA-FB-2	SM 2320B	650630		
60385860015	S-LMW-1S	SM 2320B	651462		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385860016	S-LMW-2S	SM 2320B	651335		
60385860017	S-LMW-4S	SM 2320B	651335		
60385860018	S-PZ-1S	SM 2320B	651462		
60385860019	S-PZ-9D	SM 2320B	651335		
60385860020	S-TP-3D	SM 2320B	651335		
60385860021	S-TP-6S	SM 2320B	651335		
60385860022	S-TP-6D	SM 2320B	651335		
60385860023	S-TP-8D	SM 2320B	651335		
60385860024	S-CA-DUP-2	SM 2320B	651335		
60385860025	S-TP-2D	SM 2320B	651462		
60385860001	S-BMW-1S	SM 2540C	756220		
60385860002	S-BMW-3S	SM 2540C	756220		
60385860003	S-LMW-5S	SM 2540C	756566		
60385860004	S-LMW-6S	SM 2540C	756566		
60385860005	S-AM-1S	SM 2540C	756220		
60385860006	S-AM-1D	SM 2540C	756220		
60385860007	S-TP-4D	SM 2540C	756220		
60385860008	S-TP-5D	SM 2540C	756566		
60385860009	S-UG-3	SM 2540C	756566		
60385860010	S-CA-DUP-1	SM 2540C	756223		
60385860011	S-CA-FB-1	SM 2540C	756223		
60385860012	S-CA-FB-2	SM 2540C	756566		
60385860015	S-LMW-1S	SM 2540C	756845		
60385860016	S-LMW-2S	SM 2540C	756844		
60385860017	S-LMW-4S	SM 2540C	756844		
60385860018	S-PZ-1S	SM 2540C	757164		
60385860019	S-PZ-9D	SM 2540C	756844		
60385860020	S-TP-3D	SM 2540C	756844		
60385860021	S-TP-6S	SM 2540C	756844		
60385860022	S-TP-6D	SM 2540C	756844		
60385860023	S-TP-8D	SM 2540C	756844		
60385860024	S-CA-DUP-2	SM 2540C	756844		
60385860025	S-TP-2D	SM 2540C	757386		
60385860001	S-BMW-1S	EPA 300.0	757720		
60385860002	S-BMW-3S	EPA 300.0	757720		
60385860003	S-LMW-5S	EPA 300.0	757720		
60385860004	S-LMW-6S	EPA 300.0	757720		
60385860005	S-AM-1S	EPA 300.0	757720		
60385860006	S-AM-1D	EPA 300.0	757720		
60385860007	S-TP-4D	EPA 300.0	757720		
60385860008	S-TP-5D	EPA 300.0	757720		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SPCA-CA
Pace Project No.: 60385860

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385860009	**S-UG-3**	EPA 300.0	757720		
60385860010	**S-CA-DUP-1**	EPA 300.0	757720		
60385860011	**S-CA-FB-1**	EPA 300.0	757720		
60385860012	**S-CA-FB-2**	EPA 300.0	757720		
60385860015	**S-LMW-1S**	EPA 300.0	757722		
60385860016	**S-LMW-2S**	EPA 300.0	757722		
60385860017	**S-LMW-4S**	EPA 300.0	757722		
60385860018	**S-PZ-1S**	EPA 300.0	757722		
60385860019	**S-PZ-9D**	EPA 300.0	757722		
60385860020	**S-TP-3D**	EPA 300.0	757722		
60385860021	**S-TP-6S**	EPA 300.0	757722		
60385860022	**S-TP-6D**	EPA 300.0	757722		
60385860023	**S-TP-8D**	EPA 300.0	757722		
60385860024	**S-CA-DUP-2**	EPA 300.0	757722		
60385860025	**S-TP-2D**	EPA 300.0	757095		

Pace Analytical® www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60385860

60385860

Client Name: Golder Assoc.

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 ☑ ZPLC

Thermometer Used: IR4a **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2.1, 3.3, 2.2 (4.3, 1.8) **Corr. Factor** -0.2 **Corrected** 1.9, 3.1, 2.0 (4.3, 1.6)

Date and initials of person examining contents: ☐ 11/12

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	TDS exp 11/15
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	All coolers out of temp
Correct containers used:	☑Yes ☐No ☐N/A	had only Radium
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# 603173	☑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: _____

REVIEWED
By jchurch at 12:33 pm, 11/12/21

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical www.pacelabs.com

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

Page: 1 of 2

Section A – Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone:	636-724-9191
Fax:	636-724-9323
Requested Due Date/TAT:	Standard

Section B – Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA-CA
Project Number:	153-140603.0003A (COC #8)

Section C – Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Chloride/Fluoride/Sulfate (N)	App III and Cat/An Metals* (N)	Alkalinity (N)	TDS (N)	Appendix IV Metals ** (N)		Radium 226 (N)	Radium 228 (N)	Residual Chlorine (Y/N)
1	S-BMW-1S	WT	G			11-8-21	1441		4	1		3						/	/	/	/	/		/	/	
2	S-BMW-3S	WT	G			↓	1515		↓	↓		↓						/	/	/	/	/		/	/	
3	S-LMW-1S	WT	G																							
4	S-LMW-2S	WT	G																							
5	S-LMW-4S	WT	G																							
6	S-LMW-5S	WT	G			11-9-21	1047		4	1		3						/	/	/	/	/		/	/	
7	S-LMW-6S	WT	G			11-9-21	1227		4	1		3						/	/	/	/	/		/	/	
8	S-AM-1S	WT	G			11-8-21	1115		4	1		3						/	/	/	/	/		/	/	
9	S-AM-1D	WT	G			↓	1220		↓	↓		↓						/	/	/	/	/		/	/	
10	S-PZ-1S	WT	G																							
11	S-PZ-9D	WT	G																							
12	S-TP-2D	WT	G																							

Pace Project No./ Lab I.D.: 60385860

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields / Golder	11/9/21	1530	Angel [illegible]	11/9	1535	PI			
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr, Se	Angle MA	11/9	1535	[illegible]	11-10-21	0517	1.9 2.6	Y	Y	Y
							143	N	Y	Y
							1.6			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sierra Shields

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 11/9/21

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA-CA
Project Number:	153-140603.0003A (COC #8)

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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 #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228						Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N		N	N						
1	S-TP-3D	WT	G																											
2	S-TP-4D	WT	G			11-8-21	1138		4	1		3							/	/	/	/	/		/	/					
3	S-TP-5D	WT	G			11-9-21	1325		4	1		3							/	/	/	/	/		/	/					
4	S-TP-6S	WT	G																											
5	S-TP-6D	WT	G																											
6	~~S-TP-8D~~ S-CA-MSD-1	WT	G			11-9-21	1047		4	1		3							/	/	/	/	/		/	/					
7	S-UG-3	WT	G			11-9-21	1020		4	1		3							/	/	/	/	/		/	/					
8	S-CA-DUP-1	WT	G			11-8-21	—		4	1		3							/	/	/	/	/		/	/					
9	~~S-CA-DUP-2~~	~~WT~~	~~G~~			~~11-8-21~~	~~1250~~																							
10	S-CA-FB-1	WT	G			11-8-21	1250																							
11	S-CA-FB-2	WT	G			11-9-21	1400																							
12	S-CA-MS-1	WT	G			11-9-21	1047		1	1		1							1	1	1	1	1		1	1					

6038860

Pace Project No./ Lab I.D.

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields/Golder	11/9/21	1530	Angela McN	11/9	1535	
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr, Se	Angela McN	11/9	1535		11.10.21	0517	1.9 2.6 4.3 1.6

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sierra Shields

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/9/21

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

Pace Analytical® www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60385860

60385860

Client Name: Golder Assoc.

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 ☑ Blue

Thermometer Used: T294 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): As-read 1.4,20 (1.6, 13.5, 12.3) Corr. Factor -0.2 Corrected 1.4, 1.8 12.1 (1.4, 13.3, 0.7)

Date and initials of person examining contents: ELH 11/3

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	TDS 11/17
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	all coolers out of temp had only Rad.cm
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# 603173	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added. S-CA-Dup 2 BP3N initial 20 Final 40 added 1mL HNO3 11/13/21 10:00 CA 60BD19
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: _____

REVIEWED
By jchurch at 1:36 pm, 11/13/21

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
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Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA-CA
Project Number:	153-140603.0003A (COC #8)

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N ↓	N	N	N	N	N		N	N						
1	S-BMW-1S	WT	G																											
2	S-BMW-3S	WT	G																											
3	S-LMW-1S	WT	G			11-11-21	1007		4	1		3							/	/	/	/	/		/	/					
4	S-LMW-2S	WT	G			11-10-21	1546		1	1		1							1	1	1	1	1		1	1					
5	S-LMW-4S	WT	G			11-10-21	1511		1	1		1							1	1	1	1	1		1	1					
6	S-LMW-5S	WT	G																											
7	S-LMW-6S	WT	G																											
8	S-AM-1S	WT	G																											
9	S-AM-1D	WT	G																											
10	S-PZ-1S	WT	G			11-11-21	1450		4	1		3							/	/	/	/	/		/	/					
11	S-PZ-9D	WT	G			11-10-21	1135		4	1		3							/	/	/	/	/		/	/					
12	S-TP-2D	WT	G																											

60385860

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields/Golder	11/11/21	1640	Elyman Price	11/12	0432	1.4 13.3	N	Y	Y
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr, Se							0.7 1.4	Y		
							1.8 12.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sierra Shields

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/11/21

*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.

Pace Analytical
www.pacelabs.com

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Page: 2 of 2

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Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA-CA
Project Number:	153-140603.0003A (COC #8)

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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 #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N	N		N	N						60385860
1	S-TP-3D	WT	G			11-10-21	1232		4	1		3							/	/	/	/	/		/	/						
2	S-TP-4D	WT	G																												
3	S-TP-5D	WT	G																												
4	S-TP-6S	WT	G			11-10-21	1003		4	1		3							/	/	/	/	/		/	/						
5	S-TP-6D	WT	G			11-10-21	1100		4	1		3							/	/	/	/	/		/	/						
6	S-TP-8D	WT	G			11-10-21	1350		4	1		3							/	/	/	/	/		/	/						
7	S-UG-3	WT	G																												
8	S-CA-DUP-1	WT	G																												
9	S-CA-DUP-2	WT	G			11-10-21	—		4	1		3							/	/	/	/	/		/	/						
10	S-CA-FB-1	WT	G																												
11	S-CA-FB-2	WT	G																												
12	S-CA-MS-1	WT	G																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields/Golder	11/11/21	1640	Ryan/Pace	~~11/12~~ 11/12	0432	
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr, Se							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sierra Shields

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 11/11/21

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

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Sample Condition Upon Receipt

WO# : 60385860

60385860

Client Name: Golder Assoc.

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 ☑ Zplc

Thermometer Used: T2C4 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.3 **Corr. Factor** -0.2 **Corrected** 2.1

Date and initials of person examining contents: EL 11/15

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	TDS 11/18
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# 603173	☑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: _____

REVIEWED
By jchurch at 2:53 pm, 11/15/21

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA-CA
Project Number:	153-140603.0003A (COC #8)

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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 #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N	N		N	N					60385860
1	S-BMW-1S	WT	G																											
2	S-BMW-3S	WT	G																											
3	S-LMW-1S	WT	G																											
4	S-LMW-2S	WT	G																											
5	S-LMW-4S	WT	G																											
6	S-LMW-5S	WT	G																											
7	S-LMW-6S	WT	G																											
8	S-AM-1S	WT	G																											
9	S-AM-1D	WT	G																											
10	S-PZ-1S	WT	G																											
11	S-PZ-9D	WT	G																											
12	S-TP-2D	WT	G			11/12/21	1131		4	1		3							/	/	/	/	/		/	/					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields/Golder	11/12/21	1320	Angela McMa	11/12	1330				
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr, Se	Angela McMa	11/12	1330	Lynch Rice	11/13	0330	2.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Sierra Shields				
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 11/12/21			

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical

Page: of

Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Ryan Feldmann/Eric Schneider
Purchase Order No.:	
Project Name:	Ameren SCPA-CA
Project Number:	153-140603.0003A (COC #8)

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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

ITEM #	Section D SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: Chloride/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **		Radium 226	Radium 228					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N		N	N						
1	S-CA-MSD-1	WT	G																											60385860
2		WT	G																											
3		WT	G																											
4		WT	G																											
5		WT	G																											
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: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Sierra Shields/Golder	11/12/21	1320	Angela Mar	11/12	1330				
**EPA 200.7: Ba, Be, Co, Li, Mo **EPA 200.8: As, Cd, Cr, Se	Angela Mar	11/12	1330	Aymen/Pace	11/13	0730	2.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sierra Shields

SIGNATURE of SAMPLER: Sierra Shields

DATE Signed (MM/DD/YY): 11/12/21

MEMORANDUM

DATE January 12, 2023 **Project No.** 153140603

4TO Project File
WSP USA Inc.

CC Amanda Derhake, Jeff Ingram

FROM Rahel Pommerenke **EMAIL rahel.pommerenke@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA – CORRECTIVE ACTION MONITORING - DATA PACKAGE 60385860REV1

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 MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).
- When duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When matrix spike/matrix spike duplicate (MS/MSD) criterion was not met, the associated sample result was qualified as an estimate (J, J+ for estimates biased high, and J- for estimates biased low).

WSP USA Inc.
701 Emerson Road, Suite 250,
Creve Coeur, Missouri, 63141
T: +1 314 984-8800 F: +1 314 984-8770

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: WSP USA Inc.
Project Manager: J. Ingram
Project Name: Ameren- Sioux - SCPA - CA
Project Number: 153140603
Reviewer: R. Pommerenke
Validation Date: 1/12/2023

Laboratory: Pace Analytical Services - Kansas City
SDG #: 60385860rev1
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); SM2320B (Alkalinity); SM2540C (TDS); EPA 300.0 (Anions); EPA 903.1/904.0 (Radium 226/228)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names S-BMW-1S, S-BMW-3S, S-LMW-5S, S-LMW-6S, S-AM-1S, S-AM-1D, S-TP-4D, S-TP-5D, S-UG-3, S-CA-DUP-1, S-CA-FB-1, S-CA-FB-2, S-MS-1, S-MSD-1, S-LMW-1S, S-LMW-2S, S-LMW-4S, S-PZ-1S, S-PZ-9D, S-TP-3D, S-TP-6S, S-TP-6D, S-TP-8D, S-CA-DUP-2, S-TP-2D

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			11/8/2021 - 11/12/2021
b) Sampling team indicated?	x			SSS/ETF/BTT
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, Sp.Cond, ORP, Temp, DO, Turb
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: _____

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		See Notes

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			See Notes

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			
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			
d) Were lab dup. precision criteria met (note RPD)?	x			Max RPD: 6% [<10%]

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:

Sample Condition Upon Receipt forms indicate that the coolers received outside of temperature range only contained radium samples.

Sample Condition Upon Receipt forms indicate that the metals bottle for S-CA-DUP-2 was received with a pH >2, which was corrected by the lab upon arrival. No qualification necessary.

Calcium, lithium, magnesium, sulfate, and chloride analyzed at a dilution in multiple samples, no qualification necessary.

Lithium was reanalyzed at a lower dilution to meet action limit, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

3038952: Molybdenum (2.4J). Associated with samples -001, -002, -004 through -012, -015 through -020.

Results < RL were reported at the RL and qualified as ND. ND results and results >RL and 10x blank were not qualified.

3032286: Chloride (0.79J). Associated with sample -025. Sample result >RL and 10x blank, no qualification necessary.

3035149: Chloride (0.69J). Associated with samples -001 through -012. Results >RL but <10x blank qualified as estimates.

Results < RL were reported at the RL and qualified as ND. Results >RL and 10x blank not qualified.

3035156/3036538: Chloride (0.65J/0.71J). Associated with samples -015 through -024. Results >RL but <10x blank qualified as estimates. Results >RL and 10x blank not qualified.

S-CA-FB-1 @ S-AM-1S: Chromium (0.32J), selenium (0.19J). Results < RL were reported at the RL and qualified as ND. ND results were not qualified.

S-CA-FB-2 @ S-TP-5D: Chromium (0.31J), chloride (0.58J). Results < RL were reported at the RL and qualified as ND. Results >RL and 10x blank were not qualified.

Duplicates:

S-CA-DUP-1 @ S-TP-4D: Cobalt, radium-226 detected in sample, ND in duplicate. Radium-228 detected in duplicate, ND in sample.

S-CA-DUP-2 @ S-TP-6D: Arsenic, selenium ND in sample, detected in duplicate.

Laboratory analyzed sample duplicates for Alkalinity and TDS.

MS/MSD:

3038956/3038957: MS% recovery high for calcium, sodium. Only 1 QC indicator out, no qualification necessary.

MSMSD % recovery high for boron. Associated with sample -004.

3040510/3040511: MSD % recovery high for boron, sodium. Only 1 QC indicator out, no qualification necessary.

MS/MSD % recovery high for calcium, magnesium. Associated with samples -003.

3040512/3040513: MSD % recovery high for boron. MS/MSD % recovery high for calcium. MS/MSD performed on unrelated sample, no qualification necessary.

3034265: MS % recovery low for arsenic. MS performed on unrelated sample, no qualification necessary.

3032272/3032273: MS % recovery high for sulfate. Associated with sample -003. Only 1 QC indicator out, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-BMW-1S	Molybdenum	20.0	U	Detected in MB, RL > result > MDL
S-BMW-3S	"	20.0	U	"
S-UG-3	"	20.0	U	"
S-LMW-4S	"	20.0	U	"
S-PZ-9D	"	20.0	U	"
S-TP-3D	"	20.0	U	"
S-CA-FB-2	Chloride	1.0	U	"
S-LMW-6S	"	3.3	J	Detected in MB, 10x blank > result > RL
S-LMW-4S	"	2.5	J	"
S-AM-1S	Chromium	1.0	U	Detected in MB, RL > result > MDL
S-TP-5D	"	1.0	U	"
S-TP-4D	Cobalt	1.4	J	Detected in sample, ND in duplicate
"	Radium-226	1.50 ± 0.828	J	"
"	Radium-228	0.682 ± 0.409	UJ	ND in sample, detected in duplicate
S-CA-DUP-1	Cobalt	0.95	UJ	Detected in sample, ND in duplicate
"	Radium-226	0.220 ± 0.674	UJ	"
"	Radium-228	1.64 ± 0.642	J	ND in sample, detected in duplicate
S-TP-6D	Arsenic	0.11	UJ	ND in sample, detected in duplicate
"	Selenium	0.18	UJ	"
S-CA-DUP-2	Arsenic	0.14	J	"
"	Selenium	0.21	J	"
S-LMW-6S	Boron	22500	J+	MS/MSD % recovery high
S-LMW-5S	Calcium	253000	J+	"
"	Magnesium	47100	J+	"

Signature: _____  _ Date: 1/12/2023

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

February 18, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN VS SCPA
Pace Project No.: 60392266

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on February 09, 2022. 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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

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

CERTIFICATIONS

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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

SAMPLE SUMMARY

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60392266001	**S-UMW-3D**	Water	02/08/22 10:05	02/09/22 04:04
60392266002	**S-UMW-2D**	Water	02/08/22 11:05	02/09/22 04:04
60392266003	**S-SCPA-DUP-1**	Water	02/08/22 08:00	02/09/22 04:04
60392266004	**S-SCPA-FB-1**	Water	02/08/22 10:15	02/09/22 04:04

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

SAMPLE ANALYTE COUNT

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60392266001	**S-UMW-3D**	EPA 300.0	SK	1	PASI-K
60392266002	**S-UMW-2D**	EPA 300.0	SK	1	PASI-K
60392266003	**S-SCPA-DUP-1**	EPA 300.0	SK	1	PASI-K
60392266004	**S-SCPA-FB-1**	EPA 300.0	SK	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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

ANALYTICAL RESULTS

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Sample: S-UMW-3D **Lab ID: 60392266001** Collected: 02/08/22 10:05 Received: 02/09/22 04:04 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	**0.75**	mg/L	0.20	0.12	1		02/15/22 12:15	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Sample: S-UMW-2D **Lab ID: 60392266002** Collected: 02/08/22 11:05 Received: 02/09/22 04:04 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	**0.47**	mg/L	0.20	0.12	1		02/15/22 12:28	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Sample: S-SCPA-DUP-1 **Lab ID: 60392266003** Collected: 02/08/22 08:00 Received: 02/09/22 04:04 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	**0.76**	mg/L	0.20	0.12	1		02/15/22 13:22	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Sample: S-SCPA-FB-1 **Lab ID: 60392266004** Collected: 02/08/22 10:15 Received: 02/09/22 04:04 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		02/15/22 13:35	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: AMEREN VS SCPA
Pace Project No.: 60392266

QC Batch: 771173 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60392266001, 60392266002, 60392266003, 60392266004

METHOD BLANK: 3079295 — Matrix: Water
Associated Lab Samples: 60392266001, 60392266002, 60392266003, 60392266004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.12	0.20	0.12	02/15/22 08:48	

METHOD BLANK: 3081055 — Matrix: Water
Associated Lab Samples: 60392266001, 60392266002, 60392266003, 60392266004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.12	0.20	0.12	02/16/22 13:17	

METHOD BLANK: 3081506 — Matrix: Water
Associated Lab Samples: 60392266001, 60392266002, 60392266003, 60392266004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.12	0.20	0.12	02/17/22 18:53	

LABORATORY CONTROL SAMPLE: 3079296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

LABORATORY CONTROL SAMPLE: 3081056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	108	90-110	

LABORATORY CONTROL SAMPLE: 3081507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	108	90-110	

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 DATA

Project: AMEREN VS SCPA
Pace Project No.: 60392266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3079297 3079298

Parameter	Units	60392266002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.47	2.5	2.5	2.7	2.8	91	95	80-120	3	15	

SAMPLE DUPLICATE: 3079299

Parameter	Units	60392266002 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.47	0.47	1	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

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: AMEREN VS SCPA
Pace Project No.: 60392266

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.

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN VS SCPA
Pace Project No.: 60392266

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60392266001	**S-UMW-3D**	EPA 300.0	771173		
60392266002	**S-UMW-2D**	EPA 300.0	771173		
60392266003	**S-SCPA-DUP-1**	EPA 300.0	771173		
60392266004	**S-SCPA-FB-1**	EPA 300.0	771173		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co	WO# : 60392266
	Revision: 2	Effective Date: 01/12/2022

60392266

Client Name: Golder Associates

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: T 299 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 1.5 **Corr. Factor** -0.2 **Corrected** 1.3

Date and initials of person examining contents: PV 2/9/22

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	PV 2/9
Correct containers used:	☑Yes ☐No ☐N/A	Time - S-UMW-20 = ~~11:00~~ 1105
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: _____

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.

Page: 1 of 1

Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schnieder, Ryan Feldman, Brendan Talbert
Purchase Order No.:	
Project Name:	Ameren - Verification Sampling
Project Number:	153140603

Section C Invoice Information:

Attention:	
Company Name:	Golder Associates Inc
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285, 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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Preservatives: NaOH	Preservatives: $Na_2S_2O_3$	Preservatives: Methanol	Preservatives: Other	Analysis Test Y/N	Chloride	Fluoride	Sulfate	TDS	Calcium	Boron	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N		60392266
1	S-UMW-3D	WT	G			2/8/22	1005		1	X										X						BP2U
2	S-UMW-2D	WT	G																							4BP3U
3	S-SCPA-DUP-1	WT	G				—																			
4	S-SCPA-FB-1	WT	G				1015																			
5	S-SCPA-MS-1	WT	G																							MS/MSD taken @ UMW-2D
6	S-SCPA-MSD-1	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			
		2/8/22	1450		2/8	1500				
		2/8	1500		2/8 2/9	0404	1.3	X	X	X

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Eric Schnieder

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 02/08/22

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

*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.

MEMORANDUM

DATE March 1, 2022 **Project No.** 153140604

TO Project File
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth **EMAIL AMuehlfarth@golder.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA – VERIFICATON SAMPLING - DATA PACKAGE 60392266

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

- None.

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates USA Inc / WSP
Project Manager: J. Ingram
Project Name: Ameren- Sioux - SCPA
Project Number: 153140604
Reviewer: A. Muehlfarth
Validation Date: 3/1/2022

Laboratory: Pace Analytical Services - Kansas City
SDG #: 60392266
Analytical Method (type and no.): EPA 300.0 (Anions)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names S-UMW-3D, S-UMW-2D, S-SCPA-DUP-1, S-SCPA-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			2/8/2022
b) Sampling team indicated?	x			EMS
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, Sp.Cond, ORP, Temp, DO, Turb
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: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?		x		See Notes
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)?	☐	☒	☐	S-SCPA-FB-1 @ S-UMW-3D
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)?	☒	☐	☐	S-SCPA-DUP-1 @ S-UMW-3D
b) Were field dup. precision criteria met (note RPD)?	☒	☐	☐	Max RPD: 1.3% [<20%]
c) Were lab duplicates analyzed (note original and duplicate samples)?	☒	☐	☐	
d) Were lab dup. precision criteria met (note RPD)?	☒	☐	☐	Max RPD: 1% [<15%]

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?	☒	☐	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☒	
b) Was MSD accuracy criteria met?	☒	☐	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☒	
c) Were MS/MSD precision criteria met?	☒	☐	☐	

Comments/Notes:

No time was noted on the COC for sample S-UMW-2D. Time was added by lab (1105).

MS/MSD set collected in field at S-UMW-2D.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Ann Muhlfeath _____ Date: 3/1/2022

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

March 01, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN VS SCPB
Pace Project No.: 60392854

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on February 16, 2022. 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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: AMEREN VS SCPB
Pace Project No.: 60392854

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: AMEREN VS SCPB
Pace Project No.: 60392854

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60392854001	**S-LMW-6S**	Water	02/15/22 11:00	02/16/22 04:10

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

SAMPLE ANALYTE COUNT

Project: AMEREN VS SCPB
Pace Project No.: 60392854

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60392854001	**S-LMW-6S**	EPA 200.7	JLH	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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

ANALYTICAL RESULTS

Project: AMEREN VS SCPB
Pace Project No.: 60392854

Sample: S-LMW-6S **Lab ID: 60392854001** Collected: 02/15/22 11:00 Received: 02/16/22 04:10 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								
Lithium	**<38.4**	ug/L	50.0	38.4	5	03/01/22 09:18	03/01/22 16:22	7439-93-2	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: AMEREN VS SCPB
Pace Project No.: 60392854

QC Batch: 773220
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: 60392854001

METHOD BLANK: 3086442 Matrix: Water
Associated Lab Samples: 60392854001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	<7.7	10.0	7.7	03/01/22 14:21	

LABORATORY CONTROL SAMPLE: 3086443

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	1000	873	87	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3086444 3086445

Parameter	Units	60392705006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	<23.0	1000	1000	935	950	91	93	70-130	2	20	

MATRIX SPIKE SAMPLE: 3086446

Parameter	Units	60392705001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	25.5J	1000	996	97	70-130	

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

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

QUALIFIERS

Project: AMEREN VS SCPB
Pace Project No.: 60392854

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.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN VS SCPB
Pace Project No.: 60392854

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60392854001	**S-LMW-6S**	EPA 200.7	773220	EPA 200.7	773337

WO# : 60392854

60392854

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

Client Name: Golder

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: T-299 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 1.5 **Corr. Factor** -0.2 **Corrected** 1.3

Date and initials of person examining contents: AN 2/16/22

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#:** 55192	☑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
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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A — **Required** Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B — **Required** Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schnieder, Ryan Feldman, Brendan Talbert
Purchase Order No.:	
Project Name:	Ameren - Verification Sampling-SCPB
Project Number:	153140603, 0003B

Section C — Invoice Information:

Attention:	
Company Name:	Golder Associates Inc
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285, 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

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	Chloride	Fluoride	Sulfate	TDS	Calcium	Boron	Lithium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	N	N	N	N	
1	5-LMW-65	WT	G			2-15-22	1100		1			1												1		60392854
2		WT	G																							BP3N
3		WT	G																							
4		WT	G																							
5		WT	G																							
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
	Grant Morey / Golder	2-15-22	1330	Angela M	2/15	1335	
	Angela M	2/15	1335		2/16	0410	1-3 X X X

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: Grant Morey

DATE Signed (MM/DD/YY): 02-15-22

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1-3	X	X	X

*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.

MEMORANDUM

DATE March 2, 2022 **Project No.** 153140604

TO Project File
Golder Associates/WSP USA

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth **EMAIL AMuehlfarth@golder.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA-CA – CONFIRMATORY SAMPLING - DATA PACKAGE 60392854

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

- None.

Golder Associates Inc.
701 Emerson Road, Suite 250,
Creve Coeur, Missouri, USA 63141

T: +1 314 984-8800 F: +1 314 984-8770

golder.com

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates USA Inc / WSP
Project Manager: J. Ingram
Project Name: Ameren- Sioux - SCPA-CA
Project Number: 153140604
Reviewer: A. Muehlfarth
Validation Date: 3/2/2022

Laboratory: Pace Analytical Services - Kansas City
SDG #: 60392854
Analytical Method (type and no.): EPA 200.7 (Total Metals)
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐ _____
Sample Names S-LMW-6S

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?	☒	☐	☐	2/15/2022
b) Sampling team indicated?	☒	☐	☐	GTM
c) Sample location noted?	☒	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☒	
e) Sample type indicated (grab/composite)?	☒	☐	☐	Grab
f) Field QC noted?	☐	☒	☐	
g) Field parameters collected (note types)?	☒	☐	☐	pH, Sp.Cond, ORP, Temp, DO, Turb
h) Field Calibration within control limits?	☒	☐	☐	
i) Notations of unacceptable field conditions/performances from field logs or field notes?	☐	☒	☐	
j) Does the laboratory narrative indicate deficiencies?	☐	☐	☒	

Note Deficiencies: _____

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

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

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)?	☐	☒	☐	
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?	☒	☐	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☒	
b) Was MSD accuracy criteria met?	☒	☐	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☒	
c) Were MS/MSD precision criteria met?	☒	☐	☐	

Comments/Notes:

Lithium analyzed at a dilution [5x] in sample S-LMW-6S. No qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Ann Muhlfarth _____ Date: 3/2/2022

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

May 05, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between March 30, 2022 and April 05, 2022. 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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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CERTIFICATIONS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
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 #: PA014572018-1
New Hampshire/TNI Certification #: 297617
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 #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
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
Wyoming Certification #: 8TMS-L

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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

SAMPLE SUMMARY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60396332001	**S-BMW-1D**	Water	03/29/22 13:57	03/30/22 04:23
60396332002	**S-BMW-3D**	Water	03/29/22 13:07	03/30/22 04:23
60396332003	**S-UMW-2D**	Water	03/31/22 14:26	04/02/22 03:00
60396332004	**S-UMW-3D**	Water	03/31/22 12:52	04/02/22 03:00
60396332005	**S-UMW-4D**	Water	03/31/22 11:27	04/02/22 03:00
60396332006	**S-UMW-5D**	Water	03/31/22 10:05	04/02/22 03:00
60396332007	**S-UMW-6D**	Water	03/31/22 12:07	04/02/22 03:00
60396332008	**S-UMW-DUP-1**	Water	03/31/22 08:00	04/02/22 03:00
60396332009	**S-UMW-FB-1**	Water	03/31/22 14:55	04/02/22 03:00
60396332010	**S-UMW-MS-1**	Water	03/31/22 12:52	04/02/22 03:00
60396332011	**S-UMW-MSD-1**	Water	03/31/22 12:52	04/02/22 03:00
60396332012	**S-UMW-1D**	Water	04/04/22 10:41	04/05/22 04:32

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60396332001	**S-BMW-1D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332002	**S-BMW-3D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332003	**S-UMW-2D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332004	**S-UMW-3D**	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332005	**S-UMW-4D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332006	**S-UMW-5D**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332007	**S-UMW-6D**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332008	**S-UMW-DUP-1**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332009	**S-UMW-FB-1**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396332010	**S-UMW-MS-1**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
60396332011	**S-UMW-MSD-1**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
60396332012	**S-UMW-1D**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

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

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-BMW-1D **Lab ID: 60396332001** Collected: 03/29/22 13:57 Received: 03/30/22 04:23 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	**388**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 15:52	7440-39-3	
Beryllium	**0.33J**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 15:52	7440-41-7	
Boron	**118**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 15:52	7440-42-8	
Calcium	**137000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 17:53	7440-70-2	
Cobalt	**2.1J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 15:52	7440-48-4	
Iron	**9040**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 15:52	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 15:52	7439-92-1	
Lithium	**14.7**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 15:52	7439-93-2	
Magnesium	**26500**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 15:52	7439-95-4	
Manganese	**862**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 15:52	7439-96-5	
Molybdenum	**1.9J**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 15:52	7439-98-7	
Potassium	**2900**	ug/L	500	224	1	04/07/22 13:51	04/09/22 15:52	7440-09-7	
Sodium	**6850**	ug/L	500	166	1	04/07/22 13:51	04/10/22 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	04/07/22 11:58	04/11/22 10:59	7440-36-0	
Arsenic	**0.27J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 10:59	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 10:59	7440-43-9	
Chromium	**0.35J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 10:59	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 10:59	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 10:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/18/22 15:29	04/19/22 09:14	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**423**	mg/L	20.0	4.6	1		04/11/22 16:35		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**457**	mg/L	10.0	10.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**8.9**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.12J**	mg/L	0.20	0.060	1		03/30/22 17:14	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-BMW-1D **Lab ID: 60396332001** Collected: 03/29/22 13:57 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/04/22 14:43	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**4.3**	mg/L	1.0	0.53	1		04/06/22 14:37	16887-00-6	
Fluoride	**0.26**	mg/L	0.20	0.12	1		04/06/22 14:37	16984-48-8	
Sulfate	**30.9**	mg/L	5.0	2.8	5		04/06/22 14:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-BMW-3D **Lab ID: 60396332002** Collected: 03/29/22 13:07 Received: 03/30/22 04:23 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	**687**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 15:55	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 15:55	7440-41-7	
Boron	**52.2J**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 15:55	7440-42-8	
Calcium	**113000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 17:55	7440-70-2	
Cobalt	**4.2J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 15:55	7440-48-4	
Iron	**7440**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 15:55	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 15:55	7439-92-1	
Lithium	**22.4**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 15:55	7439-93-2	
Magnesium	**23700**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 15:55	7439-95-4	
Manganese	**503**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 15:55	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 15:55	7439-98-7	
Potassium	**3790**	ug/L	500	224	1	04/07/22 13:51	04/09/22 15:55	7440-09-7	
Sodium	**6560**	ug/L	500	166	1	04/07/22 13:51	04/10/22 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	04/07/22 11:58	04/11/22 11:03	7440-36-0	
Arsenic	**<0.14**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:03	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:03	7440-43-9	
Chromium	**0.43J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:03	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:03	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/18/22 15:29	04/19/22 09:17	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**352**	mg/L	20.0	4.6	1		04/11/22 16:42		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**413**	mg/L	10.0	10.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**7.2**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.21**	mg/L	0.20	0.060	1		03/30/22 17:13	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-BMW-3D **Lab ID: 60396332002** Collected: 03/29/22 13:07 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/04/22 14:44	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**7.9**	mg/L	1.0	0.53	1		04/06/22 15:05	16887-00-6	
Fluoride	**0.28**	mg/L	0.20	0.12	1		04/06/22 15:05	16984-48-8	
Sulfate	**20.6**	mg/L	10.0	5.5	10		04/06/22 15:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-2D **Lab ID: 60396332003** Collected: 03/31/22 14:26 Received: 04/02/22 03:00 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	**62.2**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:10	7440-39-3	
Beryllium	**0.29J**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:10	7440-41-7	B
Boron	**18000**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:10	7440-42-8	
Calcium	**170000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 18:56	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:10	7440-48-4	
Iron	**142**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:10	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:10	7439-92-1	
Lithium	**27.2**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:10	7439-93-2	
Magnesium	**5070**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:10	7439-95-4	
Manganese	**154**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:10	7439-96-5	
Molybdenum	**1630**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:10	7439-98-7	
Potassium	**24800**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:10	7440-09-7	
Sodium	**51100**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:10	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	04/07/22 11:58	04/11/22 11:25	7440-36-0	
Arsenic	**2.9**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:25	7440-38-2	
Cadmium	**0.40J**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:25	7440-43-9	
Chromium	**0.40J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:25	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:25	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:55	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**111**	mg/L	20.0	4.6	1		04/13/22 17:23		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**833**	mg/L	10.0	10.0	1		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.14**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:25	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-2D **Lab ID: 60396332003** Collected: 03/31/22 14:26 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:56	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**22.4**	mg/L	5.0	2.6	5		04/08/22 22:30	16887-00-6	
Fluoride	**0.56**	mg/L	0.20	0.12	1		04/08/22 22:16	16984-48-8	
Sulfate	**413**	mg/L	100	55.0	100		04/08/22 22:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-3D **Lab ID: 60396332004** Collected: 03/31/22 12:52 Received: 04/02/22 03:00 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	**74.7**	ug/L	5.0	1.2	1	04/27/22 09:00	04/27/22 15:26	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/27/22 09:00	04/27/22 15:26	7440-41-7	
Boron	**29200**	ug/L	100	7.1	1	04/27/22 09:00	04/27/22 15:26	7440-42-8	M1
Calcium	**262000**	ug/L	200	38.2	1	04/27/22 09:00	04/27/22 14:42	7440-70-2	M1
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/27/22 09:00	04/27/22 15:26	7440-48-4	
Iron	**928**	ug/L	50.0	21.1	1	04/27/22 09:00	04/27/22 15:26	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/27/22 09:00	04/27/22 15:26	7439-92-1	
Lithium	**21.2**	ug/L	10.0	1.1	1	04/27/22 09:00	04/27/22 14:42	7439-93-2	
Magnesium	**11700**	ug/L	50.0	11.7	1	04/27/22 09:00	04/27/22 15:26	7439-95-4	
Manganese	**546**	ug/L	5.0	1.1	1	04/27/22 09:00	04/27/22 15:26	7439-96-5	
Molybdenum	**3650**	ug/L	20.0	1.8	1	04/27/22 09:00	04/27/22 15:26	7439-98-7	
Potassium	**20000**	ug/L	500	224	1	04/27/22 09:00	04/27/22 15:26	7440-09-7	
Sodium	**88000**	ug/L	500	166	1	04/27/22 09:00	04/27/22 15:26	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	04/07/22 11:58	04/11/22 11:32	7440-36-0	
Arsenic	**0.70J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:32	7440-38-2	
Cadmium	**0.95**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:32	7440-43-9	
Chromium	**0.39J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:32	7440-47-3	
Selenium	**0.20J**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:32	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:29	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**95.3**	mg/L	20.0	4.6	1		04/13/22 17:28		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1360**	mg/L	13.3	13.3	1		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.89**	mg/L	0.050		1		04/28/22 15:01	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:25	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-3D **Lab ID: 60396332004** Collected: 03/31/22 12:52 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:16	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**15.5**	mg/L	1.0	0.53	1		04/08/22 22:58	16887-00-6	
Fluoride	**0.77**	mg/L	0.20	0.12	1		04/08/22 22:58	16984-48-8	
Sulfate	**773**	mg/L	100	55.0	100		04/09/22 01:17	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-4D **Lab ID: 60396332005** Collected: 03/31/22 11:27 Received: 04/02/22 03:00 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	**64.5**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:12	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:12	7440-41-7	
Boron	**26500**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:12	7440-42-8	
Calcium	**203000**	ug/L	600	214	3	04/07/22 13:51	04/11/22 18:59	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:12	7440-48-4	
Iron	**7540**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:12	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:12	7439-92-1	
Lithium	**41.6**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:12	7439-93-2	
Magnesium	**24800**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:12	7439-95-4	
Manganese	**1630**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:12	7439-96-5	
Molybdenum	**6860**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:12	7439-98-7	
Potassium	**16800**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:12	7440-09-7	
Sodium	**77200**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:12	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	04/07/22 11:58	04/11/22 11:43	7440-36-0	
Arsenic	**0.34J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:43	7440-38-2	
Cadmium	**1.7**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:43	7440-43-9	
Chromium	**0.36J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:43	7440-47-3	
Selenium	**0.19J**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:43	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:36	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**174**	mg/L	20.0	4.6	1		04/13/22 17:38		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1090**	mg/L	13.3	13.3	1		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**7.4**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.13J**	mg/L	0.20	0.060	1		04/06/22 15:24	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-4D **Lab ID: 60396332005** Collected: 03/31/22 11:27 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**21.5**	mg/L	2.0	1.1	2		04/08/22 11:41	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/08/22 11:27	16984-48-8	
Sulfate	**549**	mg/L	100	55.0	100		04/08/22 11:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-5D **Lab ID: 60396332006** Collected: 03/31/22 10:05 Received: 04/02/22 03:00 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	**287**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:14	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:14	7440-41-7	
Boron	**12600**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:14	7440-42-8	
Calcium	**89900**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 17:14	7440-70-2	
Cobalt	**1.7J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:14	7440-48-4	
Iron	**3530**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:14	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:14	7439-92-1	
Lithium	**25.3**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:14	7439-93-2	
Magnesium	**19600**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:14	7439-95-4	
Manganese	**462**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:14	7439-96-5	
Molybdenum	**685**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:14	7439-98-7	
Potassium	**10900**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:14	7440-09-7	
Sodium	**28500**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:14	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	04/07/22 11:58	04/11/22 11:50	7440-36-0	
Arsenic	**0.37J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:50	7440-38-2	
Cadmium	**0.19J**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:50	7440-43-9	
Chromium	**0.42J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:50	7440-47-3	
Selenium	**0.21J**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:50	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:50	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:38	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**301**	mg/L	20.0	4.6	1		04/13/22 17:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**427**	mg/L	10.0	10.0	1		04/06/22 14:44		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**3.3**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.24**	mg/L	0.20	0.060	1		04/06/22 15:23	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-5D **Lab ID: 60396332006** Collected: 03/31/22 10:05 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:18	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**24.7**	mg/L	10.0	5.3	10		04/08/22 12:52	16887-00-6	
Fluoride	**0.58**	mg/L	0.20	0.12	1		04/08/22 12:10	16984-48-8	
Sulfate	**26.8**	mg/L	10.0	5.5	10		04/08/22 12:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-6D **Lab ID: 60396332007** Collected: 03/31/22 12:07 Received: 04/02/22 03:00 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	**115**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:16	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:16	7440-41-7	
Boron	**619**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:16	7440-42-8	
Calcium	**86800**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 17:16	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:16	7440-48-4	
Iron	**3940**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:16	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:16	7439-92-1	
Lithium	**11.3**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:16	7439-93-2	
Magnesium	**19400**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:16	7439-95-4	
Manganese	**636**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:16	7439-96-5	
Molybdenum	**69.5**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:16	7439-98-7	
Potassium	**4180**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:16	7440-09-7	
Sodium	**9280**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:16	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	04/07/22 11:58	04/11/22 11:54	7440-36-0	
Arsenic	**0.46J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:54	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:54	7440-43-9	
Chromium	**0.99J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:54	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:54	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:54	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:40	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**243**	mg/L	20.0	4.6	1		04/13/22 17:49		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**336**	mg/L	5.0	5.0	1		04/06/22 14:44		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**3.9**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:24	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-6D **Lab ID: 60396332007** Collected: 03/31/22 12:07 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:18	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**8.4**	mg/L	1.0	0.53	1		04/08/22 13:06	16887-00-6	
Fluoride	**0.37**	mg/L	0.20	0.12	1		04/08/22 13:06	16984-48-8	
Sulfate	**55.7**	mg/L	5.0	2.8	5		04/08/22 13:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-DUP-1 **Lab ID: 60396332008** Collected: 03/31/22 08:00 Received: 04/02/22 03:00 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	**277**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:19	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:19	7440-41-7	
Boron	**12100**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:19	7440-42-8	
Calcium	**85900**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 17:19	7440-70-2	
Cobalt	**1.7J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:19	7440-48-4	
Iron	**3400**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:19	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:19	7439-92-1	
Lithium	**24.3**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:19	7439-93-2	
Magnesium	**18800**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:19	7439-95-4	
Manganese	**436**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:19	7439-96-5	
Molybdenum	**664**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:19	7439-98-7	
Potassium	**10500**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:19	7440-09-7	
Sodium	**27400**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:19	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	04/07/22 11:58	04/11/22 11:57	7440-36-0	
Arsenic	**0.36J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:57	7440-38-2	
Cadmium	**0.18J**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:57	7440-43-9	
Chromium	**0.52J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:57	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:57	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:57	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:43	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**307**	mg/L	20.0	4.6	1		04/13/22 17:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**437**	mg/L	10.0	10.0	1		04/06/22 14:44		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**3.1**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.26**	mg/L	0.20	0.060	1		04/06/22 15:21	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-DUP-1 **Lab ID: 60396332008** Collected: 03/31/22 08:00 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**25.1**	mg/L	2.0	1.1	2		04/08/22 13:49	16887-00-6	
Fluoride	**0.57**	mg/L	0.20	0.12	1		04/08/22 13:35	16984-48-8	
Sulfate	**25.7**	mg/L	2.0	1.1	2		04/08/22 13:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-FB-1 **Lab ID: 60396332009** Collected: 03/31/22 14:55 Received: 04/02/22 03:00 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	**<1.2**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:26	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:26	7440-41-7	
Boron	**13.3J**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:26	7440-42-8	
Calcium	**<71.3**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 17:26	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:26	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:26	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:26	7439-92-1	
Lithium	**<1.2**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:26	7439-93-2	
Magnesium	**<11.7**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:26	7439-95-4	
Manganese	**<1.1**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:26	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:26	7439-98-7	
Potassium	**<224**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:26	7440-09-7	
Sodium	**<166**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:26	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	04/07/22 11:58	04/11/22 12:05	7440-36-0	
Arsenic	**<0.14**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 12:05	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 12:05	7440-43-9	
Chromium	**0.53J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 12:05	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 12:05	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 12:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:45	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<4.6**	mg/L	20.0	4.6	1		04/13/22 18:00		
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		04/06/22 14:44		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0047J**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:26	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-FB-1 **Lab ID: 60396332009** Collected: 03/31/22 14:55 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:19	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		04/08/22 14:17	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/08/22 14:17	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		04/08/22 14:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-1D **Lab ID: 60396332012** Collected: 04/04/22 10:41 Received: 04/05/22 04:32 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	**155**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:28	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:28	7440-41-7	
Boron	**162**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:28	7440-42-8	
Calcium	**63000**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 17:28	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:28	7440-48-4	
Iron	**524**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:28	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:28	7439-92-1	
Lithium	**11.6**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:28	7439-93-2	
Magnesium	**16600**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:28	7439-95-4	
Manganese	**136**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:28	7439-96-5	
Molybdenum	**33.5**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:28	7439-98-7	
Potassium	**4130**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:28	7440-09-7	
Sodium	**11800**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:28	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	04/07/22 11:58	04/11/22 12:08	7440-36-0	
Arsenic	**1.6**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 12:08	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 12:08	7440-43-9	
Chromium	**0.65J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 12:08	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 12:08	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 12:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:52	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**186**	mg/L	20.0	4.6	1		04/14/22 16:15		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**290**	mg/L	5.0	5.0	1		04/08/22 15:18		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.52**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/12/22 12:47	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-1D **Lab ID: 60396332012** Collected: 04/04/22 10:41 Received: 04/05/22 04:32 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**18.3**	mg/L	1.0	0.53	1		04/08/22 16:24	16887-00-6	
Fluoride	**0.23**	mg/L	0.20	0.12	1		04/08/22 16:24	16984-48-8	
Sulfate	**39.5**	mg/L	10.0	5.5	10		04/08/22 16:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 781904
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332001, 60396332002

METHOD BLANK: 3118571 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/19/22 09:10	

LABORATORY CONTROL SAMPLE: 3118572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3118573 3118574

Parameter	Units	60396332002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	5.0	4.9	100	99	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 782280
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60396332003

METHOD BLANK: 3119799 Matrix: Water
Associated Lab Samples: 60396332003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/21/22 11:05	

LABORATORY CONTROL SAMPLE: 3119800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119801 3119802

Parameter	Units	60396333011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	4.6	4.6	92	92	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 782284
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

METHOD BLANK: 3119810 Matrix: Water
Associated Lab Samples: 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/21/22 09:24	

LABORATORY CONTROL SAMPLE: 3119811

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119812 3119813

Parameter	Units	60396332004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	4.7	4.8	94	96	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780187
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: 60396332001, 60396332002

METHOD BLANK: 3111909 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.2	5.0	1.2	04/09/22 15:48	
Beryllium	ug/L	<0.24	1.0	0.24	04/09/22 15:48	
Boron	ug/L	<7.1	100	7.1	04/09/22 15:48	
Calcium	ug/L	<71.3	200	71.3	04/09/22 15:48	
Cobalt	ug/L	<1.4	5.0	1.4	04/09/22 15:48	
Iron	ug/L	<21.1	50.0	21.1	04/09/22 15:48	
Lead	ug/L	<6.1	10.0	6.1	04/09/22 15:48	
Lithium	ug/L	<1.2	10.0	1.2	04/09/22 15:48	
Magnesium	ug/L	<11.7	50.0	11.7	04/09/22 15:48	
Manganese	ug/L	<1.1	5.0	1.1	04/09/22 15:48	
Molybdenum	ug/L	<1.8	20.0	1.8	04/09/22 15:48	
Potassium	ug/L	<224	500	224	04/09/22 15:48	
Sodium	ug/L	<166	500	166	04/12/22 13:11	

LABORATORY CONTROL SAMPLE: 3111910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1040	104	85-115	
Beryllium	ug/L	1000	1030	103	85-115	
Boron	ug/L	1000	978	98	85-115	
Calcium	ug/L	10000	9160	92	85-115	
Cobalt	ug/L	1000	1060	106	85-115	
Iron	ug/L	10000	9920	99	85-115	
Lead	ug/L	1000	1060	106	85-115	
Lithium	ug/L	1000	888	89	85-115	
Magnesium	ug/L	10000	9930	99	85-115	
Manganese	ug/L	1000	963	96	85-115	
Molybdenum	ug/L	1000	1050	105	85-115	
Potassium	ug/L	10000	11100	111	85-115	
Sodium	ug/L	10000	11000	110	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111911 3111912

Parameter	Units	60396338004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	350	1000	1000	1380	1370	103	102	70-130	0	20	
Beryllium	ug/L	<0.24	1000	1000	1030	1030	103	103	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111911 3111912

Parameter	Units	60396338004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	93.3J	1000	1000	1090	1100	100	101	70-130	1	20	
Calcium	ug/L	163000	10000	10000	171000	172000	72	86	70-130	1	20	
Cobalt	ug/L	7.7	1000	1000	1040	1040	104	103	70-130	1	20	
Iron	ug/L	2250	10000	10000	12100	12100	99	98	70-130	1	20	
Lead	ug/L	<6.1	1000	1000	1060	1050	106	105	70-130	0	20	
Lithium	ug/L	44.2	1000	1000	1200	1200	115	115	70-130	0	20	
Magnesium	ug/L	28300	10000	10000	36300	35800	80	75	70-130	1	20	
Manganese	ug/L	1110	1000	1000	2100	2080	99	96	70-130	1	20	
Molybdenum	ug/L	<1.8	1000	1000	1060	1060	106	106	70-130	0	20	
Potassium	ug/L	6150	10000	10000	17900	17700	117	116	70-130	1	20	
Sodium	ug/L	5150	10000	10000	16800	16700	116	116	70-130	0	20	

MATRIX SPIKE SAMPLE: 3111913

Parameter	Units	60396338008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	280	1000	1340	106	70-130	
Beryllium	ug/L	<0.24	1000	1050	105	70-130	
Boron	ug/L	113	1000	1140	103	70-130	
Calcium	ug/L	97300	10000	119000	216	70-130	M1
Cobalt	ug/L	1.8J	1000	1060	106	70-130	
Iron	ug/L	<21.1	10000	9940	99	70-130	
Lead	ug/L	<6.1	1000	1080	108	70-130	
Lithium	ug/L	20.4	1000	1230	121	70-130	
Magnesium	ug/L	21400	10000	30000	87	70-130	
Manganese	ug/L	14.8	1000	995	98	70-130	
Molybdenum	ug/L	3.3J	1000	1090	108	70-130	
Potassium	ug/L	5150	10000	17700	126	70-130	
Sodium	ug/L	43400	10000	56900	135	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780191
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: 60396332003, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

METHOD BLANK: 3111927 Matrix: Water
Associated Lab Samples: 60396332003, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.2	5.0	1.2	04/09/22 16:45	
Beryllium	ug/L	0.36J	1.0	0.24	04/09/22 16:45	
Boron	ug/L	<7.1	100	7.1	04/09/22 16:45	
Calcium	ug/L	<71.3	200	71.3	04/09/22 16:45	
Cobalt	ug/L	<1.4	5.0	1.4	04/09/22 16:45	
Iron	ug/L	<21.1	50.0	21.1	04/09/22 16:45	
Lead	ug/L	<6.1	10.0	6.1	04/09/22 16:45	
Lithium	ug/L	<1.2	10.0	1.2	04/09/22 16:45	
Magnesium	ug/L	16.6J	50.0	11.7	04/09/22 16:45	
Manganese	ug/L	<1.1	5.0	1.1	04/09/22 16:45	
Molybdenum	ug/L	2.4J	20.0	1.8	04/09/22 16:45	
Potassium	ug/L	<224	500	224	04/09/22 16:45	
Sodium	ug/L	<166	500	166	04/10/22 15:58	

LABORATORY CONTROL SAMPLE: 3111928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1020	102	85-115	
Beryllium	ug/L	1000	1030	103	85-115	
Boron	ug/L	1000	945	94	85-115	
Calcium	ug/L	10000	10200	102	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1040	104	85-115	
Lithium	ug/L	1000	873	87	85-115	
Magnesium	ug/L	10000	10500	105	85-115	
Manganese	ug/L	1000	1010	101	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	10000	100	85-115	
Sodium	ug/L	10000	10400	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111929 3111930

Parameter	Units	60396337010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	81.9	1000	1000	1130	1090	105	101	70-130	4	20	
Beryllium	ug/L	<0.24	1000	1000	1070	1030	107	103	70-130	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111929 3111930

Parameter	Units	60396337010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1450	1000	1000	2490	2460	104	101	70-130	1	20	
Calcium	ug/L	235000	10000	10000	253000	243000	184	78	70-130	4	20	M1
Cobalt	ug/L	2.7J	1000	1000	1050	1000	104	100	70-130	4	20	
Iron	ug/L	<21.1	10000	10000	10500	10100	105	101	70-130	4	20	
Lead	ug/L	<6.1	1000	1000	1040	1010	104	101	70-130	3	20	
Lithium	ug/L	62.5	1000	1000	1310	1240	125	118	70-130	5	20	
Magnesium	ug/L	73300	10000	10000	81200	79900	79	66	70-130	2	20	M1
Manganese	ug/L	390	1000	1000	1440	1380	105	99	70-130	4	20	
Molybdenum	ug/L	15.8J	1000	1000	1100	1050	108	103	70-130	4	20	
Potassium	ug/L	5190	10000	10000	16300	16200	112	110	70-130	1	20	
Sodium	ug/L	56200	10000	10000	68100	68300	120	122	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111931 3111932

Parameter	Units	60396735001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	219	1000	1000	1260	1280	104	106	70-130	2	20	
Beryllium	ug/L	<0.24	1000	1000	1060	1090	106	109	70-130	3	20	
Boron	ug/L	99.3J	1000	1000	1090	1130	99	103	70-130	3	20	
Calcium	ug/L	141000	10000	10000	148000	159000	76	186	70-130	7	20	M1
Cobalt	ug/L	3.4J	1000	1000	1040	1070	104	107	70-130	3	20	
Iron	ug/L	34.2J	10000	10000	10400	10600	104	106	70-130	2	20	
Lead	ug/L	<6.1	1000	1000	1050	1070	105	107	70-130	2	20	
Lithium	ug/L	31.7	1000	1000	1130	1160	110	113	70-130	3	20	
Magnesium	ug/L	30200	10000	10000	39000	39500	88	93	70-130	1	20	
Manganese	ug/L	737	1000	1000	1790	1830	105	109	70-130	2	20	
Molybdenum	ug/L	5.1J	1000	1000	1060	1090	106	108	70-130	2	20	
Potassium	ug/L	6110	10000	10000	17000	17600	109	115	70-130	4	20	
Sodium	ug/L	4700	10000	10000	16000	16200	113	115	70-130	2	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 783503
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: 60396332004

METHOD BLANK: 3124382 Matrix: Water
Associated Lab Samples: 60396332004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.2	5.0	1.2	04/27/22 15:21	
Beryllium	ug/L	0.44J	1.0	0.24	04/27/22 15:21	
Boron	ug/L	<7.1	100	7.1	04/27/22 15:21	
Calcium	ug/L	<38.2	200	38.2	04/27/22 15:21	
Cobalt	ug/L	<1.4	5.0	1.4	04/27/22 15:21	
Iron	ug/L	<21.1	50.0	21.1	04/27/22 15:21	
Lead	ug/L	<6.1	10.0	6.1	04/27/22 15:21	
Lithium	ug/L	<1.1	10.0	1.1	04/27/22 15:21	
Magnesium	ug/L	<11.7	50.0	11.7	04/27/22 15:21	
Manganese	ug/L	<1.1	5.0	1.1	04/27/22 15:21	
Molybdenum	ug/L	<1.8	20.0	1.8	04/27/22 15:21	
Potassium	ug/L	<224	500	224	04/27/22 15:21	
Sodium	ug/L	<166	500	166	04/27/22 15:21	

LABORATORY CONTROL SAMPLE: 3124383

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	968	97	85-115	
Calcium	ug/L	10000	9790	98	85-115	
Cobalt	ug/L	1000	985	98	85-115	
Iron	ug/L	10000	10000	100	85-115	
Lead	ug/L	1000	994	99	85-115	
Lithium	ug/L	1000	988	99	85-115	
Magnesium	ug/L	10000	10300	103	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	1020	102	85-115	
Potassium	ug/L	10000	10200	102	85-115	
Sodium	ug/L	10000	10400	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3124384 3124385

Parameter	Units	60396332004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	74.7	1000	1000	1090	1040	102	97	70-130	5	20	
Beryllium	ug/L	<0.24	1000	1000	935	903	93	90	70-130	3	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3124384 3124385

Parameter	Units	60396332004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	29200	1000	1000	30300	29100	110	-12	70-130	4	20	M1
Calcium	ug/L	262000	10000	10000	274000	259000	121	-28	70-130	6	20	M1
Cobalt	ug/L	<1.4	1000	1000	973	929	97	93	70-130	5	20	
Iron	ug/L	928	10000	10000	10300	9810	94	89	70-130	5	20	
Lead	ug/L	<6.1	1000	1000	1030	981	103	98	70-130	5	20	
Lithium	ug/L	21.2	1000	1000	1070	998	105	98	70-130	7	20	
Magnesium	ug/L	11700	10000	10000	20700	19800	90	80	70-130	5	20	
Manganese	ug/L	546	1000	1000	1510	1430	96	89	70-130	5	20	
Molybdenum	ug/L	3650	1000	1000	4660	4470	101	82	70-130	4	20	
Potassium	ug/L	20000	10000	10000	30500	29300	105	93	70-130	4	20	
Sodium	ug/L	88000	10000	10000	97700	93800	97	58	70-130	4	20	M1

MATRIX SPIKE SAMPLE: 3124386

Parameter	Units	60398436002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	91.7	1000	1130	104	70-130	
Beryllium	ug/L	ND	1000	1070	107	70-130	
Boron	ug/L	ND	1000	1030	100	70-130	
Calcium	ug/L	39200	10000	50100	109	70-130	
Cobalt	ug/L	ND	1000	974	97	70-130	
Iron	ug/L	459	10000	10400	100	70-130	
Lead	ug/L	ND	1000	1000	100	70-130	
Lithium	ug/L	ND	1000	994	99	70-130	
Magnesium	ug/L	5490	10000	15900	104	70-130	
Manganese	ug/L	8.5	1000	1060	105	70-130	
Molybdenum	ug/L	ND	1000	1010	101	70-130	
Potassium	ug/L	3570	10000	13900	103	70-130	
Sodium	ug/L	13800	10000	24000	102	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780166
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: 60396332001, 60396332002, 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

METHOD BLANK: 3111832 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002, 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	04/11/22 10:54	
Arsenic	ug/L	<0.14	1.0	0.14	04/11/22 10:54	
Cadmium	ug/L	<0.053	0.50	0.053	04/11/22 10:54	
Chromium	ug/L	<0.31	1.0	0.31	04/11/22 10:54	
Selenium	ug/L	<0.18	1.0	0.18	04/11/22 10:54	
Thallium	ug/L	<0.15	1.0	0.15	04/11/22 10:54	

LABORATORY CONTROL SAMPLE: 3111833

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.2	103	85-115	
Arsenic	ug/L	40	42.3	106	85-115	
Cadmium	ug/L	40	42.7	107	85-115	
Chromium	ug/L	40	41.2	103	85-115	
Selenium	ug/L	40	43.4	108	85-115	
Thallium	ug/L	40	39.4	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111834 3111835

Parameter	Units	60396332004 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	40.9	41.1	102	103	70-130	0	20	
Arsenic	ug/L	0.70J	40	40	43.5	43.2	107	106	70-130	1	20	
Cadmium	ug/L	0.95	40	40	40.3	40.3	98	98	70-130	0	20	
Chromium	ug/L	0.39J	40	40	39.9	40.4	99	100	70-130	1	20	
Selenium	ug/L	0.20J	40	40	40.2	40.3	100	100	70-130	0	20	
Thallium	ug/L	<0.15	40	40	42.3	41.9	106	105	70-130	1	20	

MATRIX SPIKE SAMPLE: 3111836

Parameter	Units	60396332012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.12	40	41.9	105	70-130	
Arsenic	ug/L	1.6	40	43.7	105	70-130	
Cadmium	ug/L	<0.053	40	41.7	104	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

MATRIX SPIKE SAMPLE: 3111836

Parameter	Units	60396332012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	0.65J	40	40.8	100	70-130	
Selenium	ug/L	<0.18	40	41.9	105	70-130	
Thallium	ug/L	<0.15	40	40.8	102	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780727
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332001, 60396332002

METHOD BLANK: 3113968 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/11/22 16:10	

LABORATORY CONTROL SAMPLE: 3113969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	498	100	90-110	

SAMPLE DUPLICATE: 3113971

Parameter	Units	60396466003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	113	112	1	10	

SAMPLE DUPLICATE: 3113973

Parameter	Units	60396299004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	853	850	0	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780896
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009

METHOD BLANK: 3114512 Matrix: Water
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/13/22 16:56	

LABORATORY CONTROL SAMPLE: 3114513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	491	98	90-110	

SAMPLE DUPLICATE: 3114516

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	95.3	95.7	0	10	

SAMPLE DUPLICATE: 3114517

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	291	288	1	10	

SAMPLE DUPLICATE: 3114518

Parameter	Units	60396735001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	437	442	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 781269
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60396332012

METHOD BLANK: 3115960 Matrix: Water
Associated Lab Samples: 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/14/22 14:50	

LABORATORY CONTROL SAMPLE: 3115961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	492	98	90-110	

SAMPLE DUPLICATE: 3115962

Parameter	Units	60396735002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	470	468	0	10	

SAMPLE DUPLICATE: 3115963

Parameter	Units	60396332012 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	186	189	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 779231
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332001, 60396332002

METHOD BLANK: 3108391 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/01/22 17:19	

LABORATORY CONTROL SAMPLE: 3108392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	966	97	80-120	

SAMPLE DUPLICATE: 3108393

Parameter	Units	60396337001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	621	613	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 779734 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009

METHOD BLANK: 3110285 Matrix: Water
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/06/22 14:42	

LABORATORY CONTROL SAMPLE: 3110286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3110287

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1360	1310	4	10	

SAMPLE DUPLICATE: 3110288

Parameter	Units	60396332003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	833	835	0	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780462
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396332012

METHOD BLANK: 3112983 Matrix: Water
Associated Lab Samples: 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/08/22 15:17	

LABORATORY CONTROL SAMPLE: 3112984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	980	98	80-120	

SAMPLE DUPLICATE: 3112985

Parameter	Units	60396735004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	540	523	3	10	

SAMPLE DUPLICATE: 3112986

Parameter	Units	60396757006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	4640	5210	12	10	D6

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 778712
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: 60396332001, 60396332002

METHOD BLANK: 3106506 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.060	0.20	0.060	03/30/22 17:06	H6

LABORATORY CONTROL SAMPLE: 3106507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.1	107	90-110	H6

SAMPLE DUPLICATE: 3106508

Parameter	Units	60395394022 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.20	<0.060		20	H6

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 779797
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: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009

METHOD BLANK: 3110416 Matrix: Water
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.060	0.20	0.060	04/06/22 15:19	H6

LABORATORY CONTROL SAMPLE: 3110417

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

SAMPLE DUPLICATE: 3110419

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.060	<0.060		20	H6

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780602
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: 60396332012

METHOD BLANK: 3113627 Matrix: Water
Associated Lab Samples: 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.060	0.20	0.060	04/12/22 12:43	H6

LABORATORY CONTROL SAMPLE: 3113628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.1	104	90-110	H6

SAMPLE DUPLICATE: 3113629

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.060	<0.060		20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 779347
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: 60396332001, 60396332002

METHOD BLANK: 3108914 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/04/22 14:31	

LABORATORY CONTROL SAMPLE: 3108915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3108916 3108917

Parameter	Units	60396378001 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	1.4	0.5	0.5	2.5	2.5	204	204	75-125	0	20	M1

SAMPLE DUPLICATE: 3108918

Parameter	Units	60396332001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 3108919

Parameter	Units	60396456001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.026		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 779886
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: 60396332003, 60396332005, 60396332008, 60396332012

METHOD BLANK: 3110733 Matrix: Water
Associated Lab Samples: 60396332003, 60396332005, 60396332008, 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/06/22 13:51	

LABORATORY CONTROL SAMPLE: 3110734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.54	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111061 3111062

Parameter	Units	60396333011 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	<0.026	0.5	0.5	0.46	0.46	91	91	75-125	0	20	

SAMPLE DUPLICATE: 3110738

Parameter	Units	60396332008 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 3111060

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780089
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: 60396332004, 60396332006, 60396332007, 60396332009

METHOD BLANK: 3111505 Matrix: Water
Associated Lab Samples: 60396332004, 60396332006, 60396332007, 60396332009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/07/22 14:15	

LABORATORY CONTROL SAMPLE: 3111506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111508 3111509

Parameter	Units	60396332004 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	<0.026	0.5	0.5	0.42	0.42	84	84	75-125	0	20	

SAMPLE DUPLICATE: 3111507

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 3111510

Parameter	Units	60396811002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.026		20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 779754
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: 60396332001, 60396332002

METHOD BLANK: 3110335 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/06/22 09:21	
Fluoride	mg/L	<0.12	0.20	0.12	04/06/22 09:21	
Sulfate	mg/L	<0.55	1.0	0.55	04/06/22 09:21	

METHOD BLANK: 3114213 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.56J	1.0	0.53	04/07/22 09:06	
Fluoride	mg/L	<0.12	0.20	0.12	04/07/22 09:06	
Sulfate	mg/L	<0.55	1.0	0.55	04/07/22 09:06	

LABORATORY CONTROL SAMPLE: 3110336

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	
Sulfate	mg/L	5	4.6	92	90-110	

LABORATORY CONTROL SAMPLE: 3114214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3110337 3110338

Parameter	Units	60396310005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40800	25000	25000	74900	78900	136	152	80-120	5	15	M1
Fluoride	mg/L	ND	12500	12500	17900	19900	143	159	80-120	10	15	M1
Sulfate	mg/L	ND	25000	25000	38000	42000	143	159	80-120	10	15	M1

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

MATRIX SPIKE SAMPLE: 3110339

Parameter	Units	60396332002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	7.9	5	12.4	90	80-120	
Fluoride	mg/L	0.28	2.5	2.5	89	80-120	
Sulfate	mg/L	20.6	50	69.9	99	80-120	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780287
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: 60396332003, 60396332004

METHOD BLANK: 3112201 Matrix: Water
Associated Lab Samples: 60396332003, 60396332004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/08/22 10:44	
Fluoride	mg/L	<0.12	0.20	0.12	04/08/22 10:44	
Sulfate	mg/L	<0.55	1.0	0.55	04/08/22 10:44	

LABORATORY CONTROL SAMPLE: 3112202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112203 3112204

Parameter	Units	60396338004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.5	5	5	13.4	13.4	97	98	80-120	0	15	
Fluoride	mg/L	0.38	2.5	2.5	3.0	3.0	103	107	80-120	3	15	
Sulfate	mg/L	63.9	25	25	87.8	86.6	95	91	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112206 3112207

Parameter	Units	60396332004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	15.5	5	5	20.8	20.8	105	105	80-120	0	15	E
Fluoride	mg/L	0.77	2.5	2.5	3.5	3.5	110	111	80-120	1	15	
Sulfate	mg/L	773	500	500	1300	1290	104	104	80-120	0	15	

SAMPLE DUPLICATE: 3112205

Parameter	Units	60396338004 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	8.5	8.5	0	15	
Fluoride	mg/L	0.38	0.37	1	15	
Sulfate	mg/L	63.9	62.0	3	15	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

SAMPLE DUPLICATE: 3112208

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	15.5	15.5	0	15	
Fluoride	mg/L	0.77	0.78	2	15	
Sulfate	mg/L	773	781	1	15	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 780288
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: 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

METHOD BLANK: 3112209 Matrix: Water
Associated Lab Samples: 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/08/22 10:04	
Fluoride	mg/L	<0.12	0.20	0.12	04/08/22 10:04	
Sulfate	mg/L	<0.55	1.0	0.55	04/08/22 10:04	

METHOD BLANK: 3115498 Matrix: Water
Associated Lab Samples: 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/12/22 08:49	
Fluoride	mg/L	<0.12	0.20	0.12	04/12/22 08:49	
Sulfate	mg/L	<0.55	1.0	0.55	04/12/22 08:49	

LABORATORY CONTROL SAMPLE: 3112210

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	2.4	98	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

LABORATORY CONTROL SAMPLE: 3115499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	101	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	5	5.2	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112212 3112213

Parameter	Units	20239159004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	69.2	5	5	73.9	74.0	93	95	80-120	0	15	E
Fluoride	mg/L	ND	2.5	2.5	2.8	2.3	111	90	80-120	21	15	R1
Sulfate	mg/L	363	5	5	364	364	23	20	80-120	0	15	E,M1

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

SAMPLE DUPLICATE: 3112211

Parameter	Units	20239159004 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	69.2	69.3	0	15	E
Fluoride	mg/L	ND	<0.12		15	
Sulfate	mg/L	363	363	0	15	E

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-BMW-1D **Lab ID: 60396332001** Collected: 03/29/22 13:57 Received: 03/30/22 04:23 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	**0.0990 ± 0.238 (0.459) C:NA T:86%**	pCi/L	04/19/22 11:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.13 ± 0.758 (1.44) C:61% T:86%**	pCi/L	04/13/22 21:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-BMW-3D **Lab ID: 60396332002** Collected: 03/29/22 13:07 Received: 03/30/22 04:23 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	**0.615 ± 0.428 (0.576) C:NA T:94%**	pCi/L	04/19/22 11:45	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.792 ± 0.619 (1.21) C:63% T:94%**	pCi/L	04/13/22 21:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-2D **Lab ID: 60396332003** Collected: 03/31/22 14:26 Received: 04/02/22 03:00 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 ± 0.294 (0.636) C:NA T:82%**	pCi/L	04/25/22 12:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.787 ± 0.453 (0.831) C:71% T:82%**	pCi/L	04/19/22 11:34	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-3D **Lab ID: 60396332004** Collected: 03/31/22 12:52 Received: 04/02/22 03:00 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	**-0.0480 ± 0.282 (0.629) C:NA T:85%**	pCi/L	04/25/22 12:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.277 ± 0.354 (0.751) C:70% T:85%**	pCi/L	04/19/22 11:34	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-4D **Lab ID: 60396332005** Collected: 03/31/22 11:27 Received: 04/02/22 03:00 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	**-0.208 ± 0.323 (0.780) C:NA T:84%**	pCi/L	04/25/22 12:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.475 ± 0.364 (0.711) C:71% T:84%**	pCi/L	04/19/22 11:34	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-5D **Lab ID: 60396332006** Collected: 03/31/22 10:05 Received: 04/02/22 03:00 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	**-0.111 ± 0.307 (0.726) C:NA T:86%**	pCi/L	04/25/22 12:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.518 ± 0.371 (0.717) C:74% T:86%**	pCi/L	04/19/22 11:34	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-6D **Lab ID: 60396332007** Collected: 03/31/22 12:07 Received: 04/02/22 03:00 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	**0.0966 ± 0.268 (0.520) C:NA T:87%**	pCi/L	04/25/22 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.575 ± 0.369 (0.681) C:65% T:87%**	pCi/L	04/19/22 11:35	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-DUP-1 **Lab ID: 60396332008** Collected: 03/31/22 08:00 Received: 04/02/22 03:00 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 ± 0.242 (0.543) C:NA T:83%**	pCi/L	04/25/22 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.324 ± 0.369 (0.770) C:67% T:83%**	pCi/L	04/19/22 11:35	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-FB-1 **Lab ID: 60396332009** Collected: 03/31/22 14:55 Received: 04/02/22 03:00 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	**-0.148 ± 0.225 (0.591) C:NA T:92%**	pCi/L	04/25/22 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0960 ± 0.337 (0.763) C:67% T:92%**	pCi/L	04/19/22 11:35	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-MS-1 **Lab ID: 60396332010** Collected: 03/31/22 12:52 Received: 04/02/22 03:00 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	**0.160 ± 0.376 (0.697) C:NA T:84%**	pCi/L	04/25/22 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.273 ± 0.392 (0.842) C:67% T:84%**	pCi/L	04/19/22 11:35	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-MSD-1 **Lab ID: 60396332011** Collected: 03/31/22 12:52 Received: 04/02/22 03:00 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	**0.220 ± 0.405 (0.722) C:NA T:83%**	pCi/L	04/25/22 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.05 ± 0.458 (0.730) C:68% T:83%**	pCi/L	04/19/22 11:35	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Sample: S-UMW-1D **Lab ID: 60396332012** Collected: 04/04/22 10:41 Received: 04/05/22 04:32 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	**0.113 ± 0.384 (0.741) C:NA T:86%**	pCi/L	04/25/22 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.701 ± 0.443 (0.829) C:64% T:86%**	pCi/L	04/19/22 11:35	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 496110
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: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332010, 60396332011, 60396332012

METHOD BLANK: 2400913 Matrix: Water
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332010, 60396332011, 60396332012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.145 ± 0.314 (0.579) C:NA T:83%	pCi/L	04/25/22 12:32	

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 - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 496113
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: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332010, 60396332011, 60396332012

METHOD BLANK: 2400918 Matrix: Water
Associated Lab Samples: 60396332003, 60396332004, 60396332005, 60396332006, 60396332007, 60396332008, 60396332009, 60396332010, 60396332011, 60396332012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0258 ± 0.323 (0.750) C:70% T:83%	pCi/L	04/19/22 11:33	

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 - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 494876
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: 60396332001, 60396332002

METHOD BLANK: 2394061 Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.144 ± 0.282 (0.676) C:NA T:93%	pCi/L	04/19/22 11:24	

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 - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

QC Batch: 494878
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: 60396332001, 60396332002

METHOD BLANK: 2394067
Matrix: Water
Associated Lab Samples: 60396332001, 60396332002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.260 ± 0.292 (0.743) C:69% T:93%	pCi/L	04/13/22 17:29	

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 SEC SCPA
Pace Project No.: 60396332

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

B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396332001	S-BMW-1D	EPA 200.7	780187	EPA 200.7	780329
60396332002	S-BMW-3D	EPA 200.7	780187	EPA 200.7	780329
60396332003	S-UMW-2D	EPA 200.7	780191	EPA 200.7	780331
60396332004	S-UMW-3D	EPA 200.7	783503	EPA 200.7	783603
60396332005	S-UMW-4D	EPA 200.7	780191	EPA 200.7	780331
60396332006	S-UMW-5D	EPA 200.7	780191	EPA 200.7	780331
60396332007	S-UMW-6D	EPA 200.7	780191	EPA 200.7	780331
60396332008	S-UMW-DUP-1	EPA 200.7	780191	EPA 200.7	780331
60396332009	S-UMW-FB-1	EPA 200.7	780191	EPA 200.7	780331
60396332012	S-UMW-1D	EPA 200.7	780191	EPA 200.7	780331
60396332001	S-BMW-1D	EPA 200.8	780166	EPA 200.8	780242
60396332002	S-BMW-3D	EPA 200.8	780166	EPA 200.8	780242
60396332003	S-UMW-2D	EPA 200.8	780166	EPA 200.8	780242
60396332004	S-UMW-3D	EPA 200.8	780166	EPA 200.8	780242
60396332005	S-UMW-4D	EPA 200.8	780166	EPA 200.8	780242
60396332006	S-UMW-5D	EPA 200.8	780166	EPA 200.8	780242
60396332007	S-UMW-6D	EPA 200.8	780166	EPA 200.8	780242
60396332008	S-UMW-DUP-1	EPA 200.8	780166	EPA 200.8	780242
60396332009	S-UMW-FB-1	EPA 200.8	780166	EPA 200.8	780242
60396332012	S-UMW-1D	EPA 200.8	780166	EPA 200.8	780242
60396332001	S-BMW-1D	EPA 7470	781904	EPA 7470	781992
60396332002	S-BMW-3D	EPA 7470	781904	EPA 7470	781992
60396332003	S-UMW-2D	EPA 7470	782280	EPA 7470	782382
60396332004	S-UMW-3D	EPA 7470	782284	EPA 7470	782380
60396332005	S-UMW-4D	EPA 7470	782284	EPA 7470	782380
60396332006	S-UMW-5D	EPA 7470	782284	EPA 7470	782380
60396332007	S-UMW-6D	EPA 7470	782284	EPA 7470	782380
60396332008	S-UMW-DUP-1	EPA 7470	782284	EPA 7470	782380
60396332009	S-UMW-FB-1	EPA 7470	782284	EPA 7470	782380
60396332012	S-UMW-1D	EPA 7470	782284	EPA 7470	782380
60396332001	S-BMW-1D	EPA 903.1	494876		
60396332002	S-BMW-3D	EPA 903.1	494876		
60396332003	S-UMW-2D	EPA 903.1	496110		
60396332004	S-UMW-3D	EPA 903.1	496110		
60396332005	S-UMW-4D	EPA 903.1	496110		
60396332006	S-UMW-5D	EPA 903.1	496110		
60396332007	S-UMW-6D	EPA 903.1	496110		
60396332008	S-UMW-DUP-1	EPA 903.1	496110		
60396332009	S-UMW-FB-1	EPA 903.1	496110		
60396332010	S-UMW-MS-1	EPA 903.1	496110		
60396332011	S-UMW-MSD-1	EPA 903.1	496110		
60396332012	S-UMW-1D	EPA 903.1	496110		
60396332001	S-BMW-1D	EPA 904.0	494878		
60396332002	S-BMW-3D	EPA 904.0	494878		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396332003	**S-UMW-2D**	EPA 904.0	496113		
60396332004	**S-UMW-3D**	EPA 904.0	496113		
60396332005	**S-UMW-4D**	EPA 904.0	496113		
60396332006	**S-UMW-5D**	EPA 904.0	496113		
60396332007	**S-UMW-6D**	EPA 904.0	496113		
60396332008	**S-UMW-DUP-1**	EPA 904.0	496113		
60396332009	**S-UMW-FB-1**	EPA 904.0	496113		
60396332010	**S-UMW-MS-1**	EPA 904.0	496113		
60396332011	**S-UMW-MSD-1**	EPA 904.0	496113		
60396332012	**S-UMW-1D**	EPA 904.0	496113		
60396332001	**S-BMW-1D**	SM 2320B	780727		
60396332002	**S-BMW-3D**	SM 2320B	780727		
60396332003	**S-UMW-2D**	SM 2320B	780896		
60396332004	**S-UMW-3D**	SM 2320B	780896		
60396332005	**S-UMW-4D**	SM 2320B	780896		
60396332006	**S-UMW-5D**	SM 2320B	780896		
60396332007	**S-UMW-6D**	SM 2320B	780896		
60396332008	**S-UMW-DUP-1**	SM 2320B	780896		
60396332009	**S-UMW-FB-1**	SM 2320B	780896		
60396332012	**S-UMW-1D**	SM 2320B	781269		
60396332001	**S-BMW-1D**	SM 2540C	779231		
60396332002	**S-BMW-3D**	SM 2540C	779231		
60396332003	**S-UMW-2D**	SM 2540C	779734		
60396332004	**S-UMW-3D**	SM 2540C	779734		
60396332005	**S-UMW-4D**	SM 2540C	779734		
60396332006	**S-UMW-5D**	SM 2540C	779734		
60396332007	**S-UMW-6D**	SM 2540C	779734		
60396332008	**S-UMW-DUP-1**	SM 2540C	779734		
60396332009	**S-UMW-FB-1**	SM 2540C	779734		
60396332012	**S-UMW-1D**	SM 2540C	780462		
60396332001	**S-BMW-1D**	SM 3500-Fe B#4	783215		
60396332002	**S-BMW-3D**	SM 3500-Fe B#4	783215		
60396332003	**S-UMW-2D**	SM 3500-Fe B#4	783182		
60396332004	**S-UMW-3D**	SM 3500-Fe B#4	783946		
60396332005	**S-UMW-4D**	SM 3500-Fe B#4	783182		
60396332006	**S-UMW-5D**	SM 3500-Fe B#4	783182		
60396332007	**S-UMW-6D**	SM 3500-Fe B#4	783182		
60396332008	**S-UMW-DUP-1**	SM 3500-Fe B#4	783182		
60396332009	**S-UMW-FB-1**	SM 3500-Fe B#4	783215		
60396332012	**S-UMW-1D**	SM 3500-Fe B#4	783215		
60396332001	**S-BMW-1D**	SM 3500-Fe B#4	778712		
60396332002	**S-BMW-3D**	SM 3500-Fe B#4	778712		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA
Pace Project No.: 60396332

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396332003	**S-UMW-2D**	SM 3500-Fe B#4	779797		
60396332004	**S-UMW-3D**	SM 3500-Fe B#4	779797		
60396332005	**S-UMW-4D**	SM 3500-Fe B#4	779797		
60396332006	**S-UMW-5D**	SM 3500-Fe B#4	779797		
60396332007	**S-UMW-6D**	SM 3500-Fe B#4	779797		
60396332008	**S-UMW-DUP-1**	SM 3500-Fe B#4	779797		
60396332009	**S-UMW-FB-1**	SM 3500-Fe B#4	779797		
60396332012	**S-UMW-1D**	SM 3500-Fe B#4	780602		
60396332001	**S-BMW-1D**	SM 4500-S-2 D	779347		
60396332002	**S-BMW-3D**	SM 4500-S-2 D	779347		
60396332003	**S-UMW-2D**	SM 4500-S-2 D	779886		
60396332004	**S-UMW-3D**	SM 4500-S-2 D	780089		
60396332005	**S-UMW-4D**	SM 4500-S-2 D	779886		
60396332006	**S-UMW-5D**	SM 4500-S-2 D	780089		
60396332007	**S-UMW-6D**	SM 4500-S-2 D	780089		
60396332008	**S-UMW-DUP-1**	SM 4500-S-2 D	779886		
60396332009	**S-UMW-FB-1**	SM 4500-S-2 D	780089		
60396332012	**S-UMW-1D**	SM 4500-S-2 D	779886		
60396332001	**S-BMW-1D**	EPA 300.0	779754		
60396332002	**S-BMW-3D**	EPA 300.0	779754		
60396332003	**S-UMW-2D**	EPA 300.0	780287		
60396332004	**S-UMW-3D**	EPA 300.0	780287		
60396332005	**S-UMW-4D**	EPA 300.0	780288		
60396332006	**S-UMW-5D**	EPA 300.0	780288		
60396332007	**S-UMW-6D**	EPA 300.0	780288		
60396332008	**S-UMW-DUP-1**	EPA 300.0	780288		
60396332009	**S-UMW-FB-1**	EPA 300.0	780288		
60396332012	**S-UMW-1D**	EPA 300.0	780288		

WO# : 60396332

60396332

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

Client Name: Golder

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** 14.8/1.8 **Corr. Factor** -0.2 **Corrected** 14.6/1.6

Date and initials of person examining contents: PW 3/30/22 PW 3/30/22

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	Fe+2
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#:** 55192/55193	☐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: _____

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A — Required Client Information:

Company:	Golder Associates
Address:	701 Emerson Road, Suite 250
	Creve Coeur, Missouri, 63141
Email To:	jeffrey_ingram@golder.com
Phone:	636-724-9191 — Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider, Ryan Feldman, Brendan Talbert
Purchase Order No.:	COC #7
Project Name:	Ameren Sioux Energy Center SCPA
Project Number:	153140604. 0003

Section C — Invoice Information:

Attention:	
Company Name:	Golder Associates USA, Inc.
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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): N N N N

Pace Project No./ Lab I.D.: 60396332

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Chloride/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	S-UMW-1D	WT	G																											
2	S-UMW-2D	WT	G																											
3	S-UMW-3D	WT	G																											
4	S-UMW-4D	WT	G																											
5	S-UMW-5D	WT	G																											
6	S-UMW-6D	WT	G																											
7	S-BMW-1D	WT	G			3/29/22	1357		6	2		3		1					x	x	x	x	x	x	x	x	x	x	BP3U	BP3N BP3Z BP1U 2BP1N
8	S-BMW-3D	WT	G			↓	1307		↓	↓		↓		↓					↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓ ↓ ↓ ↓
9	S-UMW-DUP-1	WT	G																											
10	S-UMW-FB-1	WT	G																											
11	S-UMW-MS-1	WT	G																											
12	S-UMW-MSD-1	WT	G																											

ADDITIONAL COMMENTS

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
EPA 200.8: Sb, As, Cd, Cr, Se, Tl

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
[signature]	3/29/22	1630	Angele McManus	3/29	1630				
Angele Man	3/29	1630	[signature] PASI	3/30	0423	14.6	N	Y	Y
						1.6	Y	Y	Y

SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Eric Schneider

SIGNATURE of SAMPLER: [signature] — DATE Signed (MM/DD/YY): 03/29/22

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co	WO# : 60396332
	Revision: 2	Effective Date: 01/12/2022

Client Name: Golder Assoc

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 ☑ ZPLC

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

Cooler Temperature (°C): **As-read** 2.6, 0.9, 2.2 **Corr. Factor** -0.2 **Corrected** 2.4, 0.7, 2.0, 2.2, 1.3, 3.0, 12.8, 11.9, 12.8

Date and initials of person examining contents: VRB 4/2/22

Temperature should be above freezing to 6°C 2.4, 1.5, 3.2, 13.0, 12.0, 13.0

Chain of Custody present:	☑Yes ☐No ☐N/A	Any coolers outside reccomended temp only contained Radium Samples
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#:** 55192	☑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:	Golder Associates
Address:	701 Emerson Road, Suite 250
	Creve Coeur, Missouri, 63141
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider, Ryan Feldman, Brendan Talbert
Purchase Order No.:	COC #7
Project Name:	Ameren Sioux Energy Center SCPA
Project Number:	153140604. 0003

Section C — Invoice Information:

Attention:	
Company Name:	Golder Associates USA, Inc.
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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 #	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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~S-UMW-1D~~	WT	G			~~3-31-22~~			6	2		3	1				N	/	/	/	/	/	/	/	/	/	/		60396332
2	S-UMW-2D	WT	G		1426	3-31-22	~~1426~~ 1427		6	2		3	1					N	N	N	N	N	N	N	N	N	N		
3	S-UMW-3D	WT	G			"	1252																						
4	S-UMW-4D	WT	G			"	1127																						
5	S-UMW-5D	WT	G			3-31-22	1005																						
6	S-UMW-6D	WT	G			"	1207		"	"		"	"																
7	S-BMW-1D	WT	G																										
8	S-BMW-3D	WT	G																										
9	S-UMW-DUP-1	WT	G			3-31-22	—		6	2		3	1						/	/	/	/	/	/	/	/	/	/		
10	S-UMW-FB-1	WT	G			"	1455		1	1		1	1																
11	S-UMW-MS-1	WT	G			"	1252		"	"		"	"																
12	S-UMW-MSD-1	WT	G			"	1252		—	"		"	"																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Brendan Talbert / Golder	4-1-22	1640	Victor D / Pace	4/2/22	0300
**App IV Metals - EPA 200.7: Ba, Be, Co, Pb, Li, Mo EPA 200.8: Sb, As, Cd, Cr, Se, Tl						

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.4 0.7 2.0 1.3 3.0 1.8 11.8 12.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brendan Talbert

SIGNATURE of SAMPLER: Brendan Talbert

DATE Signed (MM/DD/YY): 04/01/22

*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.

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

WO# : 60396332

60396332

Client Name: Golder

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** 1.9/12.3 **Corr. Factor** -0.2 **Corrected** 1.7/12.1/14.2 **Date and initials of person examining contents:** PW 4/5/22

Temperature should be above freezing to 6°C 14.4

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	Fe+2
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#:** 55192/55193	☑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: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A
Required Client Information:

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Address:	701 Emerson Road, Suite 250
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Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider, Ryan Feldman, Brendan Talbert
Purchase Order No.:	COC #7
Project Name:	Ameren Sioux Energy Center SCPA
Project Number:	153140604. 0003

Section C
Invoice Information:

Attention:	
Company Name:	Golder Associates USA, Inc.
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60396332
																		Requested Analysis Filtered (Y/N)	N	N	N	N										
1	S-UMW-1D	WT	G			4/4/22	1041		6	2		3		1					X	X	X	X	X	X	X	X	X	X	BP3U		BP3N BP3Z BPIN 2BPIN
2	S-UMW-2D	WT	G																												
3	S-UMW-3D	WT	G																												
4	S-UMW-4D	WT	G																												
5	S-UMW-5D	WT	G																												
6	S-UMW-6D	WT	G																												
7	S-BMW-1D	WT	G																												
8	S-BMW-3D	WT	G																												
9	S-UMW-DUP-1	WT	G																												
10	S-UMW-FB-1	WT	G																												
11	S-UMW-MS-1	WT	G																												
12	S-UMW-MSD-1	WT	G																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B		4/4/2022	1545	Angela Nemaus	4/4	1545				
**App IV Metals - EPA 200.7: Ba, Be, Co, Pb, Li, Mo EPA 200.8: Sb, As, Cd, Cr, Se, Tl	Angela Nem	4/4	1545		4/5	0432	1.7	Y	X	Y
							12.1	N	↓	↓
							14.2	N	↓	↓

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Eric Schneider					
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 04/04/2022				

*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.

MEMORANDUM

DATE May 31, 2022 **Project No.** 153140604

TO Project File
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth **EMAIL ann.muehlfarth@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA – DETECTION MONITORING AND ASSESSMENT MONITORING - DATA PACKAGE 60396332

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, associated sample results were qualified as estimates (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 MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).
- When 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: Golder / WSP
Project Manager: J. Ingram
Project Name: Ameren SEC - SCPA
Project Number: 153140604
Reviewer: A. Muehlfarth
Validation Date: 5/31/2022

Laboratory: Pace Analytical Services
SDG #: 60396332
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); EPA 903.1/904.0 (Radium 226/228); SM2320B (Alkalinity);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ SM2540C (TDS); SM3500 (Ferric/Ferrous Iron); SM4500 (Sulfide); EPA 300.0 (Anions)
Sample Names S-BMW-1D, S-BMW-3D, S-UMW-2D, S-UMW-3D, S-UMW-4D, S-UMW-5D, S-UMW-6D, S-UMW-DUP-1, S-UMW-FB-1, S-UMW-MS-1, S-UMW-MSD-1, S-UMW-1D

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			3/29/2022 - 4/4/2022
b) Sampling team indicated?	x			BTT/EMS/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 Nots
g) Field parameters collected (note types)?	x			pH, Sp.Cond, ORP, Temp, DO, Turb
h) Field Calibration within control limits?				
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	

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			See Notes

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?		x		See Notes
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			See Notes

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			S-UMW-DUP-1 @ S-UMW-5D
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	x			
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		See Notes

Comments/Notes:

Some coolers received outside of recommended temperature, these coolers contained only radium, no qualification necessary.

Hold Times:

Ferrous Iron analyzed outside of hold time in all samples. All results qualified as estimates.

Dilutions:

Calcium, sulfate, and chloride analyzed at a dilution. No qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

MB 3111927: Beryllium (0.36J), magnesium (16.6J), molybdenum (2.4J); associated with samples -003, -005 through -009, -012 Results >10x blank or ND not qualified. Results <RL reported as ND at RL.

MB 3124382: Beryllium (0.44J); associated with sample -004. Result ND, no qualification necessary.

MB 3114213: Chloride (0.56J); associated with sample -001, -002. Results >RL and 10x blank not qualified. Results <10x blank but >RL qualified as estimate.

S-UMW-FB-1 @ S-UMW-2D: Boron (13.3J), chromium (0.53J), ferric iron (0.0047J). Results >RL and 10x blank not qualified. Results <RL reported as ND at RL.

Duplicates:

S-UMW-DUP-1 @ S-UMW-5D: RPD exceeds limit (20%) for chromium (21.3%); Selenium detected in dup, ND in parent sample.

Sample Duplicate 3112986: RPD exceeds limit (10%) for TDS (12%). Performed on unrelated sample, no qualification necessary.

MS/MSD:

3111913: MS % recovery high for calcium, sodium. Performed on unrelated sample, no qualification necessary.

3111929/3111930: MS % recovery high for calcium; MSD % recovery low for magnesium. Performed on unrelated sample, no qualification necessary.

3111931/3111932: MSD % recovery high for calcium. Performed on unrelated sample, no qualification necessary.

3124384/3124385: MSD % recovery low for boron, calcium, and sodium. Associated with sample S-UMW-3D. Only one QC indicator outside of control limits, no qualification necessary.

3108916/3108917: MS/MSD % recovery high for sulfide. Performed on unrelated sample, no qualification necessary.

3110337/3110338: MS/MSD % recovery high for chloride, fluoride, sulfate. Performed on unrelated sample, no qualification necessary.

3112212/3112213: RPD exceeds limit for fluoride; MS/MSD % recovery low for sulfate. Performed on unrelated sample, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-BMW-1D	Ferrous Iron	0.12	J	Analyzed outside of hold time
S-BMW-3D	"	0.21	J	"
S-UMW-4D	"	0.13	J	"
S-UMW-5D	"	0.24	J	"
S-UMW-DUP-1	"	0.26	J	"
S-UMW-FB-1	"	0.060	UJ	Analyzed outside of hold time; non-detect
S-UMW-1D	"	0.060	UJ	"
S-UMW-2D	"	0.060	UJ	"
S-UMW-3D	"	0.060	UJ	"
S-UMW-6D	"	0.060	UJ	"
S-UMW-2D	Beryllium	1.0	U	Detected in MB, Result <RL
S-BMW-1D	Chloride	4.3	J	Detected in MB, 10x blank > result > RL
S-UMW-2D	Chromium	1.0	U	Detected in MB, Result <RL
S-UMW-5D	Chromium	0.42	J	DUP RPD exceeds limit
"	Selenium	0.21	J	Detected in parent sample, ND in dup
S-UMW-DUP-1	Chromium	0.52	J	DUP RPD exceeds limit
"	Selenium	0.15	UJ	Detected in parent sample, ND in dup

Signature: Ann Muhlfeith Date: 5/31/2022

Pace Analytical Services, LLC
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May 05, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between March 30, 2022 and April 05, 2022. 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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

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CERTIFICATIONS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
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 #: PA014572018-1
New Hampshire/TNI Certification #: 297617
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 #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
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
Wyoming Certification #: 8TMS-L

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60396333001	S-AM-1S	Water	03/29/22 12:20	03/30/22 04:23
60396333002	S-AM-1D	Water	03/29/22 12:55	03/30/22 04:23
60396333003	S-TP-6D	Water	03/29/22 15:00	03/30/22 04:23
60396333004	S-TP-6S	Water	03/29/22 14:59	03/30/22 04:23
60396333005	S-LMW-6S	Water	04/01/22 12:33	04/02/22 03:00
60396333006	S-LMW-5S	Water	04/01/22 09:27	04/02/22 03:00
60396333007	S-CA-MS-1	Water	04/01/22 12:25	04/02/22 03:00
60396333008	S-PZ-9D	Water	04/01/22 11:22	04/02/22 03:00
60396333009	S-TP-2D	Water	04/01/22 10:30	04/02/22 03:00
60396333010	S-TP-3D	Water	04/01/22 12:17	04/02/22 03:00
60396333011	S-TP-4D	Water	04/01/22 12:25	04/02/22 03:00
60396333012	S-TP-5D	Water	04/01/22 15:08	04/02/22 03:00
60396333013	S-CA-DUP-2	Water	04/01/22 08:00	04/02/22 03:00
60396333014	S-CA-FB-2	Water	04/01/22 15:30	04/02/22 03:00
60396333015	S-CA-MSD-1	Water	04/01/22 12:25	04/02/22 03:00
60396333016	S-UG-3	Water	04/01/22 13:59	04/02/22 03:00
60396333017	S-LMW-1S	Water	03/31/22 14:52	04/02/22 03:00
60396333018	S-CA-DUP-1	Water	03/31/22 08:00	04/02/22 03:00
60396333019	S-CA-FB-1	Water	03/31/22 10:40	04/02/22 03:00
60396333020	S-PZ-1S	Water	03/31/22 10:22	04/02/22 03:00
60396333021	S-TP-8D	Water	04/04/22 13:43	04/05/22 04:32
60396333022	S-LMW-4S	Water	04/04/22 13:05	04/05/22 04:32
60396333023	S-LMW-2S	Water	04/04/22 12:10	04/05/22 04:32
60396337002	S-BMW-1S	Water	03/29/22 14:00	03/30/22 04:23
60396337003	S-BMW-3S	Water	03/29/22 12:20	03/30/22 04:23

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60396333001	**S-AM-1S**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333002	**S-AM-1D**	EPA 200.7	MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333003	**S-TP-6D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333004	**S-TP-6S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333005	**S-LMW-6S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333006	**S-LMW-5S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333007	**S-CA-MS-1**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
60396333008	**S-PZ-9D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333009	**S-TP-2D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333010	**S-TP-3D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333011	**S-TP-4D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	CRN2	3	PASI-K
60396333012	S-TP-5D	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333013	S-CA-DUP-2	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333014	S-CA-FB-2	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333015	S-CA-MSD-1	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
60396333016	S-UG-3	EPA 200.7	JLH, MRV	13	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333017	**S-LMW-1S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333018	**S-CA-DUP-1**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333019	**S-CA-FB-1**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333020	**S-PZ-1S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333021	**S-TP-8D**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333022	**S-LMW-4S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396333023	**S-LMW-2S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	KB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60396337002	**S-BMW-1S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	LDB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	KB	3	PASI-K
60396337003	**S-BMW-3S**	EPA 200.7	JLH, MRV	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		SM 2320B	LDB	1	PASI-K
		SM 2540C	TNB	1	PASI-K
		SM 3500-Fe B#4	BLA	1	PASI-K
		SM 3500-Fe B#4	SK	1	PASI-K
		SM 4500-S-2 D	SK	1	PASI-K
		EPA 300.0	KB	3	PASI-K

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-AM-1S **Lab ID: 60396333001** Collected: 03/29/22 12:20 Received: 03/30/22 04:23 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	**138**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 16:49	7440-39-3	
Beryllium	**0.41J**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 16:49	7440-41-7	B
Boron	**1660**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 16:49	7440-42-8	
Calcium	**80400**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 16:49	7440-70-2	
Cobalt	**2.9J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 16:49	7440-48-4	
Iron	**1090**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 16:49	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 16:49	7439-92-1	
Lithium	**25.2**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 16:49	7439-93-2	
Magnesium	**17000**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 16:49	7439-95-4	
Manganese	**1180**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 16:49	7439-96-5	
Molybdenum	**183**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 16:49	7439-98-7	
Potassium	**7380**	ug/L	500	224	1	04/07/22 13:51	04/09/22 16:49	7440-09-7	
Sodium	**19100**	ug/L	500	166	1	04/07/22 13:51	04/10/22 16:03	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	04/07/22 11:58	04/11/22 11:07	7440-36-0	
Arsenic	**1.3**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:07	7440-38-2	
Cadmium	**0.10J**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:07	7440-43-9	
Chromium	**0.42J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:07	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:07	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/18/22 15:29	04/19/22 09:23	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**245**	mg/L	20.0	4.6	1		04/11/22 16:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**358**	mg/L	5.0	5.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**1.1**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		03/30/22 17:10	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-AM-1S **Lab ID: 60396333001** Collected: 03/29/22 12:20 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/04/22 14:44	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**22.3**	mg/L	5.0	2.6	5		04/06/22 16:16	16887-00-6	B
Fluoride	**0.49**	mg/L	0.20	0.12	1		04/06/22 16:02	16984-48-8	
Sulfate	**34.5**	mg/L	5.0	2.8	5		04/06/22 16:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-AM-1D **Lab ID: 60396333002** Collected: 03/29/22 12:55 Received: 03/30/22 04:23 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	**220**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 16:51	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 16:51	7440-41-7	
Boron	**7520**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 16:51	7440-42-8	
Calcium	**75700**	ug/L	200	71.3	1	04/07/22 13:51	04/09/22 16:51	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 16:51	7440-48-4	
Iron	**2530**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 16:51	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 16:51	7439-92-1	
Lithium	**31.7**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 16:51	7439-93-2	
Magnesium	**16000**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 16:51	7439-95-4	
Manganese	**344**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 16:51	7439-96-5	
Molybdenum	**478**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 16:51	7439-98-7	
Potassium	**6650**	ug/L	500	224	1	04/07/22 13:51	04/09/22 16:51	7440-09-7	
Sodium	**22800**	ug/L	500	166	1	04/07/22 13:51	04/10/22 16:05	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.23J**	ug/L	1.0	0.12	1	04/07/22 11:58	04/11/22 11:14	7440-36-0	
Arsenic	**0.20J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:14	7440-38-2	
Cadmium	**0.14J**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:14	7440-43-9	
Chromium	**0.41J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:14	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:14	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/18/22 15:29	04/19/22 09:26	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**218**	mg/L	20.0	4.6	1		04/11/22 16:54		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**349**	mg/L	5.0	5.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**2.5**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		03/30/22 17:13	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-AM-1D **Lab ID: 60396333002** Collected: 03/29/22 12:55 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/04/22 14:44	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**26.6**	mg/L	10.0	5.3	10		04/06/22 17:12	16887-00-6	B
Fluoride	**0.53**	mg/L	0.20	0.12	1		04/06/22 16:58	16984-48-8	
Sulfate	**40.0**	mg/L	10.0	5.5	10		04/06/22 17:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-6D **Lab ID: 60396333003** Collected: 03/29/22 15:00 Received: 03/30/22 04:23 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	**414**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 16:58	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 16:58	7440-41-7	
Boron	**61.4J**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 16:58	7440-42-8	
Calcium	**119000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 18:34	7440-70-2	
Cobalt	**2.4J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 16:58	7440-48-4	
Iron	**7540**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 16:58	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 16:58	7439-92-1	
Lithium	**26.5**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 16:58	7439-93-2	
Magnesium	**28800**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 16:58	7439-95-4	
Manganese	**496**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 16:58	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 16:58	7439-98-7	
Potassium	**3850**	ug/L	500	224	1	04/07/22 13:51	04/09/22 16:58	7440-09-7	
Sodium	**7220**	ug/L	500	166	1	04/07/22 13:51	04/09/22 16:58	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	04/07/22 11:58	04/11/22 11:18	7440-36-0	
Arsenic	**<0.14**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:18	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:18	7440-43-9	
Chromium	**0.35J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:18	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:18	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/18/22 15:29	04/19/22 09:28	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**353**	mg/L	20.0	4.6	1		04/11/22 17:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**463**	mg/L	10.0	10.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**6.2**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**1.3**	mg/L	0.20	0.060	1		03/30/22 17:14	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-6D **Lab ID: 60396333003** Collected: 03/29/22 15:00 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/04/22 14:46	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**13.2**	mg/L	1.0	0.53	1		04/06/22 17:26	16887-00-6	
Fluoride	**0.24**	mg/L	0.20	0.12	1		04/06/22 17:26	16984-48-8	
Sulfate	**47.6**	mg/L	10.0	5.5	10		04/06/22 17:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-6S **Lab ID: 60396333004** Collected: 03/29/22 14:59 Received: 03/30/22 04:23 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	**302**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 17:00	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 17:00	7440-41-7	
Boron	**99.5J**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 17:00	7440-42-8	
Calcium	**134000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 18:36	7440-70-2	
Cobalt	**2.3J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 17:00	7440-48-4	
Iron	**92.0**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 17:00	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 17:00	7439-92-1	
Lithium	**36.0**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 17:00	7439-93-2	
Magnesium	**28700**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 17:00	7439-95-4	
Manganese	**209**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 17:00	7439-96-5	
Molybdenum	**3.0J**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 17:00	7439-98-7	B
Potassium	**2420**	ug/L	500	224	1	04/07/22 13:51	04/09/22 17:00	7440-09-7	
Sodium	**5940**	ug/L	500	166	1	04/07/22 13:51	04/09/22 17:00	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	04/07/22 11:58	04/11/22 11:21	7440-36-0	
Arsenic	**0.52J**	ug/L	1.0	0.14	1	04/07/22 11:58	04/11/22 11:21	7440-38-2	
Cadmium	**0.066J**	ug/L	0.50	0.053	1	04/07/22 11:58	04/11/22 11:21	7440-43-9	
Chromium	**0.59J**	ug/L	1.0	0.31	1	04/07/22 11:58	04/11/22 11:21	7440-47-3	
Selenium	**0.32J**	ug/L	1.0	0.18	1	04/07/22 11:58	04/11/22 11:21	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/07/22 11:58	04/11/22 11:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/18/22 15:29	04/19/22 09:30	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**410**	mg/L	20.0	4.6	1		04/11/22 17:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**487**	mg/L	10.0	10.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.092**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		03/30/22 17:14	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-6S **Lab ID: 60396333004** Collected: 03/29/22 14:59 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/04/22 14:46	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**7.8**	mg/L	1.0	0.53	1		04/06/22 17:54	16887-00-6	
Fluoride	**0.27**	mg/L	0.20	0.12	1		04/06/22 17:54	16984-48-8	
Sulfate	**35.2**	mg/L	5.0	2.8	5		04/06/22 18:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-6S **Lab ID: 60396333005** Collected: 04/01/22 12:33 Received: 04/02/22 03:00 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	**45.0**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 19:43	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 19:43	7440-41-7	
Boron	**26100**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 14:50	7440-42-8	
Calcium	**260000**	ug/L	600	214	3	04/07/22 16:00	04/11/22 19:42	7440-70-2	
Cobalt	**8.0**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 19:43	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 19:43	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 19:43	7439-92-1	
Lithium	**23.0**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 19:43	7439-93-2	
Magnesium	**63200**	ug/L	150	35.1	3	04/07/22 16:00	04/11/22 19:42	7439-95-4	
Manganese	**487**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 19:43	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 19:43	7439-98-7	
Potassium	**4930**	ug/L	500	224	1	04/07/22 16:00	04/11/22 14:50	7440-09-7	
Sodium	**96300**	ug/L	500	166	1	04/07/22 16:00	04/11/22 14:50	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.23J**	ug/L	1.0	0.12	1	04/11/22 08:52	04/12/22 14:06	7440-36-0	
Arsenic	**0.67J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:06	7440-38-2	
Cadmium	**0.69**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:06	7440-43-9	
Chromium	**0.41J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:06	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:06	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:14	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**378**	mg/L	20.0	4.6	1		04/13/22 18:04		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1470**	mg/L	13.3	13.3	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.015J**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:31	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-6S **Lab ID: 60396333005** Collected: 04/01/22 12:33 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:19	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.5**	mg/L	1.0	0.53	1		04/07/22 21:50	16887-00-6	
Fluoride	**0.19J**	mg/L	0.20	0.12	1		04/07/22 21:50	16984-48-8	
Sulfate	**705**	mg/L	100	55.0	100		04/06/22 19:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-5S **Lab ID: 60396333006** Collected: 04/01/22 09:27 Received: 04/02/22 03:00 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	**54.2**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 19:45	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 19:45	7440-41-7	
Boron	**16300**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 14:52	7440-42-8	
Calcium	**264000**	ug/L	600	214	3	04/07/22 16:00	04/11/22 19:44	7440-70-2	
Cobalt	**1.8J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 19:45	7440-48-4	
Iron	**120**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 19:45	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 19:45	7439-92-1	
Lithium	**62.8**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 19:45	7439-93-2	
Magnesium	**45300**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 19:45	7439-95-4	
Manganese	**1710**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 19:45	7439-96-5	
Molybdenum	**2000**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 19:45	7439-98-7	
Potassium	**5090**	ug/L	500	224	1	04/07/22 16:00	04/11/22 14:52	7440-09-7	
Sodium	**201000**	ug/L	500	166	1	04/07/22 16:00	04/11/22 14:52	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	04/11/22 08:52	04/12/22 14:12	7440-36-0	
Arsenic	**0.80J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:12	7440-38-2	
Cadmium	**1.1**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:12	7440-43-9	
Chromium	**0.37J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:12	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:12	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:12	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:16	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**320**	mg/L	20.0	4.6	1		04/13/22 18:11		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1610**	mg/L	20.0	20.0	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.12**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:29	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-5S **Lab ID: 60396333006** Collected: 04/01/22 09:27 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:19	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**17.1**	mg/L	1.0	0.53	1		04/06/22 19:42	16887-00-6	
Fluoride	**0.39**	mg/L	0.20	0.12	1		04/06/22 19:42	16984-48-8	
Sulfate	**899**	mg/L	100	55.0	100		04/06/22 19:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-PZ-9D **Lab ID: 60396333008** Collected: 04/01/22 11:22 Received: 04/02/22 03:00 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	1.2	1	04/07/22 16:00	04/09/22 19:48	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 19:48	7440-41-7	
Boron	**4450**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 14:54	7440-42-8	
Calcium	**180000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 19:51	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 19:48	7440-48-4	
Iron	**10800**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 19:48	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 19:48	7439-92-1	
Lithium	**35.2**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 19:48	7439-93-2	
Magnesium	**39400**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 19:48	7439-95-4	
Manganese	**1090**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 19:48	7439-96-5	
Molybdenum	**21.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 19:48	7439-98-7	
Potassium	**4660**	ug/L	500	224	1	04/07/22 16:00	04/11/22 14:54	7440-09-7	
Sodium	**19800**	ug/L	500	166	1	04/07/22 16:00	04/11/22 14:54	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	04/11/22 08:52	04/12/22 14:15	7440-36-0	
Arsenic	**0.60J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:15	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:15	7440-43-9	
Chromium	**0.61J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:15	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:15	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:15	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:19	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**336**	mg/L	20.0	4.6	1		04/13/22 18:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**895**	mg/L	10.0	10.0	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**10.4**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.35**	mg/L	0.20	0.060	1		04/06/22 15:30	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-PZ-9D **Lab ID: 60396333008** Collected: 04/01/22 11:22 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:20	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**11.2**	mg/L	1.0	0.53	1		04/06/22 20:09	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/06/22 20:09	16984-48-8	
Sulfate	**332**	mg/L	50.0	27.5	50		04/06/22 20:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-2D **Lab ID: 60396333009** Collected: 04/01/22 10:30 Received: 04/02/22 03:00 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	**65.2**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 19:50	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 19:50	7440-41-7	
Boron	**122**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 14:56	7440-42-8	
Calcium	**265000**	ug/L	600	214	3	04/07/22 16:00	04/11/22 19:53	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 19:50	7440-48-4	
Iron	**16900**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 19:50	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 19:50	7439-92-1	
Lithium	**58.9**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 19:50	7439-93-2	
Magnesium	**70500**	ug/L	150	35.1	3	04/07/22 16:00	04/11/22 19:53	7439-95-4	
Manganese	**1320**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 19:50	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 19:50	7439-98-7	
Potassium	**6260**	ug/L	500	224	1	04/07/22 16:00	04/11/22 14:56	7440-09-7	
Sodium	**26500**	ug/L	500	166	1	04/07/22 16:00	04/11/22 14:56	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	04/11/22 08:52	04/12/22 14:17	7440-36-0	
Arsenic	**0.18J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:17	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:17	7440-43-9	
Chromium	**0.44J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:17	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:17	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:21	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<4.6**	mg/L	20.0	4.6	1		04/13/22 18:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1330**	mg/L	13.3	13.3	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**16.6**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.36**	mg/L	0.20	0.060	1		04/06/22 15:29	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-2D **Lab ID: 60396333009** Collected: 04/01/22 10:30 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:20	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**72.0**	mg/L	10.0	5.3	10		04/06/22 21:19	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/06/22 21:05	16984-48-8	
Sulfate	**500**	mg/L	50.0	27.5	50		04/06/22 21:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-3D **Lab ID: 60396333010** Collected: 04/01/22 12:17 Received: 04/02/22 03:00 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	**586**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 19:52	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 19:52	7440-41-7	
Boron	**98.6J**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 14:59	7440-42-8	
Calcium	**109000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 19:56	7440-70-2	
Cobalt	**3.7J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 19:52	7440-48-4	
Iron	**7490**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 19:52	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 19:52	7439-92-1	
Lithium	**33.4**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 19:52	7439-93-2	
Magnesium	**26500**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 19:52	7439-95-4	
Manganese	**613**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 19:52	7439-96-5	
Molybdenum	**1.9J**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 19:52	7439-98-7	
Potassium	**3830**	ug/L	500	224	1	04/07/22 16:00	04/11/22 14:59	7440-09-7	
Sodium	**6910**	ug/L	500	166	1	04/07/22 16:00	04/11/22 14:59	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	04/11/22 08:52	04/12/22 14:20	7440-36-0	
Arsenic	**<0.14**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:20	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:20	7440-43-9	
Chromium	**0.43J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:20	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:20	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:23	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**326**	mg/L	20.0	4.6	1		04/13/22 18:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**526**	mg/L	10.0	10.0	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**7.4**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.13J**	mg/L	0.20	0.060	1		04/06/22 15:30	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-3D **Lab ID: 60396333010** Collected: 04/01/22 12:17 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/07/22 14:20	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.2**	mg/L	1.0	0.53	1		04/06/22 21:46	16887-00-6	
Fluoride	**0.21**	mg/L	0.20	0.12	1		04/06/22 21:46	16984-48-8	
Sulfate	**84.2**	mg/L	10.0	5.5	10		04/06/22 22:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-4D **Lab ID: 60396333011** Collected: 04/01/22 12:25 Received: 04/02/22 03:00 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	**588**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 19:54	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 19:54	7440-41-7	
Boron	**87.1J**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 15:01	7440-42-8	
Calcium	**105000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 19:58	7440-70-2	M1
Cobalt	**3.7J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 19:54	7440-48-4	
Iron	**6090**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 19:54	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 19:54	7439-92-1	
Lithium	**31.6**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 19:54	7439-93-2	
Magnesium	**26000**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 19:54	7439-95-4	
Manganese	**378**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 19:54	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 19:54	7439-98-7	
Potassium	**3480**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:01	7440-09-7	
Sodium	**9380**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:01	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	04/11/22 08:52	04/12/22 14:26	7440-36-0	
Arsenic	**1.9**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:26	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:26	7440-43-9	
Chromium	**0.43J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:26	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:26	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:25	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**291**	mg/L	20.0	4.6	1		04/13/22 18:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**534**	mg/L	10.0	10.0	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**6.1**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/12/22 12:45	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-4D **Lab ID: 60396333011** Collected: 04/01/22 12:25 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:58	18496-25-8	
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		04/06/22 22:14	16887-00-6	
Fluoride	**0.22**	mg/L	0.20	0.12	1		04/06/22 22:14	16984-48-8	
Sulfate	**112**	mg/L	10.0	5.5	10		04/06/22 23:37	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-5D **Lab ID: 60396333012** Collected: 04/01/22 15:08 Received: 04/02/22 03:00 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	1.2	1	04/07/22 16:00	04/09/22 20:01	7440-39-3	
Beryllium	**0.49J**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:01	7440-41-7	B
Boron	**8210**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 15:12	7440-42-8	
Calcium	**102000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 20:05	7440-70-2	
Cobalt	**1.9J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:01	7440-48-4	
Iron	**7310**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:01	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:01	7439-92-1	
Lithium	**35.3**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:01	7439-93-2	
Magnesium	**25000**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:01	7439-95-4	
Manganese	**827**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:01	7439-96-5	
Molybdenum	**622**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:01	7439-98-7	
Potassium	**4450**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:12	7440-09-7	
Sodium	**37000**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:12	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	04/11/22 08:52	04/12/22 14:35	7440-36-0	
Arsenic	**0.22J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:35	7440-38-2	
Cadmium	**0.23J**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:35	7440-43-9	
Chromium	**0.43J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:35	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:35	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:32	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**161**	mg/L	20.0	4.6	1		04/13/22 18:58		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**627**	mg/L	10.0	10.0	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**7.1**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.21**	mg/L	0.20	0.060	1		04/12/22 12:46	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-5D **Lab ID: 60396333012** Collected: 04/01/22 15:08 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:59	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**28.0**	mg/L	5.0	2.6	5		04/07/22 22:04	16887-00-6	
Fluoride	**0.36**	mg/L	0.20	0.12	1		04/07/22 00:33	16984-48-8	
Sulfate	**254**	mg/L	20.0	11.0	20		04/07/22 00:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-DUP-2 **Lab ID: 60396333013** Collected: 04/01/22 08:00 Received: 04/02/22 03:00 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	**52.7**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:04	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:04	7440-41-7	
Boron	**13900**	ug/L	100	7.1	1	04/07/22 16:00	04/11/22 15:14	7440-42-8	
Calcium	**247000**	ug/L	600	214	3	04/07/22 16:00	04/11/22 20:07	7440-70-2	
Cobalt	**2.1J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:04	7440-48-4	
Iron	**86.6**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:04	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:04	7439-92-1	
Lithium	**59.2**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:04	7439-93-2	
Magnesium	**43400**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:04	7439-95-4	
Manganese	**1580**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:04	7439-96-5	
Molybdenum	**1860**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:04	7439-98-7	
Potassium	**4460**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:14	7440-09-7	
Sodium	**162000**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:14	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	04/11/22 08:52	04/12/22 14:40	7440-36-0	
Arsenic	**0.77J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:40	7440-38-2	
Cadmium	**1.1**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:40	7440-43-9	
Chromium	**0.65J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:40	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:40	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:35	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**331**	mg/L	20.0	4.6	1		04/13/22 19:04		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1630**	mg/L	20.0	20.0	1		04/07/22 16:11		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.087**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:28	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-DUP-2 **Lab ID: 60396333013** Collected: 04/01/22 08:00 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:59	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**35.6**	mg/L	5.0	2.6	5		04/15/22 17:10	16887-00-6	
Fluoride	**0.27**	mg/L	0.20	0.12	1		04/15/22 16:55	16984-48-8	
Sulfate	**12.2**	mg/L	1.0	0.55	1		04/15/22 16:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-FB-2 **Lab ID: 60396333014** Collected: 04/01/22 15:30 Received: 04/02/22 03:00 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	**<1.2**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:11	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:11	7440-41-7	
Boron	**21.9J**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:11	7440-42-8	
Calcium	**<71.3**	ug/L	200	71.3	1	04/07/22 16:00	04/09/22 20:11	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:11	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:11	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:11	7439-92-1	
Lithium	**<1.2**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:11	7439-93-2	
Magnesium	**<11.7**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:11	7439-95-4	
Manganese	**<1.1**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:11	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:11	7439-98-7	
Potassium	**<224**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:17	7440-09-7	
Sodium	**<166**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:17	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	04/11/22 08:52	04/12/22 14:56	7440-36-0	
Arsenic	**<0.14**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:56	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:56	7440-43-9	
Chromium	**0.64J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:56	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:56	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:41	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<4.6**	mg/L	20.0	4.6	1		04/13/22 19:10		
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		04/07/22 16:12		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0063J**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/12/22 12:46	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-FB-2 **Lab ID: 60396333014** Collected: 04/01/22 15:30 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:59	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**510**	mg/L	100	52.7	100		04/18/22 15:35	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/15/22 17:38	16984-48-8	
Sulfate	**152**	mg/L	10.0	5.5	10		04/18/22 15:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-UG-3 **Lab ID: 60396333016** Collected: 04/01/22 13:59 Received: 04/02/22 03:00 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	**265**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:13	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:13	7440-41-7	
Boron	**184**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:13	7440-42-8	
Calcium	**120000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 20:09	7440-70-2	
Cobalt	**5.9**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:13	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:13	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:13	7439-92-1	
Lithium	**34.2**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:13	7439-93-2	
Magnesium	**24500**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:13	7439-95-4	
Manganese	**1120**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:13	7439-96-5	
Molybdenum	**3.1J**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:13	7439-98-7	
Potassium	**5970**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:19	7440-09-7	
Sodium	**52900**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:19	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.23J**	ug/L	1.0	0.12	1	04/11/22 08:52	04/12/22 14:43	7440-36-0	
Arsenic	**0.38J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:43	7440-38-2	
Cadmium	**0.38J**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:43	7440-43-9	
Chromium	**0.65J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:43	7440-47-3	
Selenium	**2.0**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:43	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:44	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**393**	mg/L	20.0	4.6	1		04/13/22 19:14		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**612**	mg/L	10.0	10.0	1		04/07/22 16:12		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.014J**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/12/22 12:45	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-UG-3 **Lab ID: 60396333016** Collected: 04/01/22 13:59 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**73.5**	mg/L	10.0	5.3	10		04/15/22 18:49	16887-00-6	
Fluoride	**0.35**	mg/L	0.20	0.12	1		04/15/22 18:06	16984-48-8	
Sulfate	**18.6**	mg/L	1.0	0.55	1		04/15/22 18:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-1S **Lab ID: 60396333017** Collected: 03/31/22 14:52 Received: 04/02/22 03:00 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	**146**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:15	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:15	7440-41-7	
Boron	**231**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:15	7440-42-8	
Calcium	**73000**	ug/L	200	71.3	1	04/07/22 16:00	04/09/22 20:15	7440-70-2	
Cobalt	**4.2J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:15	7440-48-4	
Iron	**105**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:15	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:15	7439-92-1	
Lithium	**14.8**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:15	7439-93-2	
Magnesium	**17700**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:15	7439-95-4	
Manganese	**195**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:15	7439-96-5	
Molybdenum	**60.4**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:15	7439-98-7	
Potassium	**5830**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:21	7440-09-7	
Sodium	**15900**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:21	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.44J**	ug/L	1.0	0.12	1	04/11/22 08:52	04/12/22 14:46	7440-36-0	
Arsenic	**2.2**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:46	7440-38-2	
Cadmium	**0.12J**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:46	7440-43-9	
Chromium	**0.73J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:46	7440-47-3	
Selenium	**2.6**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:46	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:46	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**204**	mg/L	20.0	4.6	1		04/13/22 16:34		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**334**	mg/L	5.0	5.0	1		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.11**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:26	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-1S **Lab ID: 60396333017** Collected: 03/31/22 14:52 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:54	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**30.8**	mg/L	5.0	2.6	5		04/18/22 15:49	16887-00-6	B
Fluoride	**0.27**	mg/L	0.20	0.12	1		04/15/22 19:03	16984-48-8	
Sulfate	**16.7**	mg/L	1.0	0.55	1		04/15/22 19:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-DUP-1 **Lab ID: 60396333018** Collected: 03/31/22 08:00 Received: 04/02/22 03:00 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	**139**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:18	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:18	7440-41-7	
Boron	**232**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:18	7440-42-8	
Calcium	**71900**	ug/L	200	71.3	1	04/07/22 16:00	04/09/22 20:18	7440-70-2	
Cobalt	**2.2J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:18	7440-48-4	
Iron	**45.6J**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:18	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:18	7439-92-1	
Lithium	**14.9**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:18	7439-93-2	
Magnesium	**17600**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:18	7439-95-4	
Manganese	**76.6**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:18	7439-96-5	
Molybdenum	**63.9**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:18	7439-98-7	
Potassium	**5970**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:23	7440-09-7	
Sodium	**16100**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:23	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.40J**	ug/L	1.0	0.12	1	04/11/22 08:52	04/12/22 14:49	7440-36-0	
Arsenic	**2.0**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:49	7440-38-2	
Cadmium	**0.067J**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:49	7440-43-9	
Chromium	**0.59J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:49	7440-47-3	
Selenium	**2.3**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:49	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:48	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**208**	mg/L	20.0	4.6	1		04/13/22 16:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**338**	mg/L	5.0	5.0	1		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.046J**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:21	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-DUP-1 **Lab ID: 60396333018** Collected: 03/31/22 08:00 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:55	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**45.0**	mg/L	10.0	5.3	10		04/18/22 16:03	16887-00-6	B
Fluoride	**0.35**	mg/L	0.20	0.12	1		04/15/22 19:31	16984-48-8	
Sulfate	**14.0**	mg/L	1.0	0.55	1		04/15/22 19:31	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-FB-1 **Lab ID: 60396333019** Collected: 03/31/22 10:40 Received: 04/02/22 03:00 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	**<1.2**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:20	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:20	7440-41-7	
Boron	**14.3J**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:20	7440-42-8	
Calcium	**<71.3**	ug/L	200	71.3	1	04/07/22 16:00	04/09/22 20:20	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:20	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:20	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:20	7439-92-1	
Lithium	**<1.2**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:20	7439-93-2	
Magnesium	**<11.7**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:20	7439-95-4	
Manganese	**<1.1**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:20	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:20	7439-98-7	
Potassium	**<224**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:26	7440-09-7	
Sodium	**<166**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:26	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	04/11/22 08:52	04/12/22 14:58	7440-36-0	
Arsenic	**<0.14**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:58	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:58	7440-43-9	
Chromium	**0.33J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:58	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:58	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:51	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<4.6**	mg/L	20.0	4.6	1		04/13/22 16:53		
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		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0019J**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:24	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-FB-1 **Lab ID: 60396333019** Collected: 03/31/22 10:40 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:55	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**16.4**	mg/L	1.0	0.53	1		04/15/22 19:59	16887-00-6	
Fluoride	**0.37**	mg/L	0.20	0.12	1		04/15/22 19:59	16984-48-8	
Sulfate	**9.8**	mg/L	1.0	0.55	1		04/15/22 19:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-PZ-1S **Lab ID: 60396333020** Collected: 03/31/22 10:22 Received: 04/02/22 03:00 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	**104**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:22	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:22	7440-41-7	
Boron	**2830**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:22	7440-42-8	
Calcium	**90400**	ug/L	200	71.3	1	04/07/22 16:00	04/09/22 20:22	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:22	7440-48-4	
Iron	**4510**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:22	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:22	7439-92-1	
Lithium	**15.1**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:22	7439-93-2	
Magnesium	**17400**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:22	7439-95-4	
Manganese	**964**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:22	7439-96-5	
Molybdenum	**682**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:22	7439-98-7	
Potassium	**3150**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:28	7440-09-7	
Sodium	**19900**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:28	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	04/11/22 08:52	04/12/22 14:59	7440-36-0	
Arsenic	**0.34J**	ug/L	1.0	0.14	1	04/11/22 08:52	04/12/22 14:59	7440-38-2	
Cadmium	**0.26J**	ug/L	0.50	0.053	1	04/11/22 08:52	04/12/22 14:59	7440-43-9	
Chromium	**0.44J**	ug/L	1.0	0.31	1	04/11/22 08:52	04/12/22 14:59	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/11/22 08:52	04/12/22 14:59	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/11/22 08:52	04/12/22 14:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 11:53	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**260**	mg/L	20.0	4.6	1		04/13/22 17:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**395**	mg/L	5.0	5.0	1		04/06/22 14:43		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**4.5**	mg/L	0.050		1		04/25/22 15:14	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.060J**	mg/L	0.20	0.060	1		04/06/22 15:23	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-PZ-1S **Lab ID: 60396333020** Collected: 03/31/22 10:22 Received: 04/02/22 03:00 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:55	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**199**	mg/L	50.0	26.4	50		04/15/22 20:27	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/15/22 20:13	16984-48-8	
Sulfate	**27.4**	mg/L	5.0	2.8	5		04/18/22 16:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-8D **Lab ID: 60396333021** Collected: 04/04/22 13:43 Received: 04/05/22 04:32 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	**383**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:25	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:25	7440-41-7	
Boron	**89.5J**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:25	7440-42-8	
Calcium	**102000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 20:11	7440-70-2	
Cobalt	**2.1J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:25	7440-48-4	
Iron	**6300**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:25	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:25	7439-92-1	
Lithium	**32.0**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:25	7439-93-2	
Magnesium	**24300**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:25	7439-95-4	
Manganese	**436**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:25	7439-96-5	
Molybdenum	**2.1J**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:25	7439-98-7	
Potassium	**3340**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:30	7440-09-7	
Sodium	**5350**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:30	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**<0.12**	ug/L	1.0	0.12	1	04/22/22 13:25	04/23/22 16:04	7440-36-0	
Arsenic	**1.5**	ug/L	1.0	0.14	1	04/22/22 13:25	04/23/22 16:04	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/22/22 13:25	04/23/22 16:04	7440-43-9	
Chromium	**0.50J**	ug/L	1.0	0.31	1	04/22/22 13:25	04/23/22 16:04	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/22/22 13:25	04/23/22 16:04	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/22/22 13:25	04/23/22 16:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:54	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**339**	mg/L	20.0	4.6	1		04/14/22 16:28		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**441**	mg/L	10.0	10.0	1		04/08/22 15:18		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**6.2**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**0.12J**	mg/L	0.20	0.060	1		04/12/22 12:49	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-8D **Lab ID: 60396333021** Collected: 04/04/22 13:43 Received: 04/05/22 04:32 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**14.2**	mg/L	1.0	0.53	1		04/15/22 21:52	16887-00-6	
Fluoride	**0.27**	mg/L	0.20	0.12	1		04/15/22 21:52	16984-48-8	
Sulfate	**42.4**	mg/L	5.0	2.8	5		04/15/22 22:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-4S **Lab ID: 60396333022** Collected: 04/04/22 13:05 Received: 04/05/22 04:32 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	**241**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:27	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:27	7440-41-7	
Boron	**594**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:27	7440-42-8	
Calcium	**175000**	ug/L	400	143	2	04/07/22 16:00	04/11/22 20:18	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:27	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:27	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:27	7439-92-1	
Lithium	**29.7**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:27	7439-93-2	
Magnesium	**38600**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:27	7439-95-4	
Manganese	**54.6**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:27	7439-96-5	
Molybdenum	**<1.8**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:27	7439-98-7	
Potassium	**4960**	ug/L	500	224	1	04/07/22 16:00	04/11/22 15:32	7440-09-7	
Sodium	**11100**	ug/L	500	166	1	04/07/22 16:00	04/11/22 15:32	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.15J**	ug/L	1.0	0.12	1	04/22/22 13:25	04/23/22 16:07	7440-36-0	
Arsenic	**0.59J**	ug/L	1.0	0.14	1	04/22/22 13:25	04/23/22 16:07	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	04/22/22 13:25	04/23/22 16:07	7440-43-9	
Chromium	**0.47J**	ug/L	1.0	0.31	1	04/22/22 13:25	04/23/22 16:07	7440-47-3	
Selenium	**0.94J**	ug/L	1.0	0.18	1	04/22/22 13:25	04/23/22 16:07	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/22/22 13:25	04/23/22 16:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:56	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**577**	mg/L	20.0	4.6	1		04/14/22 16:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**647**	mg/L	10.0	10.0	1		04/08/22 15:18		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0088J**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/12/22 12:47	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-4S **Lab ID: 60396333022** Collected: 04/04/22 13:05 Received: 04/05/22 04:32 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**5.7**	mg/L	1.0	0.53	1		04/15/22 22:20	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/15/22 22:20	16984-48-8	
Sulfate	**60.2**	mg/L	10.0	5.5	10		04/15/22 22:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-2S **Lab ID: 60396333023** Collected: 04/04/22 12:10 Received: 04/05/22 04:32 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	**138**	ug/L	5.0	1.2	1	04/07/22 16:00	04/09/22 20:29	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 16:00	04/09/22 20:29	7440-41-7	
Boron	**7520**	ug/L	100	7.1	1	04/07/22 16:00	04/09/22 20:29	7440-42-8	
Calcium	**201000**	ug/L	600	214	3	04/07/22 16:00	04/11/22 20:21	7440-70-2	
Cobalt	**3.4J**	ug/L	5.0	1.4	1	04/07/22 16:00	04/09/22 20:29	7440-48-4	
Iron	**58.1**	ug/L	50.0	21.1	1	04/07/22 16:00	04/09/22 20:29	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 16:00	04/09/22 20:29	7439-92-1	
Lithium	**38.0**	ug/L	10.0	1.2	1	04/07/22 16:00	04/09/22 20:29	7439-93-2	
Magnesium	**31800**	ug/L	50.0	11.7	1	04/07/22 16:00	04/09/22 20:29	7439-95-4	
Manganese	**461**	ug/L	5.0	1.1	1	04/07/22 16:00	04/09/22 20:29	7439-96-5	
Molybdenum	**592**	ug/L	20.0	1.8	1	04/07/22 16:00	04/09/22 20:29	7439-98-7	
Potassium	**9500**	ug/L	500	224	1	04/07/22 16:00	04/11/22 16:58	7440-09-7	
Sodium	**59900**	ug/L	500	166	1	04/07/22 16:00	04/11/22 16:58	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Antimony	**0.18J**	ug/L	1.0	0.12	1	04/22/22 13:25	04/23/22 16:09	7440-36-0	
Arsenic	**0.81J**	ug/L	1.0	0.14	1	04/22/22 13:25	04/23/22 16:09	7440-38-2	
Cadmium	**0.58**	ug/L	0.50	0.053	1	04/22/22 13:25	04/23/22 16:09	7440-43-9	
Chromium	**0.36J**	ug/L	1.0	0.31	1	04/22/22 13:25	04/23/22 16:09	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/22/22 13:25	04/23/22 16:09	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/22/22 13:25	04/23/22 16:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/20/22 10:46	04/21/22 09:59	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**376**	mg/L	20.0	4.6	1		04/14/22 16:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**981**	mg/L	13.3	13.3	1		04/08/22 15:18		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.058**	mg/L	0.050		1		04/25/22 16:39	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/12/22 12:47	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-2S **Lab ID: 60396333023** Collected: 04/04/22 12:10 Received: 04/05/22 04:32 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**161**	mg/L	50.0	26.4	50		04/15/22 23:03	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		04/15/22 22:49	16984-48-8	
Sulfate	**249**	mg/L	50.0	27.5	50		04/15/22 23:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-BMW-1S **Lab ID: 60396337002** Collected: 03/29/22 14:00 Received: 03/30/22 04:23 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	**178**	ug/L	5.0	1.2	1	04/07/22 13:51	04/09/22 16:38	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 16:38	7440-41-7	
Boron	**68.0J**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 16:38	7440-42-8	
Calcium	**173000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 18:22	7440-70-2	
Cobalt	**1.5J**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 16:38	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 16:38	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 16:38	7439-92-1	
Lithium	**5.8J**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 16:38	7439-93-2	
Magnesium	**30000**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 16:38	7439-95-4	
Manganese	**675**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 16:38	7439-96-5	
Molybdenum	**2.6J**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 16:38	7439-98-7	
Potassium	**470J**	ug/L	500	224	1	04/07/22 13:51	04/09/22 16:38	7440-09-7	
Sodium	**4900**	ug/L	1000	332	2	04/07/22 13:51	04/11/22 18:22	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	04/06/22 09:01	04/06/22 17:16	7440-36-0	
Arsenic	**0.98J**	ug/L	1.0	0.14	1	04/06/22 09:01	04/06/22 17:16	7440-38-2	
Cadmium	**0.14J**	ug/L	0.50	0.053	1	04/06/22 09:01	04/06/22 17:16	7440-43-9	
Chromium	**0.38J**	ug/L	1.0	0.31	1	04/06/22 09:01	04/06/22 17:16	7440-47-3	
Selenium	**<0.18**	ug/L	1.0	0.18	1	04/06/22 09:01	04/06/22 17:16	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/06/22 09:01	04/06/22 17:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/06/22 10:40	04/06/22 14:19	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**505**	mg/L	20.0	4.6	1		04/05/22 10:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**591**	mg/L	10.0	10.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.013J**	mg/L	0.050		1		04/26/22 16:08	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:21	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-BMW-1S **Lab ID: 60396337002** Collected: 03/29/22 14:00 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:53	18496-25-8	H1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**8.5**	mg/L	1.0	0.53	1		04/01/22 18:04	16887-00-6	
Fluoride	**0.30**	mg/L	0.20	0.12	1		04/01/22 18:04	16984-48-8	
Sulfate	**44.9**	mg/L	5.0	2.8	5		04/01/22 18:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-BMW-3S **Lab ID: 60396337003** Collected: 03/29/22 12:20 Received: 03/30/22 04:23 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	1.2	1	04/07/22 13:51	04/09/22 16:40	7440-39-3	
Beryllium	**<0.24**	ug/L	1.0	0.24	1	04/07/22 13:51	04/09/22 16:40	7440-41-7	
Boron	**70.7J**	ug/L	100	7.1	1	04/07/22 13:51	04/09/22 16:40	7440-42-8	
Calcium	**147000**	ug/L	400	143	2	04/07/22 13:51	04/11/22 18:29	7440-70-2	
Cobalt	**<1.4**	ug/L	5.0	1.4	1	04/07/22 13:51	04/09/22 16:40	7440-48-4	
Iron	**<21.1**	ug/L	50.0	21.1	1	04/07/22 13:51	04/09/22 16:40	7439-89-6	
Lead	**<6.1**	ug/L	10.0	6.1	1	04/07/22 13:51	04/09/22 16:40	7439-92-1	
Lithium	**9.8J**	ug/L	10.0	1.2	1	04/07/22 13:51	04/09/22 16:40	7439-93-2	
Magnesium	**24100**	ug/L	50.0	11.7	1	04/07/22 13:51	04/09/22 16:40	7439-95-4	
Manganese	**215**	ug/L	5.0	1.1	1	04/07/22 13:51	04/09/22 16:40	7439-96-5	
Molybdenum	**2.4J**	ug/L	20.0	1.8	1	04/07/22 13:51	04/09/22 16:40	7439-98-7	
Potassium	**569**	ug/L	500	224	1	04/07/22 13:51	04/09/22 16:40	7440-09-7	
Sodium	**6270**	ug/L	500	166	1	04/07/22 13:51	04/10/22 15:06	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	04/06/22 09:01	04/06/22 17:41	7440-36-0	
Arsenic	**0.59J**	ug/L	1.0	0.14	1	04/06/22 09:01	04/06/22 17:41	7440-38-2	
Cadmium	**0.076J**	ug/L	0.50	0.053	1	04/06/22 09:01	04/06/22 17:41	7440-43-9	
Chromium	**0.45J**	ug/L	1.0	0.31	1	04/06/22 09:01	04/06/22 17:41	7440-47-3	
Selenium	**0.35J**	ug/L	1.0	0.18	1	04/06/22 09:01	04/06/22 17:41	7782-49-2	
Thallium	**<0.15**	ug/L	1.0	0.15	1	04/06/22 09:01	04/06/22 17:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City								
Mercury	**<0.12**	ug/L	0.20	0.12	1	04/06/22 10:40	04/06/22 14:26	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**428**	mg/L	20.0	4.6	1		04/05/22 10:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**508**	mg/L	10.0	10.0	1		04/01/22 17:19		
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferric	**0.0097J**	mg/L	0.050		1		04/26/22 16:08	20074-52-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City								
Iron, Ferrous	**<0.060**	mg/L	0.20	0.060	1		04/06/22 15:20	15438-31-0	H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-BMW-3S **Lab ID: 60396337003** Collected: 03/29/22 12:20 Received: 03/30/22 04:23 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	**<0.026**	mg/L	0.050	0.026	1		04/06/22 13:53	18496-25-8	H1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**11.8**	mg/L	1.0	0.53	1		04/01/22 18:32	16887-00-6	
Fluoride	**0.36**	mg/L	0.20	0.12	1		04/01/22 18:32	16984-48-8	
Sulfate	**47.8**	mg/L	5.0	2.8	5		04/01/22 18:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779899
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396337002, 60396337003

METHOD BLANK: 3110785 Matrix: Water
Associated Lab Samples: 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/06/22 14:14	

LABORATORY CONTROL SAMPLE: 3110786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3110787 3110788

Parameter	Units	60396337003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	4.6	4.8	92	96	75-125	4	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 781904
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3118571 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/19/22 09:10	

LABORATORY CONTROL SAMPLE: 3118572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3118573 3118574

Parameter	Units	60396332002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	5.0	4.9	100	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 782280 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020

METHOD BLANK: 3119799 — Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/21/22 11:05	

LABORATORY CONTROL SAMPLE: 3119800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119801 3119802

Parameter	Units	60396333011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	4.6	4.6	92	92	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 782284
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333021, 60396333022, 60396333023

METHOD BLANK: 3119810 Matrix: Water
Associated Lab Samples: 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.12	0.20	0.12	04/21/22 09:24	

LABORATORY CONTROL SAMPLE: 3119811

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119812 3119813

Parameter	Units	60396332004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	4.7	4.8	94	96	75-125	2	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780187
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: 60396337002, 60396337003

METHOD BLANK: 3111909 Matrix: Water
Associated Lab Samples: 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.2	5.0	1.2	04/09/22 15:48	
Beryllium	ug/L	<0.24	1.0	0.24	04/09/22 15:48	
Boron	ug/L	<7.1	100	7.1	04/09/22 15:48	
Calcium	ug/L	<71.3	200	71.3	04/09/22 15:48	
Cobalt	ug/L	<1.4	5.0	1.4	04/09/22 15:48	
Iron	ug/L	<21.1	50.0	21.1	04/09/22 15:48	
Lead	ug/L	<6.1	10.0	6.1	04/09/22 15:48	
Lithium	ug/L	<1.2	10.0	1.2	04/09/22 15:48	
Magnesium	ug/L	<11.7	50.0	11.7	04/09/22 15:48	
Manganese	ug/L	<1.1	5.0	1.1	04/09/22 15:48	
Molybdenum	ug/L	<1.8	20.0	1.8	04/09/22 15:48	
Potassium	ug/L	<224	500	224	04/09/22 15:48	
Sodium	ug/L	<166	500	166	04/12/22 13:11	

LABORATORY CONTROL SAMPLE: 3111910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1040	104	85-115	
Beryllium	ug/L	1000	1030	103	85-115	
Boron	ug/L	1000	978	98	85-115	
Calcium	ug/L	10000	9160	92	85-115	
Cobalt	ug/L	1000	1060	106	85-115	
Iron	ug/L	10000	9920	99	85-115	
Lead	ug/L	1000	1060	106	85-115	
Lithium	ug/L	1000	888	89	85-115	
Magnesium	ug/L	10000	9930	99	85-115	
Manganese	ug/L	1000	963	96	85-115	
Molybdenum	ug/L	1000	1050	105	85-115	
Potassium	ug/L	10000	11100	111	85-115	
Sodium	ug/L	10000	11000	110	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111911 3111912

Parameter	Units	60396338004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	350	1000	1000	1380	1370	103	102	70-130	0	20	
Beryllium	ug/L	<0.24	1000	1000	1030	1030	103	103	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111911 3111912

Parameter	Units	60396338004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	93.3J	1000	1000	1090	1100	100	101	70-130	1	20	
Calcium	ug/L	163000	10000	10000	171000	172000	72	86	70-130	1	20	
Cobalt	ug/L	7.7	1000	1000	1040	1040	104	103	70-130	1	20	
Iron	ug/L	2250	10000	10000	12100	12100	99	98	70-130	1	20	
Lead	ug/L	<6.1	1000	1000	1060	1050	106	105	70-130	0	20	
Lithium	ug/L	44.2	1000	1000	1200	1200	115	115	70-130	0	20	
Magnesium	ug/L	28300	10000	10000	36300	35800	80	75	70-130	1	20	
Manganese	ug/L	1110	1000	1000	2100	2080	99	96	70-130	1	20	
Molybdenum	ug/L	<1.8	1000	1000	1060	1060	106	106	70-130	0	20	
Potassium	ug/L	6150	10000	10000	17900	17700	117	116	70-130	1	20	
Sodium	ug/L	5150	10000	10000	16800	16700	116	116	70-130	0	20	

MATRIX SPIKE SAMPLE: 3111913

Parameter	Units	60396338008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	280	1000	1340	106	70-130	
Beryllium	ug/L	<0.24	1000	1050	105	70-130	
Boron	ug/L	113	1000	1140	103	70-130	
Calcium	ug/L	97300	10000	119000	216	70-130	M1
Cobalt	ug/L	1.8J	1000	1060	106	70-130	
Iron	ug/L	<21.1	10000	9940	99	70-130	
Lead	ug/L	<6.1	1000	1080	108	70-130	
Lithium	ug/L	20.4	1000	1230	121	70-130	
Magnesium	ug/L	21400	10000	30000	87	70-130	
Manganese	ug/L	14.8	1000	995	98	70-130	
Molybdenum	ug/L	3.3J	1000	1090	108	70-130	
Potassium	ug/L	5150	10000	17700	126	70-130	
Sodium	ug/L	43400	10000	56900	135	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780191
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3111927 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.2	5.0	1.2	04/09/22 16:45	
Beryllium	ug/L	0.36J	1.0	0.24	04/09/22 16:45	
Boron	ug/L	<7.1	100	7.1	04/09/22 16:45	
Calcium	ug/L	<71.3	200	71.3	04/09/22 16:45	
Cobalt	ug/L	<1.4	5.0	1.4	04/09/22 16:45	
Iron	ug/L	<21.1	50.0	21.1	04/09/22 16:45	
Lead	ug/L	<6.1	10.0	6.1	04/09/22 16:45	
Lithium	ug/L	<1.2	10.0	1.2	04/09/22 16:45	
Magnesium	ug/L	16.6J	50.0	11.7	04/09/22 16:45	
Manganese	ug/L	<1.1	5.0	1.1	04/09/22 16:45	
Molybdenum	ug/L	2.4J	20.0	1.8	04/09/22 16:45	
Potassium	ug/L	<224	500	224	04/09/22 16:45	
Sodium	ug/L	<166	500	166	04/10/22 15:58	

LABORATORY CONTROL SAMPLE: 3111928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1020	102	85-115	
Beryllium	ug/L	1000	1030	103	85-115	
Boron	ug/L	1000	945	94	85-115	
Calcium	ug/L	10000	10200	102	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1040	104	85-115	
Lithium	ug/L	1000	873	87	85-115	
Magnesium	ug/L	10000	10500	105	85-115	
Manganese	ug/L	1000	1010	101	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	10000	100	85-115	
Sodium	ug/L	10000	10400	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111929 3111930

Parameter	Units	60396337010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	81.9	1000	1000	1130	1090	105	101	70-130	4	20	
Beryllium	ug/L	<0.24	1000	1000	1070	1030	107	103	70-130	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111929 3111930

Parameter	Units	60396337010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1450	1000	1000	2490	2460	104	101	70-130	1	20	
Calcium	ug/L	235000	10000	10000	253000	243000	184	78	70-130	4	20	M1
Cobalt	ug/L	2.7J	1000	1000	1050	1000	104	100	70-130	4	20	
Iron	ug/L	<21.1	10000	10000	10500	10100	105	101	70-130	4	20	
Lead	ug/L	<6.1	1000	1000	1040	1010	104	101	70-130	3	20	
Lithium	ug/L	62.5	1000	1000	1310	1240	125	118	70-130	5	20	
Magnesium	ug/L	73300	10000	10000	81200	79900	79	66	70-130	2	20	M1
Manganese	ug/L	390	1000	1000	1440	1380	105	99	70-130	4	20	
Molybdenum	ug/L	15.8J	1000	1000	1100	1050	108	103	70-130	4	20	
Potassium	ug/L	5190	10000	10000	16300	16200	112	110	70-130	1	20	
Sodium	ug/L	56200	10000	10000	68100	68300	120	122	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111931 3111932

Parameter	Units	60396735001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	219	1000	1000	1260	1280	104	106	70-130	2	20	
Beryllium	ug/L	<0.24	1000	1000	1060	1090	106	109	70-130	3	20	
Boron	ug/L	99.3J	1000	1000	1090	1130	99	103	70-130	3	20	
Calcium	ug/L	141000	10000	10000	148000	159000	76	186	70-130	7	20	M1
Cobalt	ug/L	3.4J	1000	1000	1040	1070	104	107	70-130	3	20	
Iron	ug/L	34.2J	10000	10000	10400	10600	104	106	70-130	2	20	
Lead	ug/L	<6.1	1000	1000	1050	1070	105	107	70-130	2	20	
Lithium	ug/L	31.7	1000	1000	1130	1160	110	113	70-130	3	20	
Magnesium	ug/L	30200	10000	10000	39000	39500	88	93	70-130	1	20	
Manganese	ug/L	737	1000	1000	1790	1830	105	109	70-130	2	20	
Molybdenum	ug/L	5.1J	1000	1000	1060	1090	106	108	70-130	2	20	
Potassium	ug/L	6110	10000	10000	17000	17600	109	115	70-130	4	20	
Sodium	ug/L	4700	10000	10000	16000	16200	113	115	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780254
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: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023

METHOD BLANK: 3112107
Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.2	5.0	1.2	04/09/22 19:27	
Beryllium	ug/L	0.74J	1.0	0.24	04/09/22 19:27	
Boron	ug/L	<7.1	100	7.1	04/20/22 18:03	
Calcium	ug/L	<71.3	200	71.3	04/09/22 19:27	
Cobalt	ug/L	<1.4	5.0	1.4	04/09/22 19:27	
Iron	ug/L	<21.1	50.0	21.1	04/09/22 19:27	
Lead	ug/L	<6.1	10.0	6.1	04/09/22 19:27	
Lithium	ug/L	<1.2	10.0	1.2	04/09/22 19:27	
Magnesium	ug/L	13.2J	50.0	11.7	04/09/22 19:27	
Manganese	ug/L	1.3J	5.0	1.1	04/09/22 19:27	
Molybdenum	ug/L	<1.8	20.0	1.8	04/09/22 19:27	
Potassium	ug/L	<224	500	224	04/09/22 19:27	
Sodium	ug/L	<166	500	166	04/09/22 19:27	

LABORATORY CONTROL SAMPLE: 3112108

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1060	106	85-115	
Beryllium	ug/L	1000	1070	107	85-115	
Boron	ug/L	1000	999	100	85-115	
Calcium	ug/L	10000	10100	101	85-115	
Cobalt	ug/L	1000	1070	107	85-115	
Iron	ug/L	10000	10400	104	85-115	
Lead	ug/L	1000	1080	108	85-115	
Lithium	ug/L	1000	880	88	85-115	
Magnesium	ug/L	10000	10500	105	85-115	
Manganese	ug/L	1000	1020	102	85-115	
Molybdenum	ug/L	1000	1050	105	85-115	
Potassium	ug/L	10000	10600	106	85-115	
Sodium	ug/L	10000	11000	110	85-115	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112111 3112112

Parameter	Units	60396333011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	588	1000	1000	1630	1640	104	105	70-130	0	20	
Beryllium	ug/L	<0.24	1000	1000	1050	1060	105	106	70-130	1	20	
Boron	ug/L	87.1J	1000	1000	1100	1100	101	101	70-130	0	20	
Calcium	ug/L	105000	10000	10000	118000	114000	132	93	70-130	3	20	M1
Cobalt	ug/L	3.7J	1000	1000	1060	1070	106	106	70-130	0	20	
Iron	ug/L	6090	10000	10000	16300	16400	102	103	70-130	1	20	
Lead	ug/L	<6.1	1000	1000	1070	1070	107	107	70-130	1	20	
Lithium	ug/L	31.6	1000	1000	1150	1160	112	113	70-130	1	20	
Magnesium	ug/L	26000	10000	10000	33800	33900	78	79	70-130	0	20	
Manganese	ug/L	378	1000	1000	1370	1370	99	100	70-130	0	20	
Molybdenum	ug/L	<1.8	1000	1000	1070	1080	106	107	70-130	1	20	
Potassium	ug/L	3480	10000	10000	13900	14300	105	108	70-130	2	20	
Sodium	ug/L	9380	10000	10000	19900	19900	105	106	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779855
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: 60396337002, 60396337003

METHOD BLANK: 3110599 Matrix: Water
Associated Lab Samples: 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	04/06/22 17:09	
Arsenic	ug/L	<0.14	1.0	0.14	04/06/22 17:09	
Cadmium	ug/L	<0.053	0.50	0.053	04/06/22 17:09	
Chromium	ug/L	<0.31	1.0	0.31	04/06/22 17:09	
Selenium	ug/L	<0.18	1.0	0.18	04/06/22 17:09	
Thallium	ug/L	<0.15	1.0	0.15	04/06/22 17:09	

LABORATORY CONTROL SAMPLE: 3110600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.1	100	85-115	
Arsenic	ug/L	40	40.5	101	85-115	
Cadmium	ug/L	40	41.2	103	85-115	
Chromium	ug/L	40	41.7	104	85-115	
Selenium	ug/L	40	41.3	103	85-115	
Thallium	ug/L	40	39.4	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3110601 3110602

Parameter	Units	60396337002 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	39.8	39.6	99	99	70-130	0	20	
Arsenic	ug/L	0.98J	40	40	41.4	41.2	101	101	70-130	0	20	
Cadmium	ug/L	0.14J	40	40	40.0	40.0	100	100	70-130	0	20	
Chromium	ug/L	0.38J	40	40	41.7	42.0	103	104	70-130	1	20	
Selenium	ug/L	<0.18	40	40	39.2	39.4	98	98	70-130	0	20	
Thallium	ug/L	<0.15	40	40	41.6	41.4	104	103	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780166
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3111832 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	04/11/22 10:54	
Arsenic	ug/L	<0.14	1.0	0.14	04/11/22 10:54	
Cadmium	ug/L	<0.053	0.50	0.053	04/11/22 10:54	
Chromium	ug/L	<0.31	1.0	0.31	04/11/22 10:54	
Selenium	ug/L	<0.18	1.0	0.18	04/11/22 10:54	
Thallium	ug/L	<0.15	1.0	0.15	04/11/22 10:54	

LABORATORY CONTROL SAMPLE: 3111833

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.2	103	85-115	
Arsenic	ug/L	40	42.3	106	85-115	
Cadmium	ug/L	40	42.7	107	85-115	
Chromium	ug/L	40	41.2	103	85-115	
Selenium	ug/L	40	43.4	108	85-115	
Thallium	ug/L	40	39.4	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111834 3111835

Parameter	Units	60396332004 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	40.9	41.1	102	103	70-130	0	20	
Arsenic	ug/L	0.70J	40	40	43.5	43.2	107	106	70-130	1	20	
Cadmium	ug/L	0.95	40	40	40.3	40.3	98	98	70-130	0	20	
Chromium	ug/L	0.39J	40	40	39.9	40.4	99	100	70-130	1	20	
Selenium	ug/L	0.20J	40	40	40.2	40.3	100	100	70-130	0	20	
Thallium	ug/L	<0.15	40	40	42.3	41.9	106	105	70-130	1	20	

MATRIX SPIKE SAMPLE: 3111836

Parameter	Units	60396332012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.12	40	41.9	105	70-130	
Arsenic	ug/L	1.6	40	43.7	105	70-130	
Cadmium	ug/L	<0.053	40	41.7	104	70-130	
Chromium	ug/L	0.65J	40	40.8	100	70-130	
Selenium	ug/L	<0.18	40	41.9	105	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE SAMPLE: 3111836

Parameter	Units	60396332012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	<0.15	40	40.8	102	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780591
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: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020

METHOD BLANK: 3113591 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	04/12/22 13:42	
Arsenic	ug/L	<0.14	1.0	0.14	04/12/22 13:42	
Cadmium	ug/L	<0.053	0.50	0.053	04/12/22 13:42	
Chromium	ug/L	<0.31	1.0	0.31	04/12/22 13:42	
Selenium	ug/L	<0.18	1.0	0.18	04/12/22 13:42	
Thallium	ug/L	<0.15	1.0	0.15	04/12/22 13:42	

LABORATORY CONTROL SAMPLE: 3113592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.7	104	85-115	
Arsenic	ug/L	40	40.9	102	85-115	
Cadmium	ug/L	40	43.3	108	85-115	
Chromium	ug/L	40	42.2	106	85-115	
Selenium	ug/L	40	42.8	107	85-115	
Thallium	ug/L	40	41.8	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113593 3113594

Parameter	Units	60396735001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.26J	40	40	44.9	43.7	112	109	70-130	3	20	
Arsenic	ug/L	0.50J	40	40	40.6	39.0	100	96	70-130	4	20	
Cadmium	ug/L	0.060J	40	40	41.3	40.2	103	100	70-130	3	20	
Chromium	ug/L	0.52J	40	40	39.3	38.2	97	94	70-130	3	20	
Selenium	ug/L	2.6	40	40	43.1	41.2	101	96	70-130	5	20	
Thallium	ug/L	<0.15	40	40	38.5	37.4	96	93	70-130	3	20	

MATRIX SPIKE SAMPLE: 3113596

Parameter	Units	60396333011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.12	40	45.4	113	70-130	
Arsenic	ug/L	1.9	40	42.9	103	70-130	
Cadmium	ug/L	<0.053	40	42.1	105	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE SAMPLE: 3113596

Parameter	Units	60396333011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	0.43J	40	40.8	101	70-130	
Selenium	ug/L	<0.18	40	41.9	105	70-130	
Thallium	ug/L	<0.15	40	39.0	98	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 782828
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: 60396333021, 60396333022, 60396333023

METHOD BLANK: 3121821 Matrix: Water
Associated Lab Samples: 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.12	1.0	0.12	04/23/22 16:00	
Arsenic	ug/L	<0.14	1.0	0.14	04/23/22 16:00	
Cadmium	ug/L	<0.053	0.50	0.053	04/23/22 16:00	
Chromium	ug/L	<0.31	1.0	0.31	04/23/22 16:00	
Selenium	ug/L	<0.18	1.0	0.18	04/23/22 16:00	
Thallium	ug/L	<0.15	1.0	0.15	04/23/22 16:00	

LABORATORY CONTROL SAMPLE: 3121822

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.6	99	85-115	
Arsenic	ug/L	40	40.0	100	85-115	
Cadmium	ug/L	40	40.4	101	85-115	
Chromium	ug/L	40	41.0	102	85-115	
Selenium	ug/L	40	41.5	104	85-115	
Thallium	ug/L	40	38.3	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121823 3121824

Parameter	Units	60397642004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	38.5	38.6	96	97	70-130	0	20	
Arsenic	ug/L	ND	40	40	40.3	40.3	100	100	70-130	0	20	
Cadmium	ug/L	ND	40	40	38.1	38.2	95	96	70-130	0	20	
Chromium	ug/L	ND	40	40	40.1	39.8	99	98	70-130	1	20	
Selenium	ug/L	ND	40	40	41.1	40.7	101	100	70-130	1	20	
Thallium	ug/L	ND	40	40	37.0	37.3	93	93	70-130	1	20	

MATRIX SPIKE SAMPLE: 3121825

Parameter	Units	60398093001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	40	36.7	91	70-130	
Arsenic	ug/L	ND	40	39.8	99	70-130	
Cadmium	ug/L	ND	40	36.2	90	70-130	
Chromium	ug/L	ND	40	39.1	97	70-130	
Selenium	ug/L	ND	40	38.6	95	70-130	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE SAMPLE: 3121825

Parameter	Units	60398093001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	ND	40	37.9	95	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779612
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396337002, 60396337003

METHOD BLANK: 3109702 Matrix: Water
Associated Lab Samples: 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/05/22 09:48	

LABORATORY CONTROL SAMPLE: 3109703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	490	98	90-110	

SAMPLE DUPLICATE: 3109704

Parameter	Units	60395733004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	154	152	1	10	

SAMPLE DUPLICATE: 3109705

Parameter	Units	60396339002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	328	330	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780727
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3113968 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/11/22 16:10	

LABORATORY CONTROL SAMPLE: 3113969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	498	100	90-110	

SAMPLE DUPLICATE: 3113971

Parameter	Units	60396466003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	113	112	1	10	

SAMPLE DUPLICATE: 3113973

Parameter	Units	60396299004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	853	850	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780896
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333020

METHOD BLANK: 3114512 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/13/22 16:56	

LABORATORY CONTROL SAMPLE: 3114513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	491	98	90-110	

SAMPLE DUPLICATE: 3114516

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	95.3	95.7	0	10	

SAMPLE DUPLICATE: 3114517

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	291	288	1	10	

SAMPLE DUPLICATE: 3114518

Parameter	Units	60396735001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	437	442	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 781132
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333017, 60396333018, 60396333019

METHOD BLANK: 3115377 Matrix: Water
Associated Lab Samples: 60396333017, 60396333018, 60396333019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/13/22 15:06	

LABORATORY CONTROL SAMPLE: 3115378

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

SAMPLE DUPLICATE: 3115380

Parameter	Units	60396333017 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	204	205	1	10	

SAMPLE DUPLICATE: 3115382

Parameter	Units	60396337010 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	567	572	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 781269
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333021, 60396333022, 60396333023

METHOD BLANK: 3115960 Matrix: Water
Associated Lab Samples: 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	04/14/22 14:50	

LABORATORY CONTROL SAMPLE: 3115961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	492	98	90-110	

SAMPLE DUPLICATE: 3115962

Parameter	Units	60396735002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	470	468	0	10	

SAMPLE DUPLICATE: 3115963

Parameter	Units	60396332012 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	186	189	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779231
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004, 60396337002, 60396337003

METHOD BLANK: 3108391 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004, 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/01/22 17:19	

LABORATORY CONTROL SAMPLE: 3108392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	966	97	80-120	

SAMPLE DUPLICATE: 3108393

Parameter	Units	60396337001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	621	613	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779734
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333017, 60396333018, 60396333019, 60396333020

METHOD BLANK: 3110285 Matrix: Water
Associated Lab Samples: 60396333017, 60396333018, 60396333019, 60396333020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/06/22 14:42	

LABORATORY CONTROL SAMPLE: 3110286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3110287

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1360	1310	4	10	

SAMPLE DUPLICATE: 3110288

Parameter	Units	60396332003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	833	835	0	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780233
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016

METHOD BLANK: 3112059 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/07/22 16:11	

LABORATORY CONTROL SAMPLE: 3112060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	972	97	80-120	

SAMPLE DUPLICATE: 3112061

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	534	515	4	10	

SAMPLE DUPLICATE: 3112062

Parameter	Units	60396338004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	578	589	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780462
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333021, 60396333022, 60396333023

METHOD BLANK: 3112983 Matrix: Water
Associated Lab Samples: 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/08/22 15:17	

LABORATORY CONTROL SAMPLE: 3112984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	980	98	80-120	

SAMPLE DUPLICATE: 3112985

Parameter	Units	60396735004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	540	523	3	10	

SAMPLE DUPLICATE: 3112986

Parameter	Units	60396757006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	4640	5210	12	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 778712
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3106506 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.060	0.20	0.060	03/30/22 17:06	H6

LABORATORY CONTROL SAMPLE: 3106507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.1	107	90-110	H6

SAMPLE DUPLICATE: 3106508

Parameter	Units	60395394022 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.20	<0.060		20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779797
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: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333013, 60396333017, 60396333018, 60396333019, 60396333020, 60396337002, 60396337003

METHOD BLANK: 3110416 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333013, 60396333017, 60396333018, 60396333019, 60396333020, 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.060	0.20	0.060	04/06/22 15:19	H6

LABORATORY CONTROL SAMPLE: 3110417

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

SAMPLE DUPLICATE: 3110419

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.060	<0.060		20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780602
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: 60396333011, 60396333012, 60396333014, 60396333016, 60396333021, 60396333022, 60396333023

METHOD BLANK: 3113627 Matrix: Water
Associated Lab Samples: 60396333011, 60396333012, 60396333014, 60396333016, 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.060	0.20	0.060	04/12/22 12:43	H6

LABORATORY CONTROL SAMPLE: 3113628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.1	104	90-110	H6

SAMPLE DUPLICATE: 3113629

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.060	<0.060		20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779347
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3108914 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/04/22 14:31	

LABORATORY CONTROL SAMPLE: 3108915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3108916 3108917

Parameter	Units	60396378001 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	1.4	0.5	0.5	2.5	2.5	204	204	75-125	0	20	M1

SAMPLE DUPLICATE: 3108918

Parameter	Units	60396332001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 3108919

Parameter	Units	60396456001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.026		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779886 — Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D — Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023, 60396337002, 60396337003

METHOD BLANK: 3110733 — Matrix: Water
Associated Lab Samples: 60396333011, 60396333012, 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023, 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/06/22 13:51	

LABORATORY CONTROL SAMPLE: 3110734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.54	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111061 3111062

Parameter	Units	60396333011 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	<0.026	0.5	0.5	0.46	0.46	91	91	75-125	0	20	

SAMPLE DUPLICATE: 3110738

Parameter	Units	60396332008 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 3111060

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 780089
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: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010

METHOD BLANK: 3111505 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/07/22 14:15	

LABORATORY CONTROL SAMPLE: 3111506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3111508 3111509

Parameter	Units	60396332004 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	<0.026	0.5	0.5	0.42	0.42	84	84	75-125	0	20	

SAMPLE DUPLICATE: 3111507

Parameter	Units	60396332004 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 3111510

Parameter	Units	60396811002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.026		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779018
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: 60396337002, 60396337003

METHOD BLANK: 3107513 Matrix: Water
Associated Lab Samples: 60396337002, 60396337003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/02/22 01:00	
Fluoride	mg/L	<0.12	0.20	0.12	04/02/22 01:00	
Sulfate	mg/L	<0.55	1.0	0.55	04/02/22 01:00	

LABORATORY CONTROL SAMPLE: 3107514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE SAMPLE: 3107517

Parameter	Units	60396337001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	33.4	50	77.9	89	80-120	
Fluoride	mg/L	<0.12	2.5	2.8	108	80-120	
Sulfate	mg/L	65.0	50	114	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3107518 3107519

Parameter	Units	60396339002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.4	5	5	8.0	8.0	92	92	80-120	0	15	
Fluoride	mg/L	0.34	2.5	2.5	3.0	3.0	105	106	80-120	1	15	
Sulfate	mg/L	79.0	25	25	105	108	106	115	80-120	2	15	E

SAMPLE DUPLICATE: 3107520

Parameter	Units	60396339002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	3.4	3.4	0	15	
Fluoride	mg/L	0.34	0.35	1	15	
Sulfate	mg/L	79.0	78.9	0	15	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779754
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 3110335 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/06/22 09:21	
Fluoride	mg/L	<0.12	0.20	0.12	04/06/22 09:21	
Sulfate	mg/L	<0.55	1.0	0.55	04/06/22 09:21	

METHOD BLANK: 3114213 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.56J	1.0	0.53	04/07/22 09:06	
Fluoride	mg/L	<0.12	0.20	0.12	04/07/22 09:06	
Sulfate	mg/L	<0.55	1.0	0.55	04/07/22 09:06	

LABORATORY CONTROL SAMPLE: 3110336

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	
Sulfate	mg/L	5	4.6	92	90-110	

LABORATORY CONTROL SAMPLE: 3114214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3110337 3110338

Parameter	Units	60396310005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40800	25000	25000	74900	78900	136	152	80-120	5	15	M1
Fluoride	mg/L	ND	12500	12500	17900	19900	143	159	80-120	10	15	M1
Sulfate	mg/L	ND	25000	25000	38000	42000	143	159	80-120	10	15	M1

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

MATRIX SPIKE SAMPLE: 3110339

Parameter	Units	60396332002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	7.9	5	12.4	90	80-120	
Fluoride	mg/L	0.28	2.5	2.5	89	80-120	
Sulfate	mg/L	20.6	50	69.9	99	80-120	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 779776
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: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012

METHOD BLANK: 3110383 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/06/22 09:21	
Fluoride	mg/L	<0.12	0.20	0.12	04/06/22 09:21	
Sulfate	mg/L	<0.55	1.0	0.55	04/06/22 09:21	

METHOD BLANK: 3114219 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/07/22 09:06	
Fluoride	mg/L	<0.12	0.20	0.12	04/07/22 09:06	
Sulfate	mg/L	<0.55	1.0	0.55	04/07/22 09:06	

METHOD BLANK: 3114244 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/08/22 09:08	
Fluoride	mg/L	<0.12	0.20	0.12	04/08/22 09:08	
Sulfate	mg/L	<0.55	1.0	0.55	04/08/22 09:08	

LABORATORY CONTROL SAMPLE: 3110384

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3114220

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

LABORATORY CONTROL SAMPLE: 3114245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3110385 3110386

Parameter	Units	60396337010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	88.7	100	100	181	179	93	90	80-120	2	15	
Fluoride	mg/L	0.28	2.5	2.5	2.6	2.6	92	93	80-120	1	15	
Sulfate	mg/L	299	100	100	405	393	106	94	80-120	3	15	E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3110389 3110390

Parameter	Units	60396333011 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	5	5	14.6	14.8	98	102	80-120	1	15	
Fluoride	mg/L	0.22	2.5	2.5	2.8	2.9	102	107	80-120	4	15	
Sulfate	mg/L	112	50	50	164	183	103	142	80-120	11	15	M1

SAMPLE DUPLICATE: 3110388

Parameter	Units	60396337010 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	88.7	86.4	3	15	
Fluoride	mg/L	0.28	0.26	6	15	
Sulfate	mg/L	299	290	3	15	

SAMPLE DUPLICATE: 3110391

Parameter	Units	60396333011 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	9.7	9.7	0	15	
Fluoride	mg/L	0.22	0.22	0	15	
Sulfate	mg/L	112	107	5	15	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 781385
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: 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023

METHOD BLANK: 3116408 Matrix: Water
Associated Lab Samples: 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	04/15/22 13:11	
Fluoride	mg/L	<0.12	0.20	0.12	04/15/22 13:11	
Sulfate	mg/L	<0.55	1.0	0.55	04/15/22 13:11	

METHOD BLANK: 3119073 Matrix: Water
Associated Lab Samples: 60396333013, 60396333014, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.66J	1.0	0.53	04/18/22 09:21	
Fluoride	mg/L	<0.12	0.20	0.12	04/18/22 09:21	
Sulfate	mg/L	<0.55	1.0	0.55	04/18/22 09:21	

LABORATORY CONTROL SAMPLE: 3116409

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	2.6	105	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3119074

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.5	90	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3116410 3116411

Parameter	Units	60397013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	82.8	25	25	115	106	130	95	80-120	8	15	E,M1
Fluoride	mg/L	ND	12.5	12.5	16.3	13.2	130	106	80-120	21	15	M1,R1
Sulfate	mg/L	41.0	25	25	72.3	65.1	125	97	80-120	10	15	M1

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-AM-1S **Lab ID: 60396333001** Collected: 03/29/22 12:20 Received: 03/30/22 04:23 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	**0.191 ± 0.298 (0.515) C:NA T:88%**	pCi/L	04/19/22 11:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.362 ± 0.698 (1.53) C:60% T:88%**	pCi/L	04/13/22 21:52	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-AM-1D **Lab ID: 60396333002** Collected: 03/29/22 12:55 Received: 03/30/22 04:23 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	**0.0898 ± 0.249 (0.483) C:NA T:94%**	pCi/L	04/19/22 11:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.361 ± 0.592 (1.29) C:64% T:94%**	pCi/L	04/13/22 21:52	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-6D **Lab ID: 60396333003** Collected: 03/29/22 15:00 Received: 03/30/22 04:23 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	**0.182 ± 0.252 (0.421) C:NA T:91%**	pCi/L	04/19/22 11:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.980 ± 0.746 (1.47) C:61% T:91%**	pCi/L	04/13/22 21:52	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-6S **Lab ID: 60396333004** Collected: 03/29/22 14:59 Received: 03/30/22 04:23 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	**0.0893 ± 0.303 (0.585) C:NA T:89%**	pCi/L	04/19/22 11:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.587 ± 0.743 (1.58) C:60% T:89%**	pCi/L	04/13/22 21:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-6S **Lab ID: 60396333005** Collected: 04/01/22 12:33 Received: 04/02/22 03:00 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	**0.0538 ± 0.460 (0.897) C:NA T:77%**	pCi/L	04/28/22 12:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.495 ± 0.454 (0.923) C:68% T:77%**	pCi/L	04/20/22 16:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-5S **Lab ID: 60396333006** Collected: 04/01/22 09:27 Received: 04/02/22 03:00 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	**0.216 ± 0.282 (0.466) C:NA T:84%**	pCi/L	04/28/22 12:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.377 ± 0.417 (0.875) C:76% T:84%**	pCi/L	04/20/22 16:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-MS-1 **Lab ID: 60396333007** Collected: 04/01/22 12:25 Received: 04/02/22 03:00 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	**73.61 %REC ± NA (NA) C:NA T:NA%**	pCi/L	04/28/22 13:17	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**96.93 %REC ± NA (NA) C:NA T:NA**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-PZ-9D **Lab ID: 60396333008** Collected: 04/01/22 11:22 Received: 04/02/22 03:00 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	**0.253 ± 0.385 (0.662) C:NA T:81%**	pCi/L	04/28/22 12:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.722 ± 0.418 (0.763) C:76% T:81%**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-2D **Lab ID: 60396333009** Collected: 04/01/22 10:30 Received: 04/02/22 03:00 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	**-0.135 ± 0.341 (0.748) C:NA T:88%**	pCi/L	04/28/22 12:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.02 ± 0.483 (0.824) C:68% T:88%**	pCi/L	04/20/22 16:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-3D **Lab ID: 60396333010** Collected: 04/01/22 12:17 Received: 04/02/22 03:00 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	**0.619 ± 0.458 (0.620) C:NA T:84%**	pCi/L	04/28/22 12:28	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**1.28 ± 0.549 (0.907) C:72% T:84%**	pCi/L	04/20/22 16:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-4D **Lab ID: 60396333011** Collected: 04/01/22 12:25 Received: 04/02/22 03:00 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	**0.139 ± 0.329 (0.609) C:NA T:78%**	pCi/L	04/28/22 12:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.52 ± 0.585 (0.896) C:72% T:78%**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-5D **Lab ID: 60396333012** Collected: 04/01/22 15:08 Received: 04/02/22 03:00 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	**0.142 ± 0.217 (0.349) C:NA T:78%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.667 ± 0.470 (0.911) C:71% T:78%**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-DUP-2 **Lab ID: 60396333013** Collected: 04/01/22 08:00 Received: 04/02/22 03:00 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	**0.0465 ± 0.302 (0.610) C:NA T:85%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0309 ± 0.346 (0.814) C:71% T:85%**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-FB-2 **Lab ID: 60396333014** Collected: 04/01/22 15:30 Received: 04/02/22 03:00 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	**-0.0475 ± 0.217 (0.441) C:NA T:86%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.00117 ± 0.297 (0.702) C:67% T:86%**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-MSD-1 **Lab ID: 60396333015** Collected: 04/01/22 12:25 Received: 04/02/22 03:00 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	**101.86 %REC 32.19 RPD ± NA (NA) C:NA T:NA%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**77.87 %REC 21.81 RPD ± NA (NA) C:NA T:NA**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-UG-3 **Lab ID: 60396333016** Collected: 04/01/22 13:59 Received: 04/02/22 03:00 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	**0.372 ± 0.429 (0.697) C:NA T:86%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.975 ± 0.457 (0.768) C:71% T:86%**	pCi/L	04/20/22 16:29	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-1S **Lab ID: 60396333017** Collected: 03/31/22 14:52 Received: 04/02/22 03:00 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	**0.377 ± 0.437 (0.706) C:NA T:80%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.533 ± 0.403 (0.788) C:72% T:80%**	pCi/L	04/20/22 16:30	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-DUP-1 **Lab ID: 60396333018** Collected: 03/31/22 08:00 Received: 04/02/22 03:00 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	**-0.0502 ± 0.260 (0.603) C:NA T:80%**	pCi/L	04/28/22 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.459 ± 0.422 (0.854) C:65% T:80%**	pCi/L	04/20/22 16:30	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-CA-FB-1 **Lab ID: 60396333019** Collected: 03/31/22 10:40 Received: 04/02/22 03:00 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	**-0.163 ± 0.278 (0.647) C:NA T:89%**	pCi/L	04/28/22 13:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.12 ± 0.692 (1.28) C:73% T:89%**	pCi/L	04/20/22 21:46	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-PZ-1S **Lab ID: 60396333020** Collected: 03/31/22 10:22 Received: 04/02/22 03:00 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	**0.168 ± 0.369 (0.666) C:NA T:83%**	pCi/L	04/28/22 13:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.495 ± 0.506 (1.04) C:64% T:83%**	pCi/L	04/20/22 18:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-TP-8D **Lab ID: 60396333021** Collected: 04/04/22 13:43 Received: 04/05/22 04:32 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	**0.754 ± 0.520 (0.709) C:NA T:82%**	pCi/L	04/28/22 13:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.236 ± 0.443 (0.975) C:64% T:82%**	pCi/L	04/20/22 18:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-4S **Lab ID: 60396333022** Collected: 04/04/22 13:05 Received: 04/05/22 04:32 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	**0.320 ± 0.349 (0.549) C:NA T:83%**	pCi/L	04/28/22 13:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.34 ± 0.615 (0.992) C:65% T:83%**	pCi/L	04/20/22 18:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-LMW-2S **Lab ID: 60396333023** Collected: 04/04/22 12:10 Received: 04/05/22 04:32 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	**0.189 ± 0.228 (0.348) C:NA T:87%**	pCi/L	04/28/22 13:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.584 (1.03) C:64% T:87%**	pCi/L	04/20/22 18:42	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-BMW-1S **Lab ID: 60396337002** Collected: 03/29/22 14:00 Received: 03/30/22 04:23 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	**0.283 ± 0.264 (0.347) C:NA T:88%**	pCi/L	04/28/22 13:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.467 ± 0.635 (1.36) C:76% T:88%**	pCi/L	04/20/22 21:46	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Sample: S-BMW-3S **Lab ID: 60396337003** Collected: 03/29/22 12:20 Received: 03/30/22 04:23 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	**0.0831 ± 0.379 (0.225) C:NA T:93%**	pCi/L	04/27/22 16:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0142 ± 0.558 (1.30) C:72% T:86%**	pCi/L	04/26/22 16:48	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 497782
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: 60396337003

METHOD BLANK: 2409269 Matrix: Water
Associated Lab Samples: 60396337003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.264 ± 0.311 (0.655) C:80% T:88%	pCi/L	04/26/22 13:21	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 496688
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: 60396333005, 60396333006, 60396333007, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333015, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023, 60396337002

METHOD BLANK: 2403505
Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333007, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333015, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023, 60396337002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.670 ± 0.346 (0.587) C:76% T:90%	pCi/L	04/20/22 16:30	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 494876
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 2394061 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.144 ± 0.282 (0.676) C:NA T:93%	pCi/L	04/19/22 11:24	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 497781
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: 60396337003

METHOD BLANK: 2409265 Matrix: Water
Associated Lab Samples: 60396337003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0680 ± 0.310 (0.184) C:NA T:94%	pCi/L	04/27/22 16:06	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 496687 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60396333005, 60396333006, 60396333007, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333015, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023, 60396337002

METHOD BLANK: 2403504 Matrix: Water
Associated Lab Samples: 60396333005, 60396333006, 60396333007, 60396333008, 60396333009, 60396333010, 60396333011, 60396333012, 60396333013, 60396333014, 60396333015, 60396333016, 60396333017, 60396333018, 60396333019, 60396333020, 60396333021, 60396333022, 60396333023, 60396337002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0453 ± 0.235 (0.544) C:NA T:90%	pCi/L	04/28/22 12:28	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

QC Batch: 494878
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: 60396333001, 60396333002, 60396333003, 60396333004

METHOD BLANK: 2394067 Matrix: Water
Associated Lab Samples: 60396333001, 60396333002, 60396333003, 60396333004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.260 ± 0.292 (0.743) C:69% T:93%	pCi/L	04/13/22 17:29	

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QUALIFIERS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

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

B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H1	Analysis conducted outside the EPA 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.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396333001	S-AM-1S	EPA 200.7	780191	EPA 200.7	780331
60396333002	S-AM-1D	EPA 200.7	780191	EPA 200.7	780331
60396333003	S-TP-6D	EPA 200.7	780191	EPA 200.7	780331
60396333004	S-TP-6S	EPA 200.7	780191	EPA 200.7	780331
60396337002	S-BMW-1S	EPA 200.7	780187	EPA 200.7	780329
60396337003	S-BMW-3S	EPA 200.7	780187	EPA 200.7	780329
60396333005	S-LMW-6S	EPA 200.7	780254	EPA 200.7	780345
60396333006	S-LMW-5S	EPA 200.7	780254	EPA 200.7	780345
60396333008	S-PZ-9D	EPA 200.7	780254	EPA 200.7	780345
60396333009	S-TP-2D	EPA 200.7	780254	EPA 200.7	780345
60396333010	S-TP-3D	EPA 200.7	780254	EPA 200.7	780345
60396333011	S-TP-4D	EPA 200.7	780254	EPA 200.7	780345
60396333012	S-TP-5D	EPA 200.7	780254	EPA 200.7	780345
60396333013	S-CA-DUP-2	EPA 200.7	780254	EPA 200.7	780345
60396333014	S-CA-FB-2	EPA 200.7	780254	EPA 200.7	780345
60396333016	S-UG-3	EPA 200.7	780254	EPA 200.7	780345
60396333017	S-LMW-1S	EPA 200.7	780254	EPA 200.7	780345
60396333018	S-CA-DUP-1	EPA 200.7	780254	EPA 200.7	780345
60396333019	S-CA-FB-1	EPA 200.7	780254	EPA 200.7	780345
60396333020	S-PZ-1S	EPA 200.7	780254	EPA 200.7	780345
60396333021	S-TP-8D	EPA 200.7	780254	EPA 200.7	780345
60396333022	S-LMW-4S	EPA 200.7	780254	EPA 200.7	780345
60396333023	S-LMW-2S	EPA 200.7	780254	EPA 200.7	780345
60396333001	S-AM-1S	EPA 200.8	780166	EPA 200.8	780242
60396333002	S-AM-1D	EPA 200.8	780166	EPA 200.8	780242
60396333003	S-TP-6D	EPA 200.8	780166	EPA 200.8	780242
60396333004	S-TP-6S	EPA 200.8	780166	EPA 200.8	780242
60396337002	S-BMW-1S	EPA 200.8	779855	EPA 200.8	779952
60396337003	S-BMW-3S	EPA 200.8	779855	EPA 200.8	779952
60396333005	S-LMW-6S	EPA 200.8	780591	EPA 200.8	780678
60396333006	S-LMW-5S	EPA 200.8	780591	EPA 200.8	780678
60396333008	S-PZ-9D	EPA 200.8	780591	EPA 200.8	780678
60396333009	S-TP-2D	EPA 200.8	780591	EPA 200.8	780678
60396333010	S-TP-3D	EPA 200.8	780591	EPA 200.8	780678
60396333011	S-TP-4D	EPA 200.8	780591	EPA 200.8	780678
60396333012	S-TP-5D	EPA 200.8	780591	EPA 200.8	780678
60396333013	S-CA-DUP-2	EPA 200.8	780591	EPA 200.8	780678
60396333014	S-CA-FB-2	EPA 200.8	780591	EPA 200.8	780678
60396333016	S-UG-3	EPA 200.8	780591	EPA 200.8	780678
60396333017	S-LMW-1S	EPA 200.8	780591	EPA 200.8	780678
60396333018	S-CA-DUP-1	EPA 200.8	780591	EPA 200.8	780678
60396333019	S-CA-FB-1	EPA 200.8	780591	EPA 200.8	780678
60396333020	S-PZ-1S	EPA 200.8	780591	EPA 200.8	780678
60396333021	S-TP-8D	EPA 200.8	782828	EPA 200.8	782921
60396333022	S-LMW-4S	EPA 200.8	782828	EPA 200.8	782921
60396333023	S-LMW-2S	EPA 200.8	782828	EPA 200.8	782921

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396333001	S-AM-1S	EPA 7470	781904	EPA 7470	781992
60396333002	S-AM-1D	EPA 7470	781904	EPA 7470	781992
60396333003	S-TP-6D	EPA 7470	781904	EPA 7470	781992
60396333004	S-TP-6S	EPA 7470	781904	EPA 7470	781992
60396337002	S-BMW-1S	EPA 7470	779899	EPA 7470	779979
60396337003	S-BMW-3S	EPA 7470	779899	EPA 7470	779979
60396333005	S-LMW-6S	EPA 7470	782280	EPA 7470	782382
60396333006	S-LMW-5S	EPA 7470	782280	EPA 7470	782382
60396333008	S-PZ-9D	EPA 7470	782280	EPA 7470	782382
60396333009	S-TP-2D	EPA 7470	782280	EPA 7470	782382
60396333010	S-TP-3D	EPA 7470	782280	EPA 7470	782382
60396333011	S-TP-4D	EPA 7470	782280	EPA 7470	782382
60396333012	S-TP-5D	EPA 7470	782280	EPA 7470	782382
60396333013	S-CA-DUP-2	EPA 7470	782280	EPA 7470	782382
60396333014	S-CA-FB-2	EPA 7470	782280	EPA 7470	782382
60396333016	S-UG-3	EPA 7470	782280	EPA 7470	782382
60396333017	S-LMW-1S	EPA 7470	782280	EPA 7470	782382
60396333018	S-CA-DUP-1	EPA 7470	782280	EPA 7470	782382
60396333019	S-CA-FB-1	EPA 7470	782280	EPA 7470	782382
60396333020	S-PZ-1S	EPA 7470	782280	EPA 7470	782382
60396333021	S-TP-8D	EPA 7470	782284	EPA 7470	782380
60396333022	S-LMW-4S	EPA 7470	782284	EPA 7470	782380
60396333023	S-LMW-2S	EPA 7470	782284	EPA 7470	782380
60396333001	S-AM-1S	EPA 903.1	494876		
60396333002	S-AM-1D	EPA 903.1	494876		
60396333003	S-TP-6D	EPA 903.1	494876		
60396333004	S-TP-6S	EPA 903.1	494876		
60396337002	S-BMW-1S	EPA 903.1	496687		
60396337003	S-BMW-3S	EPA 903.1	497781		
60396333005	S-LMW-6S	EPA 903.1	496687		
60396333006	S-LMW-5S	EPA 903.1	496687		
60396333007	S-CA-MS-1	EPA 903.1	496687		
60396333008	S-PZ-9D	EPA 903.1	496687		
60396333009	S-TP-2D	EPA 903.1	496687		
60396333010	S-TP-3D	EPA 903.1	496687		
60396333011	S-TP-4D	EPA 903.1	496687		
60396333012	S-TP-5D	EPA 903.1	496687		
60396333013	S-CA-DUP-2	EPA 903.1	496687		
60396333014	S-CA-FB-2	EPA 903.1	496687		
60396333015	S-CA-MSD-1	EPA 903.1	496687		
60396333016	S-UG-3	EPA 903.1	496687		
60396333017	S-LMW-1S	EPA 903.1	496687		
60396333018	S-CA-DUP-1	EPA 903.1	496687		
60396333019	S-CA-FB-1	EPA 903.1	496687		
60396333020	S-PZ-1S	EPA 903.1	496687		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396333021	S-TP-8D	EPA 903.1	496687		
60396333022	S-LMW-4S	EPA 903.1	496687		
60396333023	S-LMW-2S	EPA 903.1	496687		
60396333001	S-AM-1S	EPA 904.0	494878		
60396333002	S-AM-1D	EPA 904.0	494878		
60396333003	S-TP-6D	EPA 904.0	494878		
60396333004	S-TP-6S	EPA 904.0	494878		
60396337002	S-BMW-1S	EPA 904.0	496688		
60396337003	S-BMW-3S	EPA 904.0	497782		
60396333005	S-LMW-6S	EPA 904.0	496688		
60396333006	S-LMW-5S	EPA 904.0	496688		
60396333007	S-CA-MS-1	EPA 904.0	496688		
60396333008	S-PZ-9D	EPA 904.0	496688		
60396333009	S-TP-2D	EPA 904.0	496688		
60396333010	S-TP-3D	EPA 904.0	496688		
60396333011	S-TP-4D	EPA 904.0	496688		
60396333012	S-TP-5D	EPA 904.0	496688		
60396333013	S-CA-DUP-2	EPA 904.0	496688		
60396333014	S-CA-FB-2	EPA 904.0	496688		
60396333015	S-CA-MSD-1	EPA 904.0	496688		
60396333016	S-UG-3	EPA 904.0	496688		
60396333017	S-LMW-1S	EPA 904.0	496688		
60396333018	S-CA-DUP-1	EPA 904.0	496688		
60396333019	S-CA-FB-1	EPA 904.0	496688		
60396333020	S-PZ-1S	EPA 904.0	496688		
60396333021	S-TP-8D	EPA 904.0	496688		
60396333022	S-LMW-4S	EPA 904.0	496688		
60396333023	S-LMW-2S	EPA 904.0	496688		
60396333001	S-AM-1S	SM 2320B	780727		
60396333002	S-AM-1D	SM 2320B	780727		
60396333003	S-TP-6D	SM 2320B	780727		
60396333004	S-TP-6S	SM 2320B	780727		
60396337002	S-BMW-1S	SM 2320B	779612		
60396337003	S-BMW-3S	SM 2320B	779612		
60396333005	S-LMW-6S	SM 2320B	780896		
60396333006	S-LMW-5S	SM 2320B	780896		
60396333008	S-PZ-9D	SM 2320B	780896		
60396333009	S-TP-2D	SM 2320B	780896		
60396333010	S-TP-3D	SM 2320B	780896		
60396333011	S-TP-4D	SM 2320B	780896		
60396333012	S-TP-5D	SM 2320B	780896		
60396333013	S-CA-DUP-2	SM 2320B	780896		
60396333014	S-CA-FB-2	SM 2320B	780896		
60396333016	S-UG-3	SM 2320B	780896		
60396333017	S-LMW-1S	SM 2320B	781132		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396333018	S-CA-DUP-1	SM 2320B	781132		
60396333019	S-CA-FB-1	SM 2320B	781132		
60396333020	S-PZ-1S	SM 2320B	780896		
60396333021	S-TP-8D	SM 2320B	781269		
60396333022	S-LMW-4S	SM 2320B	781269		
60396333023	S-LMW-2S	SM 2320B	781269		
60396333001	S-AM-1S	SM 2540C	779231		
60396333002	S-AM-1D	SM 2540C	779231		
60396333003	S-TP-6D	SM 2540C	779231		
60396333004	S-TP-6S	SM 2540C	779231		
60396337002	S-BMW-1S	SM 2540C	779231		
60396337003	S-BMW-3S	SM 2540C	779231		
60396333005	S-LMW-6S	SM 2540C	780233		
60396333006	S-LMW-5S	SM 2540C	780233		
60396333008	S-PZ-9D	SM 2540C	780233		
60396333009	S-TP-2D	SM 2540C	780233		
60396333010	S-TP-3D	SM 2540C	780233		
60396333011	S-TP-4D	SM 2540C	780233		
60396333012	S-TP-5D	SM 2540C	780233		
60396333013	S-CA-DUP-2	SM 2540C	780233		
60396333014	S-CA-FB-2	SM 2540C	780233		
60396333016	S-UG-3	SM 2540C	780233		
60396333017	S-LMW-1S	SM 2540C	779734		
60396333018	S-CA-DUP-1	SM 2540C	779734		
60396333019	S-CA-FB-1	SM 2540C	779734		
60396333020	S-PZ-1S	SM 2540C	779734		
60396333021	S-TP-8D	SM 2540C	780462		
60396333022	S-LMW-4S	SM 2540C	780462		
60396333023	S-LMW-2S	SM 2540C	780462		
60396333001	S-AM-1S	SM 3500-Fe B#4	783215		
60396333002	S-AM-1D	SM 3500-Fe B#4	783215		
60396333003	S-TP-6D	SM 3500-Fe B#4	783215		
60396333004	S-TP-6S	SM 3500-Fe B#4	783215		
60396337002	S-BMW-1S	SM 3500-Fe B#4	783432		
60396337003	S-BMW-3S	SM 3500-Fe B#4	783432		
60396333005	S-LMW-6S	SM 3500-Fe B#4	783182		
60396333006	S-LMW-5S	SM 3500-Fe B#4	783182		
60396333008	S-PZ-9D	SM 3500-Fe B#4	783182		
60396333009	S-TP-2D	SM 3500-Fe B#4	783182		
60396333010	S-TP-3D	SM 3500-Fe B#4	783182		
60396333011	S-TP-4D	SM 3500-Fe B#4	783182		
60396333012	S-TP-5D	SM 3500-Fe B#4	783182		
60396333013	S-CA-DUP-2	SM 3500-Fe B#4	783182		
60396333014	S-CA-FB-2	SM 3500-Fe B#4	783182		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396333016	S-UG-3	SM 3500-Fe B#4	783182		
60396333017	S-LMW-1S	SM 3500-Fe B#4	783182		
60396333018	S-CA-DUP-1	SM 3500-Fe B#4	783182		
60396333019	S-CA-FB-1	SM 3500-Fe B#4	783182		
60396333020	S-PZ-1S	SM 3500-Fe B#4	783182		
60396333021	S-TP-8D	SM 3500-Fe B#4	783215		
60396333022	S-LMW-4S	SM 3500-Fe B#4	783215		
60396333023	S-LMW-2S	SM 3500-Fe B#4	783215		
60396333001	S-AM-1S	SM 3500-Fe B#4	778712		
60396333002	S-AM-1D	SM 3500-Fe B#4	778712		
60396333003	S-TP-6D	SM 3500-Fe B#4	778712		
60396333004	S-TP-6S	SM 3500-Fe B#4	778712		
60396337002	S-BMW-1S	SM 3500-Fe B#4	779797		
60396337003	S-BMW-3S	SM 3500-Fe B#4	779797		
60396333005	S-LMW-6S	SM 3500-Fe B#4	779797		
60396333006	S-LMW-5S	SM 3500-Fe B#4	779797		
60396333008	S-PZ-9D	SM 3500-Fe B#4	779797		
60396333009	S-TP-2D	SM 3500-Fe B#4	779797		
60396333010	S-TP-3D	SM 3500-Fe B#4	779797		
60396333011	S-TP-4D	SM 3500-Fe B#4	780602		
60396333012	S-TP-5D	SM 3500-Fe B#4	780602		
60396333013	S-CA-DUP-2	SM 3500-Fe B#4	779797		
60396333014	S-CA-FB-2	SM 3500-Fe B#4	780602		
60396333016	S-UG-3	SM 3500-Fe B#4	780602		
60396333017	S-LMW-1S	SM 3500-Fe B#4	779797		
60396333018	S-CA-DUP-1	SM 3500-Fe B#4	779797		
60396333019	S-CA-FB-1	SM 3500-Fe B#4	779797		
60396333020	S-PZ-1S	SM 3500-Fe B#4	779797		
60396333021	S-TP-8D	SM 3500-Fe B#4	780602		
60396333022	S-LMW-4S	SM 3500-Fe B#4	780602		
60396333023	S-LMW-2S	SM 3500-Fe B#4	780602		
60396333001	S-AM-1S	SM 4500-S-2 D	779347		
60396333002	S-AM-1D	SM 4500-S-2 D	779347		
60396333003	S-TP-6D	SM 4500-S-2 D	779347		
60396333004	S-TP-6S	SM 4500-S-2 D	779347		
60396337002	S-BMW-1S	SM 4500-S-2 D	779886		
60396337003	S-BMW-3S	SM 4500-S-2 D	779886		
60396333005	S-LMW-6S	SM 4500-S-2 D	780089		
60396333006	S-LMW-5S	SM 4500-S-2 D	780089		
60396333008	S-PZ-9D	SM 4500-S-2 D	780089		
60396333009	S-TP-2D	SM 4500-S-2 D	780089		
60396333010	S-TP-3D	SM 4500-S-2 D	780089		
60396333011	S-TP-4D	SM 4500-S-2 D	779886		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60396333

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60396333012	S-TP-5D	SM 4500-S-2 D	779886		
60396333013	S-CA-DUP-2	SM 4500-S-2 D	779886		
60396333014	S-CA-FB-2	SM 4500-S-2 D	779886		
60396333016	S-UG-3	SM 4500-S-2 D	779886		
60396333017	S-LMW-1S	SM 4500-S-2 D	779886		
60396333018	S-CA-DUP-1	SM 4500-S-2 D	779886		
60396333019	S-CA-FB-1	SM 4500-S-2 D	779886		
60396333020	S-PZ-1S	SM 4500-S-2 D	779886		
60396333021	S-TP-8D	SM 4500-S-2 D	779886		
60396333022	S-LMW-4S	SM 4500-S-2 D	779886		
60396333023	S-LMW-2S	SM 4500-S-2 D	779886		
60396333001	S-AM-1S	EPA 300.0	779754		
60396333002	S-AM-1D	EPA 300.0	779754		
60396333003	S-TP-6D	EPA 300.0	779754		
60396333004	S-TP-6S	EPA 300.0	779754		
60396337002	S-BMW-1S	EPA 300.0	779018		
60396337003	S-BMW-3S	EPA 300.0	779018		
60396333005	S-LMW-6S	EPA 300.0	779776		
60396333006	S-LMW-5S	EPA 300.0	779776		
60396333008	S-PZ-9D	EPA 300.0	779776		
60396333009	S-TP-2D	EPA 300.0	779776		
60396333010	S-TP-3D	EPA 300.0	779776		
60396333011	S-TP-4D	EPA 300.0	779776		
60396333012	S-TP-5D	EPA 300.0	779776		
60396333013	S-CA-DUP-2	EPA 300.0	781385		
60396333014	S-CA-FB-2	EPA 300.0	781385		
60396333016	S-UG-3	EPA 300.0	781385		
60396333017	S-LMW-1S	EPA 300.0	781385		
60396333018	S-CA-DUP-1	EPA 300.0	781385		
60396333019	S-CA-FB-1	EPA 300.0	781385		
60396333020	S-PZ-1S	EPA 300.0	781385		
60396333021	S-TP-8D	EPA 300.0	781385		
60396333022	S-LMW-4S	EPA 300.0	781385		
60396333023	S-LMW-2S	EPA 300.0	781385		

WO# : 60396333

60396333

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

Client Name: Golder

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** 1.8/4.8 **Corr. Factor** -0.2 **Corrected** 1.6/4.6

Date and initials of person examining contents: JV 3/30/22

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	Fe+2
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:	☐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#:** 55192/55193	☑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: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:

Company:	Golder Associates
Address:	701 Emerson Road, Suite 250
	Creve Coeur, Missouri, 63141
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider, Ryan Feldman, Brendan Talbert
Purchase Order No.:	~~COC #1~~
Project Name:	Ameren Sioux Energy Center SCPA – CA
Project Number:	153140604. 0003

Section C Invoice Information:

Attention:	
Company Name:	Golder Associates USA, Inc.
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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

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
1	~~S-UMW-1D~~ S-AM-1S	WT	G			3/29/22	1220		6	2		3		1			
2	~~S-UMW-2D~~ S-AM-1D	WT	G				1255										
3	~~S-UMW-3D~~ S-TP-6D	WT	G				1500										
4	~~S-UMW-4D~~ S-TP-6S	WT	G				1459										
5	S-UMW-5D	WT	G														
6	S-UMW-6D	WT	G														
7	S-BMW-1D	WT	G														
8	S-BMW-3D	WT	G														
9	S-UMW-DUP-1	WT	G														
10	S-UMW-FB-1	WT	G														
11	S-UMW-MS-1	WT	G														
12	S-UMW-MSD-1	WT	G														

Requested Analysis Filtered (Y/N)

Y/N	N	N	N	N												
Analysis Test	Chloride/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide			Residual Chlorine (Y/N)	60396333 Pace Project No./ Lab I.D.		
1	X	X	X	X	X	X	X	X	X	X	BP3U	BP3N	BP3Z	BP1N	2BP1N	
2	X	X	X	X	X	X	X	X	X	X						
3	X	X	X	X	X	X	X	X	X	X						
4	X	X	X	X	X	X	X	X	X	X						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	[illegible]/Golder	3/29/22	1630	Angela McNair	3/29	1630				
**App IV Metals - EPA 200.7: Ba, Be, Co, Pb, Li, Mo EPA 200.8: Sb, As, Cd, Cr, Se, Tl	Angela McNair	3/29	1630	[signature]	3/30	0423	1.6	Y	Y	Y
							14.6	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Eric Schneider

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/29/22

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C	WO# : 60396333
	Revision: 2	Effective Date: 01/12/2022

Client Name: Golder Assoc

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 ☑ ZPIC

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

Cooler Temperature (°C): **As-read** 2.6, 0.9, 2.0 **Corr. Factor** -0.2 **Corrected** 2.4, 0.7, 2.0, 2.2, 1.3, 3.0, 12.8, 11.9, 12.8

Date and initials of person examining contents: VRB 4/2/22

Temperature should be above freezing to 6°C 2.4, 1.5, 3.2, 13.0, 12.0, 13.0

Chain of Custody present:	☑Yes ☐No ☐N/A	Any coolers outside reccomended temp only contained Radium Samples
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#:** 55192	☑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:	Golder Associates
Address:	701 Emerson Road, Suite 250 Creve Coeur, Missouri, 63141
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider, Ryan Feldman, Brendan Talbert
Purchase Order No.:	COC #8
Project Name:	Ameren Sioux Energy Center SCPA-CA
Project Number:	153140604. 0003

Section C Invoice Information:

Attention:	
Company Name:	Golder Associates USA, Inc.
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N							
1	~~S-AM-1S~~ S-LMW-6S	WT	G			4/1/22	1233		6	2		3		1				X	X	X	X	X	X	X	X	X		60396333
2	~~S-AM-1D~~ S-LMW-5S	WT	G			"	0927												"	"	"	"	"	"	"	"	"		
3	~~S-PZ-1S~~ S-CA-MS-1	WT	G			"	1225																						
4	S-PZ-9D	WT	G			4/1/22	1122																						
5	S-TP-2D	WT	G			"	1050																						
6	S-TP-3D	WT	G			"	1217																						
7	S-TP-4D	WT	G			"	1225																						
8	S-TP-5D	WT	G			"	1508																						
9	~~S-TP-6S~~ S-CA-DUP-2	WT	G			4/1/22	—																						
10	~~S-TP-6D~~ S-CA-FB-2	WT	G			"	1530																						
11	~~S-TP-8D~~ S-CA-MS-1	WT	G			"	1225																						
12	S-UG-3	WT	G			"	1359																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	~~Eric Schneider~~ Brendan Talbert	4-1-22	1640	Pace	4/2/22	0300	2.4 / 0.1	128	Y	Y
**App IV Metals - EPA 200.7: Ba, Be, Co, Pb, Li, Mo EPA 200.8: Sb, As, Cd, Cr, Se, Tl							2.2 / 2.3			
							1.3 / 3.0			
							1.2 / 11.4			

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Brendan Talbert		Temp in °C	Received on Ice (Y/N)
SIGNATURE of SAMPLER:	Brendan Talbert	DATE Signed (MM/DD/YY): 04/01/22	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.

Pace Analytical
www.pacelabs.com

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Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider, Ryan Feldman, Brendan Talbert
Purchase Order No.:	COC #8
Project Name:	Ameren Sioux Energy Center SCPA-CA
Project Number:	153140604. 0003

Section C Invoice Information:

Attention:	
Company Name:	Golder Associates USA, Inc.
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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
	CT
	TS

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: Chloride/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N								60396333
1	S-LMW-1S	WT	G			3/31/22	1452		6	2		3		1				X	X	X	X	X	X	X	X	X	X		
2	S-LMW-2S	WT	G																										
3	S-LMW-4S	WT	G																										
4	S-LMW-5S	WT	G																										
5	S-LMW-6S	WT	G																										
6	S-BMW-1S	WT	G																										
7	S-BMW-3S	WT	G																										
8	S-CA-DUP-1	WT	G			3/31/22	—		6	2		3		1				X	X	X	X	X	X	X	X	X	X		
9	S-CA-DUP-2	WT	G																										
10	~~S-CA-FB-1~~ S-CA-FB-1	WT	G			3/31/22	1040		6	2		3		1				X	X	X	X	X	X	X	X	X	X		
11	~~S-CA-FB-2~~ S-PZ-15	WT	G			L	1022		2	2		1		1				X	X	X	X	X	X	X	X	X	X		
12	~~S-CA-MS~~-1	WT	G																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B		4/1/22	1640	Victor B Pace	4/2/22	0300
**App IV Metals - EPA 200.7: Ba, Be, Co, Pb, Li, Mo EPA 200.8: Sb, As, Cd, Cr, Se, Tl						

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.4	Y	Y	Y
0.7			
3.0			
2.2			
1.3			
3.0			
12.8			
11.5			
12.8			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: Eric Schneider DATE Signed (MM/DD/YY): 04/01/22

*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.

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

WO# : 60396333

60396333

Client Name: Golder

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** 2.2/14.4 12.3 **Corr. Factor** -.02 **Corrected** 2.0/14.2/12.1

Temperature should be above freezing to 6°C

Date and initials of person examining contents: pv 4/5/22

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	Fe+2
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#:** 55192/55193	☑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 Analytical
www.pacelabs.com

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Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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☐ 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 #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals*	Alkalinity	TDS	Appendix IV Metals **	Mercury	Radium 226	Radium 228	Ferrous/Ferric Iron	SM4500-S2D Sulfide			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											Y/N	N	N	N	N										60396333
1	~~S-CA-MSD-1~~	WT	G																												
2	S-TP-8D	WT	G			4/4/22	1343		6	2		3		1				X	X	X	X	X	X	X	X	X	BP3U	BP3N	BP3Z	BP1N	2BP1N
3	S-LMW-4S	WT	G				1305																								
4	S-LMW-2S	WT	G				1210																								
5		WT	G																												
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			
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	[illegible]	4/14/22	1545	Angela Norman	4/4	1545				
**App IV Metals - EPA 200.7: Ba, Be, Co, Pb, Li, Mo EPA 200.8: Sb, As, Cd, Cr, Se, Tl	Angela Norman	4/4	1545	[illegible]	4/5	0432	2-0	Y	Y	Y
							12.1	N		
							14-2	↓	↓	↓

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Eric Schneider					
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY): 04/04/22				

*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.

MEMORANDUM

DATE June 9, 2022 **Project No.** 153140604.0003

TO Project File
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth **EMAIL ann.muehlfarth@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA-CA – CORRECTIVE ACTION SAMPLING MARCH/APRIL 2022 - DATA PACKAGE 60396333

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 MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).
- When duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a compound was analyzed outside of hold time, associated sample results were qualified as estimates (J for detects, UJ for non-detects).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder / WSP
Project Manager: J. Ingram
Project Name: Ameren SEC - SCPA-CA
Project Number: 153140604
Reviewer: A. Muehlfarth
Validation Date: 6/9/2022

Laboratory: Pace Analytical Services
SDG #: 60396333
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); EPA 903.1/904.0 (Radium 226/228); SM2320B (Alkalinity);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ SM2540C (TDS); SM3500 (Ferric/Ferrous Iron); SM4500 (Sulfide); EPA 300.0 (Anions)
Sample Names S-AM-1S, S-AM-1D, S-TP-6D, S-TP-6S, S-LMW-6S, S-LMW-5S, S-CA-MS-1, S-PZ-9D, S-TP-2D, S-TP-3D, S-TP-4D, S-TP-5D, S-CA-DUP-2, S-CA-FB-2, S-CA-MSD-1, S-UG-3, S-LMW-1S, S-CA-DUP-1, S-CA-FB-1, S-PZ-1S, S-TP-8D, S-LMW-4S, S-LMW-2S, S-BMW-1S, S-BMW-3S

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			3/29/2022 - 4/4/2022
b) Sampling team indicated?	x			BTT/EMS/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, Sp.Cond, ORP, Temp, DO, Turb
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:

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			See Notes

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?		x		See Notes
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			See Notes

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)?				S-CA-DUP-1 @ S-PZ-1S
	x			S-CA-DUP-2 @ S-LMW-5S
b) Were field dup. precision criteria met (note RPD)?		x		See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?				
	x			
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,			x	
analytes included and concentrations)?				
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:

Some coolers received outside of recommended temperature, these coolers contained only radium, no qualification necessary.

Hold Times:

Ferrous Iron analyzed outside of hold time in all samples. All results qualified as estimates.

Dilutions:

Chloride, sulfate, and calcium analyzed at a dilution. No qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

3111927: Beryllium (0.36J), magnesium (16.6J), molybdenum (2.4J); associated with samples -33001 through -33004. When RL>result>MDL, result reported as ND at RL; results >RL and 10x blank or ND not qualified.

3112107: Beryllium (0.74J), magnesium (13.2J), manganese (1.3J); associated with samples -33005, -33006, -33008 through -33014, -33016 through -33023. When RL>result>MDL, result reported as ND at RL; results >RL and 10x blank or ND not qualified.

3114213: Chloride (0.56J); associated with samples -33001 through -33004. Results >RL and 10x blank, no qualification necessary.

3119073: Chloride (0.66J); associated with samples -33013, -33014, -33016 through -33023. Reults >RL but <10x blank qualified as estimates. Results >RL and 10x blank not qualified.

2403505: Radium-228 (0.670 ± 0.346 (0.587)); associated with samples -33005 through -33023, -37002. Detected results qualified as estimates. ND results not qualified.

S-CA-FB-1 @ S-PZ-1S: Boron (14.3J), chromium (0.33J), ferric iron (0.0019J), chloride (16.4), fluoride (0.37), sulfate (9.8) Results >RL and 10x blank not qualified. Results <RL reported at RL and qualified as estimates. Results >R: bu <10x blank qualified as estimates.

S-CA-FB-2 @ S-TP-5D: Boron (21.9J), chromium (0.64J), ferric iron (0.0063J), chloride (510), sulfate (152). Results >RL but <10x blank qualified as estimates, detections <RL reported at RL as ND, results >RL and 10x blank no qualification necessary.

Duplicates:

S-CA-DUP-1 @ S-LMW-1S: Dup RPD exceeds limit (20%) for cobalt (62.5%), iron (78.9%), manganese (87.2%), cadmium (56.9%), chromium (21.1%), chloride (37.5%), fluoride (25.8%), ferric iron (82.1%).

S-CA-DUP-2 @ S-LMW-5S: Dup RPD exceeds limit (20%) for iron (32.3%), sodium (21.5%), chromium (54.9%), chloride (70.2%), fluoride (36.4%), sulfate (194.6%), ferric iron (31.9%).

Lab Sample Duplicate 3112986: Dup RPD exceeds limit (10%) for TDS (12%). Duplicate performed on unrelated sample, no qualification necessary.

MS/MSD:

Quality control limits were not met in several MS/MSD samples that were analyzed on unrelated samples. No qualification necessary.

3112111/3112112: MS % recovery high for calcium. Associated with sample -011. Only 1 QC indicator outside of control limits, no qualification necessary.

3110389/3110390: MSD % recovery high for sulfate. Associated with sample -011. Only 1 QC indicator outside of control limits, no qualification necessary.

QA LEVEL II - iNORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-AM-1D	Ferrous Iron	0.060	UJ	Analyzed outside of hold time, non-detect
S-AM-1S	"	0.060	UJ	"
S-BMW-1S	"	0.060	UJ	"
S-BMW-3S	"	0.060	UJ	"
S-CA-DUP-2	"	0.060	UJ	"
S-CA-FB-1	"	0.060	UJ	"
S-CA-FB-2	"	0.060	UJ	"
S-LMW-1S	"	0.060	UJ	"
S-LMW-2S	"	0.060	UJ	"
S-LMW-4S	"	0.060	UJ	"
S-LMW-5S	"	0.060	UJ	"
S-LMW-6S	"	0.060	UJ	"
S-TP-4D	"	0.060	UJ	"
S-TP-6S	"	0.060	UJ	"
S-UG-3	"	0.060	UJ	"
S-CA-DUP-1	"	0.060	UJ	"
S-PZ-1S	"	0.060	J	Analyzed outside of hold time
S-PZ-9D	"	0.35	J	"
S-TP-2D	"	0.36	J	"
S-TP-3D	"	0.13	J	"
S-TP-5D	"	0.21	J	"
S-TP-6D	"	1.3	J	"
S-TP-8D	"	0.12	J	"
S-AM-1S	Beryllium	1.0	UJ	Detected in MB, RL>result
S-TP-3D	Molybdenum	20.0	UJ	"
S-TP-5D	Beryllium	1.0	UJ	"
S-LMW-4S	Chloride	5.7	J	Detected in MB, 10x blank > result > RL
S-TP-2D	Radium-228	1.02 ± 0.483	J	Detected in MB
S-TP-3D	"	1.28 ± 0.549	J	"
S-TP-4D	"	1.52 ± 0.585	J	"
S-UG-3	"	0.975 ± 0.457	J	"
S-LMW-4S	"	1.34 ± 0.615	J	"
S-LMW-2S	"	1.08 ± 0.584	J	"
S-PZ-1S	Chromium	1.0	UJ	Detected in FB, RL>result

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-PZ-1S	Sulfate	27.4	J	Detected in FB, 10x blank > result > RL
S-TP-5D	Chromium	1.0	UJ	Detected in FB, RL>result
"	Chloride	28.0	J	Detected in FB, 10x blank > result > RL
"	Sulfate	254	J	"
S-LMW-5S	Iron	120	J	Dup RPD exceeds limit
"	Sodium	201000	J	"
"	Chromium	0.37	J	"
"	Chloride	17.1	J	"
"	Fluoride	0.39	J	"
"	Sulfate	899	J	"
"	Ferric Iron	0.12	J	"
S-CA-DUP-2	Iron	86.6	J	"
"	Sodium	162000	J	"
"	Chromium	0.65	J	"
"	Chloride	35.6	J	"
"	Fluoride	0.27	J	"
"	Sulfate	12.2	J	"
"	Ferric Iron	0.087	J	"
S-LMW-1S	Cobalt	4.2	J	"
"	Iron	105	J	"
"	Manganese	195	J	"
"	Cadmium	0.12	J	"
"	Chromium	0.73	J	"
"	Chloride	30.8	J	"
"	Fluoride	0.27	J	"
"	Ferric Iron	0.11	J	"
S-CA-DUP-1	Cobalt	2.2	J	"
"	Iron	45.6	J	"
"	Manganese	76.6	J	"
"	Cadmium	0.067	J	"
"	Chromium	0.59	J	"
"	Chloride	45.0	J	"
"	Fluoride	0.35	J	"
"	Ferric Iron	0.046	J	"

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature:  Date: 6/9/2022

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

June 17, 2022

Jeffrey Ingram
Golder Associates
701 Emerson Road, Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2022. 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: Ryan Feldmann, Golder
Mark Haddock, Golder Associates
Eric Schneider, Golder Associates
Brendan Talbert, Golder Associates

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60402318001	**S-UMW-6D**	Water	06/07/22 09:00	06/08/22 05:26
60402318002	**S-SCPA-DUP-1**	Water	06/07/22 00:00	06/08/22 05:26
60402318003	**S-SCPA-FB-1**	Water	06/07/22 09:10	06/08/22 05:26

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SAMPLE ANALYTE COUNT

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60402318001	**S-UMW-6D**	EPA 300.0	KB	1	PASI-K
60402318002	**S-SCPA-DUP-1**	EPA 300.0	KB	1	PASI-K
60402318003	**S-SCPA-FB-1**	EPA 300.0	KB	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Sample: S-UMW-6D **Lab ID: 60402318001** Collected: 06/07/22 09:00 Received: 06/08/22 05:26 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								
Sulfate	**52.0**	mg/L	5.0	2.8	5		06/10/22 20:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Sample: S-SCPA-DUP-1 **Lab ID: 60402318002** Collected: 06/07/22 00:00 Received: 06/08/22 05:26 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								
Sulfate	**52.4**	mg/L	5.0	2.8	5		06/10/22 21:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Sample: S-SCPA-FB-1 **Lab ID: 60402318003** Collected: 06/07/22 09:10 Received: 06/08/22 05:26 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								
Sulfate	**<0.55**	mg/L	1.0	0.55	1		06/10/22 21:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

QC Batch: 791498
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: 60402318001, 60402318002, 60402318003

METHOD BLANK: 3153961 Matrix: Water
Associated Lab Samples: 60402318001, 60402318002, 60402318003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	<0.55	1.0	0.55	06/10/22 18:17	

LABORATORY CONTROL SAMPLE: 3153962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153963 3153964

Parameter	Units	60402314001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	50.5	25	250	70.2	427	79	151	80-120	144	15	E,M1, R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153966 3153967

Parameter	Units	60402318001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	52.0	25	25	74.2	74.4	89	90	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153969 3153970

Parameter	Units	60402319001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	43.4	50	50	90.1	89.4	94	92	80-120	1	15	

SAMPLE DUPLICATE: 3153965

Parameter	Units	60402314001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	50.5	48.4	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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QUALITY CONTROL DATA

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

SAMPLE DUPLICATE: 3153968

Parameter	Units	60402318001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	52.0	50.1	4	15	

SAMPLE DUPLICATE: 3153971

Parameter	Units	60402319001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	43.4	43.1	1	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

Pace Analytical Services, LLC
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QUALIFIERS

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

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

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.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN VERIFICATION SCPA
Pace Project No.: 60402318

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60402318001	**S-UMW-6D**	EPA 300.0	791498		
60402318002	**S-SCPA-DUP-1**	EPA 300.0	791498		
60402318003	**S-SCPA-FB-1**	EPA 300.0	791498		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sa	WO#: 60402318
	Revision: 2	Effective Date: 01/12/

60402318

Client Name: Golder

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 ☑ Zip'c

Thermometer Used: T301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 2.1 Corr. Factor -1.0 Corrected 1.1

Date and initials of person examining contents: 06-08-2023

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.

Page: 1 of 1

Section A Required Client Information:

Company:	Golder Associates
Address:	13515 Barrett Parkway Dr., Ste 260
	Ballwin, MO 63021
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schnieder, Ryan Feldman, Brendan Talbert
Purchase Order No.:	
Project Name:	Ameren - Verification Sampling - SCPA
Project Number:	153140603

Section C Invoice Information:

Attention:	
Company Name:	Golder Associates Inc
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285, 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 Required Client Information (SAMPLE ID)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Preservatives: NaOH	Preservatives: $Na_2S_2O_3$	Preservatives: Methanol	Preservatives: Other	Analysis Test Y/N	Boron	Sulfate	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	S-UMW-6D	WT	G			6-7-22	0900		1	1								N		/			60402318
2	S-SCPA-MS-1	WT	G				0900											N		/			
3	S-SCPA-MSD-1	WT	G				0900											N		/			
4	S-SCPA-DUP-1 BT	WT	G				—											N		/			
5	S-SCPA-FB-1	WT	G				0910		—	—								N		/			
6		WT	G															N					
7		WT	G															N					
8		WT	G															N					
9		WT	G															N					
10		WT	G															N					
11		WT	G															N					
12		WT	G															N					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Grant Morey/Golder	6-7-22	1151	Angela McMahon	6-7	1151				
	Angela McMahon	6-7-22	1151		6-8-22	0526	1.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: Grant Morey

DATE Signed (MM/DD/YY): 06/07/22

*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.

MEMORANDUM

DATE July 8, 2022 153140604.0003

TO Project Files
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth **EMAIL ann.muehlfarth@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA – VERIFICATION SAMPLING - DATA PACKAGE 60402318

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

- None.

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates USA Inc
Project Manager: J. Ingram
Project Name: Ameren - SEC - SCPA
Project Number: GL153140604.0003
Reviewer: A. Muehlfarth
Validation Date: 7/8/2022

Laboratory: Pace Analytical
SDG #: 60402318
Analytical Method (type and no.): EPA 300.0 (Anions)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names S-UMW-6D, S-SCPA-DUP-1, S-SCPA-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			6/7/2022
b) Sampling team indicated?	x			BTT
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, Sp.Cond, ORP, Temp, DO, Turb
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?	x			See Notes
j) Does the laboratory narrative indicate deficiencies?			x	

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)?	☐	☒	☐	
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)?	☒	☐	☐	S-SCPA-DUP-1 @ S-UMW-6D
b) Were field dup. precision criteria met (note RPD)?	☒	☐	☐	Max RPD: 0.8% [<20%]
c) Were lab duplicates analyzed (note original and duplicate samples)?	☒	☐	☐	
d) Were lab dup. precision criteria met (note RPD)?	☒	☐	☐	Max RPD: 4% [<15%]

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?	☐	☒	☐	See Notes

Comments/Notes:

The sample collection form notes that drilling was occurring approximately 100 feet away at the time of purging and sampling.

Sulfate analyzed at a dilution in several samples, no qualification necessary.

MS/MSD:

3153963/3153964: MS % recovery low, MSD % recovery high, and RPD high for sulfate. MS/MSD performed on unrealted sample, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: Ann Muhlfeith Date: 7/8/2022

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

November 10, 2022

Jeffrey Ingram
WSP Golder
701 Emerson Road
Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2022. 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: Mark Haddock, Golder Associates
Lisa Meyer, Ameren
Grant Morey, WSP Golder
Ann Muehlfarth, WSP Golder
Eric Schneider, WSP Golder

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

CERTIFICATIONS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
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 #: PA014572018-1
New Hampshire/TNI Certification #: 297617
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 #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
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
Wyoming Certification #: 8TMS-L

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Illinois Certification #: 2000302021-3
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 #: T104704407-21-15
Utah Certification #: KS000212022-12
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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

SAMPLE SUMMARY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60413473001	**S-UMW-1D**	Water	10/19/22 12:35	10/20/22 04:13
60413473002	**S-UMW-2D**	Water	10/19/22 10:18	10/20/22 04:13
60413473003	**S-UMW-3D**	Water	10/19/22 13:16	10/20/22 04:13
60413473004	**S-UMW-4D**	Water	10/19/22 12:08	10/20/22 04:13
60413473005	**S-UMW-5D**	Water	10/19/22 10:12	10/20/22 04:13
60413473006	**S-UMW-6D**	Water	10/19/22 11:50	10/20/22 04:13
60413473007	**S-BMW-1D**	Water	10/18/22 14:55	10/20/22 04:13
60413473008	**S-BMW-3D**	Water	10/18/22 13:28	10/20/22 04:13
60413473009	**S-UMW-DUP-1**	Water	10/19/22 00:00	10/20/22 04:13
60413473010	**S-UMW-FB-1**	Water	10/19/22 10:22	10/20/22 04:13
60413473011	**S-UMW-MS-1**	Water	10/19/22 11:50	10/20/22 04:13
60413473012	**S-UMW-MSD-1**	Water	10/19/22 11:50	10/20/22 04:13

Pace Analytical Services, LLC
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Lenexa, KS 66219
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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60413473001	S-UMW-1D	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473002	S-UMW-2D	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473003	S-UMW-3D	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473004	S-UMW-4D	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473005	S-UMW-5D	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473006	S-UMW-6D	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K

Pace Analytical Services, LLC
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Lenexa, KS 66219
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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473007	**S-BMW-1D**	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473008	**S-BMW-3D**	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473009	**S-UMW-DUP-1**	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473010	**S-UMW-FB-1**	EPA 200.7	JDS	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60413473011	**S-UMW-MS-1**	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60413473012	**S-UMW-MSD-1**	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory

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

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-1D **Lab ID: 60413473001** Collected: 10/19/22 12:35 Received: 10/20/22 04:13 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	**131**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:04	7440-39-3	
Boron	**139**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:04	7440-42-8	
Calcium	**58200**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:04	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:04	7440-48-4	
Iron	**375**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:04	7439-89-6	
Lithium	**14.5**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:04	7439-93-2	
Magnesium	**15700**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:04	7439-95-4	
Manganese	**116**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:04	7439-96-5	
Molybdenum	**37.1**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:04	7439-98-7	
Potassium	**3730**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:04	7440-09-7	
Sodium	**11500**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:04	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.4**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:02	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:02	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:02	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**198**	mg/L	20.0	4.6	1		10/27/22 19:34		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**290**	mg/L	5.0	5.0	1		10/26/22 16:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**18.3**	mg/L	1.0	0.53	1		11/03/22 19:38	16887-00-6	
Fluoride	**0.32**	mg/L	0.20	0.12	1		11/03/22 19:38	16984-48-8	
Sulfate	**38.8**	mg/L	10.0	5.5	10		11/03/22 19:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-2D **Lab ID: 60413473002** Collected: 10/19/22 10:18 Received: 10/20/22 04:13 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	**60.0**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:06	7440-39-3	
Boron	**21100**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:06	7440-42-8	
Calcium	**157000**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:06	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:06	7440-48-4	
Iron	**118**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:06	7439-89-6	B
Lithium	**25.2**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:06	7439-93-2	
Magnesium	**3820**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:06	7439-95-4	
Manganese	**149**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:06	7439-96-5	
Molybdenum	**1670**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:06	7439-98-7	
Potassium	**23500**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:06	7440-09-7	
Sodium	**51600**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:06	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**2.8**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:04	7440-38-2	
Cadmium	**0.63**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:04	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:04	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**96.0**	mg/L	20.0	4.6	1		10/27/22 19:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**842**	mg/L	10.0	10.0	1		10/26/22 16:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**22.0**	mg/L	5.0	2.6	5		11/03/22 20:22	16887-00-6	B
Fluoride	**0.41**	mg/L	0.20	0.12	1		11/03/22 20:07	16984-48-8	
Sulfate	**420**	mg/L	50.0	27.5	50		11/03/22 20:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-3D **Lab ID: 60413473003** Collected: 10/19/22 13:16 Received: 10/20/22 04:13 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	**68.7**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:08	7440-39-3	
Boron	**27200**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:08	7440-42-8	
Calcium	**239000**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:08	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:08	7440-48-4	
Iron	**912**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:08	7439-89-6	
Lithium	**20.4**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:08	7439-93-2	
Magnesium	**9890**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:08	7439-95-4	
Manganese	**547**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:08	7439-96-5	
Molybdenum	**3810**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:08	7439-98-7	
Potassium	**18900**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:08	7440-09-7	
Sodium	**85300**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.74J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:06	7440-38-2	
Cadmium	**1.4**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:06	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:06	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**78.8**	mg/L	20.0	4.6	1		10/27/22 19:44		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1400**	mg/L	13.3	13.3	1		10/26/22 16:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**15.2**	mg/L	1.0	0.53	1		11/03/22 20:51	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/03/22 20:51	16984-48-8	
Sulfate	**952**	mg/L	100	55.0	100		11/03/22 21:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-4D **Lab ID: 60413473004** Collected: 10/19/22 12:08 Received: 10/20/22 04:13 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	**56.6**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:10	7440-39-3	
Boron	**24100**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:10	7440-42-8	
Calcium	**176000**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:10	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:10	7440-48-4	
Iron	**7440**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:10	7439-89-6	
Lithium	**37.8**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:10	7439-93-2	
Magnesium	**22700**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:10	7439-95-4	
Manganese	**1570**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:10	7439-96-5	
Molybdenum	**6470**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:10	7439-98-7	
Potassium	**14900**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:10	7440-09-7	
Sodium	**68400**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:10	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.37J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:11	7440-38-2	
Cadmium	**2.4**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:11	7440-43-9	
Selenium	**0.19J**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:11	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**180**	mg/L	20.0	4.6	1		10/27/22 19:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1080**	mg/L	13.3	13.3	1		10/26/22 16:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**55.6**	mg/L	50.0	26.4	50		11/02/22 15:46	16887-00-6	
Fluoride	**0.35**	mg/L	0.20	0.12	1		11/02/22 15:32	16984-48-8	
Sulfate	**526**	mg/L	50.0	27.5	50		11/02/22 15:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-5D **Lab ID: 60413473005** Collected: 10/19/22 10:12 Received: 10/20/22 04:13 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	**306**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:18	7440-39-3	
Boron	**7770**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:18	7440-42-8	
Calcium	**90100**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:18	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:18	7440-48-4	
Iron	**3820**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:18	7439-89-6	
Lithium	**27.1**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:18	7439-93-2	
Magnesium	**20400**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:18	7439-95-4	
Manganese	**519**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:18	7439-96-5	
Molybdenum	**502**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:18	7439-98-7	
Potassium	**10400**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:18	7440-09-7	
Sodium	**26900**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:18	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.36J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:14	7440-38-2	
Cadmium	**0.18J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:14	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:14	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**352**	mg/L	20.0	4.6	1		10/27/22 19:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**468**	mg/L	10.0	10.0	1		10/26/22 16:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**26.7**	mg/L	10.0	5.3	10		11/02/22 16:15	16887-00-6	
Fluoride	**0.47**	mg/L	0.20	0.12	1		11/02/22 16:01	16984-48-8	
Sulfate	**22.3**	mg/L	10.0	5.5	10		11/02/22 16:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-6D **Lab ID: 60413473006** Collected: 10/19/22 11:50 Received: 10/20/22 04:13 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	**114**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:20	7440-39-3	
Boron	**577**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:20	7440-42-8	
Calcium	**78200**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:20	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:20	7440-48-4	
Iron	**4720**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:20	7439-89-6	
Lithium	**14.4**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:20	7439-93-2	
Magnesium	**18300**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:20	7439-95-4	
Manganese	**561**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:20	7439-96-5	
Molybdenum	**67.4**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:20	7439-98-7	
Potassium	**3940**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:20	7440-09-7	
Sodium	**9570**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:20	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.32J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:16	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:16	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:16	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**258**	mg/L	20.0	4.6	1		10/27/22 20:02		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**352**	mg/L	5.0	5.0	1		10/26/22 16:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**10.5**	mg/L	1.0	0.53	1		11/02/22 16:30	16887-00-6	M1
Fluoride	**0.31**	mg/L	0.20	0.12	1		11/02/22 16:30	16984-48-8	
Sulfate	**53.4**	mg/L	5.0	2.8	5		11/02/22 17:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-BMW-1D **Lab ID: 60413473007** Collected: 10/18/22 14:55 Received: 10/20/22 04:13 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	**357**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:26	7440-39-3	
Boron	**110**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:26	7440-42-8	
Calcium	**128000**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:26	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:26	7440-48-4	
Iron	**9240**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:26	7439-89-6	
Lithium	**16.1**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:26	7439-93-2	
Magnesium	**27600**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:26	7439-95-4	
Manganese	**917**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:26	7439-96-5	
Molybdenum	**1.5J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:26	7439-98-7	
Potassium	**2480**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:26	7440-09-7	
Sodium	**6080**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:26	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.27J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:26	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:26	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:26	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**421**	mg/L	20.0	4.6	1		10/26/22 20:15		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**581**	mg/L	10.0	10.0	1		10/25/22 10:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**5.3**	mg/L	1.0	0.53	1		11/02/22 18:56	16887-00-6	
Fluoride	**0.13J**	mg/L	0.20	0.12	1		11/02/22 18:56	16984-48-8	
Sulfate	**34.2**	mg/L	5.0	2.8	5		11/02/22 19:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-BMW-3D **Lab ID: 60413473008** Collected: 10/18/22 13:28 Received: 10/20/22 04:13 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	**644**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:28	7440-39-3	
Boron	**52.5J**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:28	7440-42-8	
Calcium	**106000**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:28	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:28	7440-48-4	
Iron	**7480**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:28	7439-89-6	
Lithium	**23.2**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:28	7439-93-2	
Magnesium	**24300**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:28	7439-95-4	
Manganese	**543**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:28	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:28	7439-98-7	
Potassium	**3220**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:28	7440-09-7	
Sodium	**5870**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:28	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.14**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:28	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:28	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:28	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**360**	mg/L	20.0	4.6	1		10/26/22 20:22		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**539**	mg/L	10.0	10.0	1		10/25/22 10:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**10.2**	mg/L	1.0	0.53	1		11/02/22 19:25	16887-00-6	
Fluoride	**0.17J**	mg/L	0.20	0.12	1		11/02/22 19:25	16984-48-8	
Sulfate	**23.2**	mg/L	5.0	2.8	5		11/02/22 19:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-DUP-1 **Lab ID: 60413473009** Collected: 10/19/22 00:00 Received: 10/20/22 04:13 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	**59.4**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:30	7440-39-3	
Boron	**21200**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:30	7440-42-8	
Calcium	**157000**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:30	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:30	7440-48-4	
Iron	**118**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:30	7439-89-6	B
Lithium	**24.4**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:30	7439-93-2	
Magnesium	**3780**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:30	7439-95-4	
Manganese	**151**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:30	7439-96-5	
Molybdenum	**1700**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:30	7439-98-7	
Potassium	**23400**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:30	7440-09-7	
Sodium	**50600**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:30	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**2.8**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:30	7440-38-2	
Cadmium	**0.60**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:30	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:30	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**94.6**	mg/L	20.0	4.6	1		10/27/22 20:14		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**824**	mg/L	10.0	10.0	1		10/26/22 16:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**51.2**	mg/L	50.0	26.4	50		11/03/22 15:51	16887-00-6	
Fluoride	**0.51**	mg/L	0.20	0.12	1		11/02/22 19:54	16984-48-8	
Sulfate	**434**	mg/L	50.0	27.5	50		11/03/22 15:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-FB-1 **Lab ID: 60413473010** Collected: 10/19/22 10:22 Received: 10/20/22 04:13 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	**<0.51**	ug/L	5.0	0.51	1	10/28/22 16:57	11/04/22 17:32	7440-39-3	
Boron	**33.6J**	ug/L	100	4.2	1	10/28/22 16:57	11/04/22 17:32	7440-42-8	
Calcium	**49.2J**	ug/L	200	33.7	1	10/28/22 16:57	11/04/22 17:32	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/04/22 17:32	7440-48-4	
Iron	**<5.6**	ug/L	50.0	5.6	1	10/28/22 16:57	11/04/22 17:32	7439-89-6	
Lithium	**<5.6**	ug/L	10.0	5.6	1	10/28/22 16:57	11/04/22 17:32	7439-93-2	
Magnesium	**<27.1**	ug/L	50.0	27.1	1	10/28/22 16:57	11/04/22 17:32	7439-95-4	
Manganese	**<0.24**	ug/L	5.0	0.24	1	10/28/22 16:57	11/04/22 17:32	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/04/22 17:32	7439-98-7	
Potassium	**<87.6**	ug/L	500	87.6	1	10/28/22 16:57	11/04/22 17:32	7440-09-7	
Sodium	**<73.2**	ug/L	500	73.2	1	10/28/22 16:57	11/04/22 17:32	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.14**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:33	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:33	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:33	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<4.6**	mg/L	20.0	4.6	1		10/27/22 20:31		
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		10/26/22 16:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**0.63J**	mg/L	1.0	0.53	1		11/03/22 16:06	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/03/22 16:06	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		11/03/22 16:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 815412
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: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

METHOD BLANK: 3242898 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.51	5.0	0.51	11/04/22 17:02	
Boron	ug/L	<4.2	100	4.2	11/04/22 17:02	
Calcium	ug/L	<33.7	200	33.7	11/04/22 17:02	
Cobalt	ug/L	<0.82	5.0	0.82	11/04/22 17:02	
Iron	ug/L	17.3J	50.0	5.6	11/04/22 17:02	
Lithium	ug/L	<5.6	10.0	5.6	11/04/22 17:02	
Magnesium	ug/L	<27.1	50.0	27.1	11/04/22 17:02	
Manganese	ug/L	2.3J	5.0	0.24	11/04/22 17:02	
Molybdenum	ug/L	<0.90	20.0	0.90	11/04/22 17:02	
Potassium	ug/L	<87.6	500	87.6	11/04/22 17:02	
Sodium	ug/L	<73.2	500	73.2	11/04/22 17:02	

LABORATORY CONTROL SAMPLE: 3242899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	934	93	85-115	
Boron	ug/L	1000	858	86	85-115	
Calcium	ug/L	10000	9380	94	85-115	
Cobalt	ug/L	1000	966	97	85-115	
Iron	ug/L	10000	9680	97	85-115	
Lithium	ug/L	1000	889	89	85-115	
Magnesium	ug/L	10000	9210	92	85-115	
Manganese	ug/L	1000	988	99	85-115	
Molybdenum	ug/L	1000	961	96	85-115	
Potassium	ug/L	10000	9040	90	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242900 3242901

Parameter	Units	60413473006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	114	1000	1000	1090	1060	97	95	70-130	2	20	
Boron	ug/L	577	1000	1000	1500	1470	93	89	70-130	3	20	
Calcium	ug/L	78200	10000	10000	90000	88100	118	99	70-130	2	20	
Cobalt	ug/L	<0.82	1000	1000	950	959	95	96	70-130	1	20	
Iron	ug/L	4720	10000	10000	14700	14400	100	97	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242900 3242901

Parameter	Units	60413473006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	14.4	1000	1000	966	942	95	93	70-130	3	20	
Magnesium	ug/L	18300	10000	10000	27700	27400	93	91	70-130	1	20	
Manganese	ug/L	561	1000	1000	1530	1550	97	99	70-130	2	20	
Molybdenum	ug/L	67.4	1000	1000	1040	1050	97	98	70-130	1	20	
Potassium	ug/L	3940	10000	10000	13900	13500	100	96	70-130	3	20	
Sodium	ug/L	9570	10000	10000	19000	18700	94	91	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 815415
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: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

METHOD BLANK: 3242903 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.14	1.0	0.14	11/10/22 10:58	
Cadmium	ug/L	<0.053	0.50	0.053	11/10/22 10:58	
Selenium	ug/L	<0.18	1.0	0.18	11/10/22 10:58	

LABORATORY CONTROL SAMPLE: 3242904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.2	96	85-115	
Cadmium	ug/L	40	39.9	100	85-115	
Selenium	ug/L	40	39.3	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242905 3242906

Parameter	Units	60413473006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	0.32J	40	40	38.0	39.0	94	97	70-130	3	20	
Cadmium	ug/L	<0.053	40	40	39.0	40.2	97	100	70-130	3	20	
Selenium	ug/L	<0.18	40	40	37.9	39.3	95	98	70-130	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 814614
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413473007, 60413473008

METHOD BLANK: 3239741 Matrix: Water
Associated Lab Samples: 60413473007, 60413473008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	7.4J	20.0	4.6	10/26/22 17:42	

LABORATORY CONTROL SAMPLE: 3239742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	494	99	90-110	

SAMPLE DUPLICATE: 3239765

Parameter	Units	60413568001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	331	333	1	10	

SAMPLE DUPLICATE: 3239766

Parameter	Units	60413574002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	140	138	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 815000 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473009, 60413473010

METHOD BLANK: 3241282 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	10/27/22 17:29	

LABORATORY CONTROL SAMPLE: 3241283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	486	97	90-110	

SAMPLE DUPLICATE: 3241284

Parameter	Units	60413420001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	61.8	56.0	10	10	

SAMPLE DUPLICATE: 3241285

Parameter	Units	60413447001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	177	174	1	10	

SAMPLE DUPLICATE: 3241286

Parameter	Units	60413473006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	258	260	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 814499
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413473007, 60413473008

METHOD BLANK: 3239207 Matrix: Water
Associated Lab Samples: 60413473007, 60413473008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/25/22 10:47	

LABORATORY CONTROL SAMPLE: 3239208

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	884	88	80-120	

SAMPLE DUPLICATE: 3239209

Parameter	Units	60413307001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2630	2720	3	10	

SAMPLE DUPLICATE: 3239210

Parameter	Units	60413477004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	467	467	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 814748 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473009, 60413473010

METHOD BLANK: 3240236 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/26/22 16:18	

LABORATORY CONTROL SAMPLE: 3240237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	977	98	80-120	

SAMPLE DUPLICATE: 3240238

Parameter	Units	60413473006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	352	352	0	10	

SAMPLE DUPLICATE: 3240239

Parameter	Units	60413480003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1160	1170	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 815920
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: 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

METHOD BLANK: 3244878 Matrix: Water
Associated Lab Samples: 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/02/22 11:52	
Fluoride	mg/L	<0.12	0.20	0.12	11/02/22 11:52	
Sulfate	mg/L	<0.55	1.0	0.55	11/02/22 11:52	

METHOD BLANK: 3247800 Matrix: Water
Associated Lab Samples: 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/03/22 15:07	
Fluoride	mg/L	<0.12	0.20	0.12	11/03/22 15:07	
Sulfate	mg/L	<0.55	1.0	0.55	11/03/22 15:07	

METHOD BLANK: 3248278 Matrix: Water
Associated Lab Samples: 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/03/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/03/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/03/22 08:54	

LABORATORY CONTROL SAMPLE: 3244879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	4.8	95	90-110	

LABORATORY CONTROL SAMPLE: 3247801

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	2.4	97	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

LABORATORY CONTROL SAMPLE: 3248279

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	2.6	102	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3244880 3244881

Parameter	Units	60413473006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	10.5	5	5	15.0	14.2	89	74	80-120	5	15	M1
Fluoride	mg/L	0.31	2.5	2.5	2.8	2.9	100	102	80-120	2	15	
Sulfate	mg/L	53.4	25	25	79.2	80.1	103	107	80-120	1	15	

SAMPLE DUPLICATE: 3244882

Parameter	Units	60413473006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	10.5	10.6	1	15	
Fluoride	mg/L	0.31	0.30	2	15	
Sulfate	mg/L	53.4	52.7	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 816153
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: 60413473001, 60413473002, 60413473003

METHOD BLANK: 3245993 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/03/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/03/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/03/22 08:54	

METHOD BLANK: 3249498 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.60J	1.0	0.53	11/06/22 06:32	
Fluoride	mg/L	<0.12	0.20	0.12	11/06/22 06:32	
Sulfate	mg/L	<0.55	1.0	0.55	11/06/22 06:32	

LABORATORY CONTROL SAMPLE: 3245994

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	2.6	102	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

LABORATORY CONTROL SAMPLE: 3249499

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	105	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3245995 3245996

Parameter	Units	60414373004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.7	5	5	19.8	20.0	102	106	80-120	1	15	
Fluoride	mg/L	<0.12	2.5	2.5	2.3	2.3	91	93	80-120	2	15	
Sulfate	mg/L	23.4	10	10	34.5	34.3	111	108	80-120	1	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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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-1D **Lab ID: 60413473001** Collected: 10/19/22 12:35 Received: 10/20/22 04:13 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	**-0.0580 ± 0.301 (0.697) C:NA T:86%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.752 ± 0.430 (0.770) C:64% T:86%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-2D **Lab ID: 60413473002** Collected: 10/19/22 10:18 Received: 10/20/22 04:13 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	**0.266 ± 0.479 (0.844) C:NA T:95%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.61 ± 0.535 (0.700) C:64% T:95%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-3D **Lab ID: 60413473003** Collected: 10/19/22 13:16 Received: 10/20/22 04:13 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 ± 0.444 (0.635) C:NA T:87%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.47 ± 0.557 (0.836) C:66% T:87%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-4D **Lab ID: 60413473004** Collected: 10/19/22 12:08 Received: 10/20/22 04:13 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 ± 0.257 (0.522) C:NA T:85%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**2.25 ± 0.652 (0.735) C:70% T:85%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-5D **Lab ID: 60413473005** Collected: 10/19/22 10:12 Received: 10/20/22 04:13 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	**0.166 ± 0.326 (0.595) C:NA T:92%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.73 ± 0.527 (0.613) C:71% T:92%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-6D **Lab ID: 60413473006** Collected: 10/19/22 11:50 Received: 10/20/22 04:13 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	**-0.0520 ± 0.237 (0.483) C:NA T:91%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.25 ± 0.497 (0.777) C:70% T:91%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-BMW-1D **Lab ID: 60413473007** Collected: 10/18/22 14:55 Received: 10/20/22 04:13 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	**-0.0528 ± 0.373 (0.792) C:NA T:89%**	pCi/L	11/05/22 13:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.617 ± 0.356 (0.642) C:75% T:89%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-BMW-3D **Lab ID: 60413473008** Collected: 10/18/22 13:28 Received: 10/20/22 04:13 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	**0.0522 ± 0.339 (0.684) C:NA T:93%**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.26 ± 0.429 (0.561) C:76% T:93%**	pCi/L	10/31/22 12:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-DUP-1 **Lab ID: 60413473009** Collected: 10/19/22 00:00 Received: 10/20/22 04:13 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	**0.167 ± 0.395 (0.731) C:NA T:88%**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.21 ± 0.584 (1.05) C:72% T:88%**	pCi/L	10/31/22 12:46	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-FB-1 **Lab ID: 60413473010** Collected: 10/19/22 10:22 Received: 10/20/22 04:13 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	**0.0517 ± 0.268 (0.557) C:NA T:92%**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.135 ± 0.488 (1.09) C:78% T:92%**	pCi/L	10/31/22 12:46	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-MS-1 **Lab ID: 60413473011** Collected: 10/19/22 11:50 Received: 10/20/22 04:13 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	**87.99 %REC ± NA (NA) C:NA T:NA**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**121.81 %REC ± NA (NA) C:NA T:NA**	pCi/L	10/31/22 16:13	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Sample: S-UMW-MSD-1 **Lab ID: 60413473012** Collected: 10/19/22 11:50 Received: 10/20/22 04:13 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	**74.57 %REC 16.51RPD ± NA (NA) C:NA T:NA**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**90.93 %REC 29.02RPD ± NA (NA) C:NA T:NA**	pCi/L	10/31/22 16:13	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 541945
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: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010, 60413473011, 60413473012

METHOD BLANK: 2630304 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010, 60413473011, 60413473012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.360 ± 0.322 (0.649) C:75% T:92%	pCi/L	10/31/22 12:41	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

QC Batch: 541944
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: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010, 60413473011, 60413473012

METHOD BLANK: 2630303 Matrix: Water
Associated Lab Samples: 60413473001, 60413473002, 60413473003, 60413473004, 60413473005, 60413473006, 60413473007, 60413473008, 60413473009, 60413473010, 60413473011, 60413473012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0532 ± 0.276 (0.573) C:NA T:92%	pCi/L	11/05/22 13:16	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

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

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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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60413473001	**S-UMW-1D**	EPA 200.7	815412	EPA 200.7	815451
60413473002	**S-UMW-2D**	EPA 200.7	815412	EPA 200.7	815451
60413473003	**S-UMW-3D**	EPA 200.7	815412	EPA 200.7	815451
60413473004	**S-UMW-4D**	EPA 200.7	815412	EPA 200.7	815451
60413473005	**S-UMW-5D**	EPA 200.7	815412	EPA 200.7	815451
60413473006	**S-UMW-6D**	EPA 200.7	815412	EPA 200.7	815451
60413473007	**S-BMW-1D**	EPA 200.7	815412	EPA 200.7	815451
60413473008	**S-BMW-3D**	EPA 200.7	815412	EPA 200.7	815451
60413473009	**S-UMW-DUP-1**	EPA 200.7	815412	EPA 200.7	815451
60413473010	**S-UMW-FB-1**	EPA 200.7	815412	EPA 200.7	815451
60413473001	**S-UMW-1D**	EPA 200.8	815415	EPA 200.8	815452
60413473002	**S-UMW-2D**	EPA 200.8	815415	EPA 200.8	815452
60413473003	**S-UMW-3D**	EPA 200.8	815415	EPA 200.8	815452
60413473004	**S-UMW-4D**	EPA 200.8	815415	EPA 200.8	815452
60413473005	**S-UMW-5D**	EPA 200.8	815415	EPA 200.8	815452
60413473006	**S-UMW-6D**	EPA 200.8	815415	EPA 200.8	815452
60413473007	**S-BMW-1D**	EPA 200.8	815415	EPA 200.8	815452
60413473008	**S-BMW-3D**	EPA 200.8	815415	EPA 200.8	815452
60413473009	**S-UMW-DUP-1**	EPA 200.8	815415	EPA 200.8	815452
60413473010	**S-UMW-FB-1**	EPA 200.8	815415	EPA 200.8	815452
60413473001	**S-UMW-1D**	EPA 903.1	541944		
60413473002	**S-UMW-2D**	EPA 903.1	541944		
60413473003	**S-UMW-3D**	EPA 903.1	541944		
60413473004	**S-UMW-4D**	EPA 903.1	541944		
60413473005	**S-UMW-5D**	EPA 903.1	541944		
60413473006	**S-UMW-6D**	EPA 903.1	541944		
60413473007	**S-BMW-1D**	EPA 903.1	541944		
60413473008	**S-BMW-3D**	EPA 903.1	541944		
60413473009	**S-UMW-DUP-1**	EPA 903.1	541944		
60413473010	**S-UMW-FB-1**	EPA 903.1	541944		
60413473011	**S-UMW-MS-1**	EPA 903.1	541944		
60413473012	**S-UMW-MSD-1**	EPA 903.1	541944		
60413473001	**S-UMW-1D**	EPA 904.0	541945		
60413473002	**S-UMW-2D**	EPA 904.0	541945		
60413473003	**S-UMW-3D**	EPA 904.0	541945		
60413473004	**S-UMW-4D**	EPA 904.0	541945		
60413473005	**S-UMW-5D**	EPA 904.0	541945		
60413473006	**S-UMW-6D**	EPA 904.0	541945		
60413473007	**S-BMW-1D**	EPA 904.0	541945		
60413473008	**S-BMW-3D**	EPA 904.0	541945		
60413473009	**S-UMW-DUP-1**	EPA 904.0	541945		
60413473010	**S-UMW-FB-1**	EPA 904.0	541945		
60413473011	**S-UMW-MS-1**	EPA 904.0	541945		
60413473012	**S-UMW-MSD-1**	EPA 904.0	541945		
60413473001	**S-UMW-1D**	SM 2320B	815000		
60413473002	**S-UMW-2D**	SM 2320B	815000		
60413473003	**S-UMW-3D**	SM 2320B	815000		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA
Pace Project No.: 60413473

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60413473004	**S-UMW-4D**	SM 2320B	815000		
60413473005	**S-UMW-5D**	SM 2320B	815000		
60413473006	**S-UMW-6D**	SM 2320B	815000		
60413473007	**S-BMW-1D**	SM 2320B	814614		
60413473008	**S-BMW-3D**	SM 2320B	814614		
60413473009	**S-UMW-DUP-1**	SM 2320B	815000		
60413473010	**S-UMW-FB-1**	SM 2320B	815000		
60413473001	**S-UMW-1D**	SM 2540C	814748		
60413473002	**S-UMW-2D**	SM 2540C	814748		
60413473003	**S-UMW-3D**	SM 2540C	814748		
60413473004	**S-UMW-4D**	SM 2540C	814748		
60413473005	**S-UMW-5D**	SM 2540C	814748		
60413473006	**S-UMW-6D**	SM 2540C	814748		
60413473007	**S-BMW-1D**	SM 2540C	814499		
60413473008	**S-BMW-3D**	SM 2540C	814499		
60413473009	**S-UMW-DUP-1**	SM 2540C	814748		
60413473010	**S-UMW-FB-1**	SM 2540C	814748		
60413473001	**S-UMW-1D**	EPA 300.0	816153		
60413473002	**S-UMW-2D**	EPA 300.0	816153		
60413473003	**S-UMW-3D**	EPA 300.0	816153		
60413473004	**S-UMW-4D**	EPA 300.0	815920		
60413473005	**S-UMW-5D**	EPA 300.0	815920		
60413473006	**S-UMW-6D**	EPA 300.0	815920		
60413473007	**S-BMW-1D**	EPA 300.0	815920		
60413473008	**S-BMW-3D**	EPA 300.0	815920		
60413473009	**S-UMW-DUP-1**	EPA 300.0	815920		
60413473010	**S-UMW-FB-1**	EPA 300.0	815920		

WO# : 60413473

60413473

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

Client Name: WSP Golder

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** 2.3/1.9 11.1 **Corr. Factor** 0.0 **Corrected** 2.3/1.9/11.9

Date and initials of person examining contents: PN 10/20/22

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	receive one BPLN for
Pace containers used:	☐Yes ☐No ☐N/A	S-LMW-MSD-1.
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#:** 55192	☐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:	WSP Golder
Address:	701 Emerson Road, Suite 250
	Creve Coeur, Missouri, 63141
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider
Purchase Order No.:	COC #7
Project Name:	Ameren Sioux Energy Center SCPA
Project Number:	153140604. 0003

Section C Invoice Information:

Attention:	
Company Name:	WSP Golder
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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

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	Chloride/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **	Radium 226	Radium 228				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N	N	N	N					60413477
1	S-UMW-1D	WT	G			10-19-22	1235		4	1		3							✓	✓	✓	✓	✓	✓	✓					BP1N	BP1N	2BP1N
2	S-UMW-2D	WT	G			10-19-22	1018		4	1		3							✓	✓	✓	✓	✓	✓	✓							
3	S-UMW-3D	WT	G			10-19-22	1316		4	1		3							✓	✓	✓	✓	✓	✓	✓							
4	S-UMW-4D	WT	G			10-19-22	1208		4	1		3							✓	✓	✓	✓	✓	✓	✓							
5	S-UMW-5D	WT	G			10-19-22	1012		4	1		3							✓	✓	✓	✓	✓	✓	✓							
6	S-UMW-6D	WT	G			10-19-22	1150		4	1		3							✓	✓	✓	✓	✓	✓	✓					3BP3N	3BP1N	2BP1N
7	S-BMW-1D	WT	G			10-18-22	1455		4	1		3							✓	✓	✓	✓	✓	✓	✓					BP3N	BP1N	
8	S-BMW-3D	WT	G			10-18-22	1328		4	1		3							✓	✓	✓	✓	✓	✓	✓							
9	S-UMW-DUP-1	WT	G			10-19-22	—		4	1		3							✓	✓	✓	✓	✓	✓	✓							
10	S-UMW-FB-1	WT	G			10-19-22	1022		4	1		3							✓	✓	✓	✓	✓	✓	✓							
11	S-UMW-MS-1	WT	G			10-19-22	1150		4	1		3							✓	✓	✓	✓	✓	✓	✓					2BP1N	Collected @ S-UMW-6D	
12	S-UMW-MSD-1	WT	G			10-19-22	1150		4	1		3							✓	✓	✓	✓	✓	✓	✓					BP1N	Collected @ S-UMW-6D	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Dixon Abrahamsen	10/19/22	1531		10/20	0413
**App IV Metals - EPA 200.7: Ba, Co, Li, Mo EPA 200.8: As, Cd, Se						

SAMPLE CONDITIONS				
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.3	Y	Y	Y
1.9	↓	↓	↓
11.1	N	↓	↓

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/19/22

*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.

MEMORANDUM

DATE December 7, 2022 **Project No.** 153140604

TO Project File
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Rahel Pommerenke **EMAIL rahel.pommerenke@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA – DETECTION MONITORING AND ASSESSMENT MONITORING - DATA PACKAGE 60413473

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).
- When duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a compound was detected in a sample result between the MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder / WSP
Project Manager: J. Ingram
Project Name: Ameren SEC - SCPA
Project Number: 153140604
Reviewer: R.Pommerenke
Validation Date: 12/07/2022

Laboratory: Pace Analytical Services
SDG #: 60413473
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 903.1/904.0 (Radium 226/228); SM2320B (Alkalinity); SM2540C (TDS);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ EPA 300.0 (Anions)
Sample Names S-BMW-1D, S-BMW-3D, S-UMW-2D, S-UMW-3D, S-UMW-4D, S-UMW-5D, S-UMW-6D, S-UMW-DUP-1, S-UMW-FB-1, S-UMW-MS-1, S-UMW-MSD-1, S-UMW-1D

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			10/18/2022 - 10/19/2022
b) Sampling team indicated?	x			GTM/SMA
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, Sp.Cond, ORP, Temp, DO, Turb
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:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?		x		See notes.
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			See notes.

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			S-UMW-DUP-1 @ S-UMW-2D
b) Were field dup. precision criteria met (note RPD)?		x		See notes.
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			
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			RPD limit 20%: Max RPD 5.5%

Comments/Notes:

COC indicated incorrect number of bottles for S-UMW-MSD-1.

Blanks:

MB 3242898: Iron (17.3J), Manganese (2.3J); associated with samples -001 through -010.

Results non-detect or > RL and 10x blank not qualified. Results > RL but <10x blank qualified as estimates.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

MB3239741: Alkalinity (7.4J); associated with samples -007 and -008.

Result > RL and > 10x blank; no qualification

MB 3249498: Chloride (0.60J). Associated with samples -001 through -003.

Results > RL and 10x blank, no qualification necessary.

S-UMW-FB-1 @ S-UMW-5D: Boron (33.6J), Calcium (49.2J), Chloride (0.63J). Results > RL and 10x blank not qualified.

Duplicates:

S-UMW-DUP-1 @ S-UMW-2D: RPD exceeds limit (20%) for chloride (79.8%), fluoride (21.7%), radium 228 (28.4%);

Results qualified with J flag.

MS/MSD:

3244880/3244881: MSD % recovery low for chloride. Associated with sample S-UMW-6D. Only one QC

indicator outside of control limits, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-UMW-2D	Iron	118	J	Detected in MB, 10x blank > result > RL
S-UMW-DUP-1	"	118	J	"
S-UMW-DUP-1	Chloride	51.2	J	DUP RPD exceeds limit
S-UMW-DUP-1	Fluoride	0.51	J	"
S-UMW-DUP-1	Radium 228	1.21	J	"
S-UMW-2D	Chloride	22	J	"
S-UMW-2D	Fluoride	0.41	J	"
S-UMW-2D	Radium 228	1.61	J	"

Signature: _____ Date: 12/07/2022

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

January 13, 2023

Jeffrey Ingram
WSP Golder
701 Emerson Road
Suite 250
Saint Louis, MO 63141

RE: Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between October 20, 2022 and October 21, 2022. 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, 1/13/23: Sample collection date updated from 10/21/22 to 10/20/22 for sample S-TP-8D.

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: Mark Haddock, Golder Associates
Lisa Meyer, Ameren
Grant Morey, WSP Golder
Ann Muehlfarth, WSP Golder
Eric Schneider, WSP Golder

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
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 #: PA014572018-1
New Hampshire/TNI Certification #: 297617
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 #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
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
Wyoming Certification #: 8TMS-L

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Illinois Certification #: 2000302021-3
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 #: T104704407-21-15
Utah Certification #: KS000212022-12
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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SAMPLE SUMMARY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60413477001	S-AM-1S	Water	10/18/22 10:56	10/20/22 04:13
60413477002	S-AM-1D	Water	10/18/22 11:53	10/20/22 04:13
60413477003	S-CA-DUP-1	Water	10/18/22 00:00	10/20/22 04:13
60413477009	S-CA-MSD-1	Water	10/20/22 16:04	10/21/22 17:48
60413477010	S-CA-MS-1	Water	10/20/22 16:04	10/21/22 17:48
60413477011	S-PZ-9D	Water	10/19/22 17:51	10/21/22 17:48
60413477012	S-TP-6S	Water	10/19/22 15:35	10/21/22 17:48
60413477013	S-TP-6D	Water	10/19/22 16:20	10/21/22 17:48
60413477014	S-CA-DUP-2	Water	10/19/22 00:00	10/21/22 17:48
60413477015	S-PZ-1S	Water	10/20/22 10:28	10/21/22 17:48
60413477016	S-TP-2D	Water	10/20/22 16:04	10/21/22 17:48
60413477017	S-TP-3D	Water	10/21/22 10:32	10/21/22 17:48
60413477018	S-TP-4D	Water	10/21/22 11:53	10/21/22 17:48
60413477019	S-CA-FB-2	Water	10/21/22 12:03	10/21/22 17:48
60413477020	S-TP-8D	Water	10/20/22 13:35	10/21/22 17:48
60413477021	S-CA-FB-1	Water	10/20/22 13:50	10/21/22 17:48
60413477023	S-TP-5D	Water	10/21/22 10:39	10/21/22 17:48
60413477004	S-BMW-3S	Water	10/18/22 14:06	10/20/22 04:13
60413477005	S-BMW-1S	Water	10/18/22 15:35	10/20/22 04:13
60413477022	S-UG-3	Water	10/21/22 09:27	10/21/22 17:48
60413477006	S-LMW-2S	Water	10/19/22 13:36	10/20/22 04:13
60413477007	S-LMW-1S	Water	10/19/22 11:40	10/20/22 04:13
60413477008	S-LMW-5S	Water	10/18/22 14:55	10/20/22 04:13
60413477024	S-LMW-6S	Water	10/20/22 15:19	10/21/22 17:48
60413477025	S-LMW-4S	Water	10/20/22 13:31	10/21/22 17:48

Pace Analytical Services, LLC
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Lenexa, KS 66219
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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60413477001	S-AM-1S	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477002	S-AM-1D	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477003	S-CA-DUP-1	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477009	S-CA-MSD-1	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60413477010	S-CA-MS-1	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60413477011	S-PZ-9D	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477012	S-TP-6S	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477013	**S-TP-6D**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477014	**S-CA-DUP-2**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477015	**S-PZ-1S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477016	**S-TP-2D**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477017	**S-TP-3D**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60413477018	**S-TP-4D**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477019	**S-CA-FB-2**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477020	**S-TP-8D**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477021	**S-CA-FB-1**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477023	**S-TP-5D**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477004	**S-BMW-3S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477005	**S-BMW-1S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477022	**S-UG-3**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477006	**S-LMW-2S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477007	**S-LMW-1S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477008	**S-LMW-5S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
60413477024	**S-LMW-6S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K
60413477025	**S-LMW-4S**	EPA 200.7	MA1	11	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		SM 2320B	SZ	1	PASI-K
		SM 2540C	TML	1	PASI-K
		EPA 300.0	RKA	3	PASI-K

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

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-AM-1S **Lab ID: 60413477001** Collected: 10/18/22 10:56 Received: 10/20/22 04:13 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	**129**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 12:50	7440-39-3	
Boron	**1670**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 12:50	7440-42-8	
Calcium	**72900**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 12:50	7440-70-2	
Cobalt	**1.8J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 12:50	7440-48-4	
Iron	**899**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 12:50	7439-89-6	
Lithium	**26.6**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 12:50	7439-93-2	
Magnesium	**15500**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 12:50	7439-95-4	
Manganese	**1080**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 12:50	7439-96-5	
Molybdenum	**151**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 12:50	7439-98-7	
Potassium	**7920**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 12:50	7440-09-7	
Sodium	**17000**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 12:50	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.3**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:41	7440-38-2	
Cadmium	**0.071J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:41	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:41	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**241**	mg/L	20.0	4.6	1		10/26/22 15:09		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**57.0**	mg/L	5.0	5.0	1		10/25/22 10:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**27.7**	mg/L	5.0	2.6	5		11/04/22 10:31	16887-00-6	
Fluoride	**0.48**	mg/L	0.20	0.12	1		11/04/22 10:16	16984-48-8	
Sulfate	**24.6**	mg/L	5.0	2.8	5		11/04/22 10:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-AM-1D **Lab ID: 60413477002** Collected: 10/18/22 11:53 Received: 10/20/22 04:13 Matrix: Water

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis. The samples were not preserved <2 within the required 5 days of collection.

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	**214**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 12:52	7440-39-3	
Boron	**7150**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 12:52	7440-42-8	
Calcium	**73500**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 12:52	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 12:52	7440-48-4	
Iron	**2640**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 12:52	7439-89-6	
Lithium	**33.5**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 12:52	7439-93-2	
Magnesium	**15600**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 12:52	7439-95-4	
Manganese	**340**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 12:52	7439-96-5	
Molybdenum	**461**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 12:52	7439-98-7	
Potassium	**6740**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 12:52	7440-09-7	
Sodium	**22600**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 12:52	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.19J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:51	7440-38-2	
Cadmium	**0.16J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:51	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:51	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**219**	mg/L	20.0	4.6	1		10/26/22 15:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**66.5**	mg/L	5.0	5.0	1		10/25/22 10:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**32.8**	mg/L	10.0	5.3	10		11/04/22 11:00	16887-00-6	B
Fluoride	**0.48**	mg/L	0.20	0.12	1		11/04/22 10:45	16984-48-8	
Sulfate	**40.6**	mg/L	10.0	5.5	10		11/04/22 11:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-DUP-1 **Lab ID: 60413477003** Collected: 10/18/22 00:00 Received: 10/20/22 04:13 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	**213**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 12:58	7440-39-3	
Boron	**7100**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 12:58	7440-42-8	
Calcium	**73300**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 12:58	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 12:58	7440-48-4	
Iron	**2640**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 12:58	7439-89-6	
Lithium	**32.0**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 12:58	7439-93-2	
Magnesium	**15600**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 12:58	7439-95-4	
Manganese	**347**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 12:58	7439-96-5	
Molybdenum	**468**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 12:58	7439-98-7	
Potassium	**6670**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 12:58	7440-09-7	
Sodium	**22100**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 12:58	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.19J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:53	7440-38-2	
Cadmium	**0.16J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:53	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:53	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**221**	mg/L	20.0	4.6	1		10/26/22 15:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**413**	mg/L	5.0	5.0	1		10/25/22 10:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**40.0**	mg/L	20.0	10.5	20		11/04/22 11:29	16887-00-6	B
Fluoride	**0.48**	mg/L	0.20	0.12	1		11/04/22 11:15	16984-48-8	
Sulfate	**44.4**	mg/L	20.0	11.0	20		11/04/22 11:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-PZ-9D **Lab ID: 60413477011** Collected: 10/19/22 17:51 Received: 10/21/22 17:48 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	**114**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:17	7440-39-3	
Boron	**3860**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:17	7440-42-8	
Calcium	**198000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:17	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:17	7440-48-4	
Iron	**11700**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:17	7439-89-6	
Lithium	**36.0**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:17	7439-93-2	
Magnesium	**48400**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:17	7439-95-4	
Manganese	**1240**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:17	7439-96-5	
Molybdenum	**10.3J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:17	7439-98-7	
Potassium	**5170**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:17	7440-09-7	
Sodium	**19300**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:17	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.71J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:10	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:10	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:10	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**342**	mg/L	20.0	4.6	1		10/27/22 15:17		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**888**	mg/L	10.0	10.0	1		10/26/22 16:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**11.6**	mg/L	1.0	0.53	1		11/04/22 23:29	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/04/22 23:29	16984-48-8	
Sulfate	**346**	mg/L	50.0	27.5	50		11/04/22 23:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-6S **Lab ID: 60413477012** Collected: 10/19/22 15:35 Received: 10/21/22 17:48 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	**287**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:19	7440-39-3	
Boron	**119**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:19	7440-42-8	
Calcium	**136000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:19	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:19	7440-48-4	
Iron	**178**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:19	7439-89-6	
Lithium	**36.5**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:19	7439-93-2	
Magnesium	**29200**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:19	7439-95-4	
Manganese	**256**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:19	7439-96-5	
Molybdenum	**3.4J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:19	7439-98-7	
Potassium	**2590**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:19	7440-09-7	
Sodium	**5750**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:19	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.60J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:12	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:12	7440-43-9	
Selenium	**0.21J**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:12	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**405**	mg/L	20.0	4.6	1		10/27/22 15:23		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**496**	mg/L	10.0	10.0	1		10/26/22 16:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**7.2**	mg/L	1.0	0.53	1		11/07/22 21:20	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 21:20	16984-48-8	
Sulfate	**38.7**	mg/L	5.0	2.8	5		11/07/22 21:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-6D **Lab ID: 60413477013** Collected: 10/19/22 16:20 Received: 10/21/22 17:48 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	**420**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:21	7440-39-3	
Boron	**65.7J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:21	7440-42-8	
Calcium	**124000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:21	7440-70-2	M1
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:21	7440-48-4	
Iron	**7820**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:21	7439-89-6	
Lithium	**28.5**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:21	7439-93-2	
Magnesium	**31500**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:21	7439-95-4	
Manganese	**523**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:21	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:21	7439-98-7	
Potassium	**3910**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:21	7440-09-7	
Sodium	**5600**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:21	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.15J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:15	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:15	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:15	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**351**	mg/L	20.0	4.6	1		10/27/22 15:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**492**	mg/L	10.0	10.0	1		10/26/22 16:24		
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		11/07/22 22:04	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 21:49	16984-48-8	
Sulfate	**57.4**	mg/L	10.0	5.5	10		11/07/22 22:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-DUP-2 **Lab ID: 60413477014** Collected: 10/19/22 00:00 Received: 10/21/22 17:48 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	**407**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:25	7440-39-3	
Boron	**60.4J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:25	7440-42-8	
Calcium	**119000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:25	7440-70-2	
Cobalt	**0.97J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:25	7440-48-4	
Iron	**7510**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:25	7439-89-6	
Lithium	**28.1**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:25	7439-93-2	
Magnesium	**30100**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:25	7439-95-4	
Manganese	**504**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:25	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:25	7439-98-7	
Potassium	**3720**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:25	7440-09-7	
Sodium	**5350**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:25	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.14**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:19	7440-38-2	
Cadmium	**0.066J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:19	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:19	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**353**	mg/L	20.0	4.6	1		10/27/22 15:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**495**	mg/L	10.0	10.0	1		10/26/22 16:24		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**21.3**	mg/L	5.0	2.6	5		11/07/22 22:33	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 22:19	16984-48-8	
Sulfate	**58.8**	mg/L	5.0	2.8	5		11/07/22 22:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-PZ-1S **Lab ID: 60413477015** Collected: 10/20/22 10:28 Received: 10/21/22 17:48 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	**93.9**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:27	7440-39-3	
Boron	**3230**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:27	7440-42-8	
Calcium	**90600**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:27	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:27	7440-48-4	
Iron	**4960**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:27	7439-89-6	
Lithium	**16.0**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:27	7439-93-2	
Magnesium	**16800**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:27	7439-95-4	
Manganese	**739**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:27	7439-96-5	
Molybdenum	**707**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:27	7439-98-7	
Potassium	**3210**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:27	7440-09-7	
Sodium	**20800**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:27	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.31J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:22	7440-38-2	
Cadmium	**0.24J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:22	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:22	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**251**	mg/L	20.0	4.6	1		10/27/22 16:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**419**	mg/L	10.0	10.0	1		10/27/22 16:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**24.4**	mg/L	10.0	5.3	10		11/07/22 12:36	16887-00-6	
Fluoride	**0.59**	mg/L	0.20	0.12	1		11/07/22 12:20	16984-48-8	
Sulfate	**58.5**	mg/L	10.0	5.5	10		11/07/22 12:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-2D **Lab ID: 60413477016** Collected: 10/20/22 16:04 Received: 10/21/22 17:48 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	**58.7**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:40	7440-39-3	
Boron	**76.5J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:40	7440-42-8	
Calcium	**273000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:40	7440-70-2	M1
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:40	7440-48-4	
Iron	**16000**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:40	7439-89-6	
Lithium	**45.2**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:40	7439-93-2	
Magnesium	**72700**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:40	7439-95-4	
Manganese	**1280**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:40	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:40	7439-98-7	
Potassium	**6000**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:40	7440-09-7	
Sodium	**25300**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:40	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.20J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:33	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:33	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:33	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**462**	mg/L	20.0	4.6	1		10/27/22 16:58		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1330**	mg/L	13.3	13.3	1		10/27/22 16:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**80.3**	mg/L	10.0	5.3	10		11/08/22 11:04	16887-00-6	M1
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/08/22 10:06	16984-48-8	
Sulfate	**501**	mg/L	50.0	27.5	50		11/08/22 12:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-3D **Lab ID: 60413477017** Collected: 10/21/22 10:32 Received: 10/21/22 17:48 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	**570**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:46	7440-39-3	
Boron	**59.5J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:46	7440-42-8	
Calcium	**121000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:46	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:46	7440-48-4	
Iron	**7630**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:46	7439-89-6	
Lithium	**35.0**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:46	7439-93-2	
Magnesium	**30300**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:46	7439-95-4	
Manganese	**657**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:46	7439-96-5	
Molybdenum	**1.1J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:46	7439-98-7	
Potassium	**4000**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:46	7440-09-7	
Sodium	**6770**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:46	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.17J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:42	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:42	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:42	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**340**	mg/L	20.0	4.6	1		10/28/22 16:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**474**	mg/L	10.0	10.0	1		10/28/22 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.8**	mg/L	1.0	0.53	1		11/07/22 13:08	16887-00-6	
Fluoride	**0.28**	mg/L	0.20	0.12	1		11/07/22 13:08	16984-48-8	
Sulfate	**86.5**	mg/L	10.0	5.5	10		11/07/22 13:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-4D **Lab ID: 60413477018** Collected: 10/21/22 11:53 Received: 10/21/22 17:48 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	**571**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:48	7440-39-3	
Boron	**60.1J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:48	7440-42-8	
Calcium	**120000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:48	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:48	7440-48-4	
Iron	**6200**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:48	7439-89-6	
Lithium	**32.1**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:48	7439-93-2	
Magnesium	**28800**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:48	7439-95-4	
Manganese	**411**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:48	7439-96-5	
Molybdenum	**1.3J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:48	7439-98-7	
Potassium	**3400**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:48	7440-09-7	
Sodium	**9150**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:48	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**2.0**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:45	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:45	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:45	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**288**	mg/L	20.0	4.6	1		10/28/22 16:22		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**513**	mg/L	10.0	10.0	1		10/28/22 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**10.1**	mg/L	1.0	0.53	1		11/07/22 13:40	16887-00-6	
Fluoride	**0.30**	mg/L	0.20	0.12	1		11/07/22 13:40	16984-48-8	
Sulfate	**123**	mg/L	10.0	5.5	10		11/07/22 13:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-FB-2 **Lab ID: 60413477019** Collected: 10/21/22 12:03 Received: 10/21/22 17:48 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	**<0.51**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:50	7440-39-3	
Boron	**<4.2**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:50	7440-42-8	
Calcium	**<33.7**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:50	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:50	7440-48-4	
Iron	**<5.6**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:50	7439-89-6	
Lithium	**<5.6**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:50	7439-93-2	
Magnesium	**<27.1**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:50	7439-95-4	
Manganese	**<0.24**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:50	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:50	7439-98-7	
Potassium	**<87.6**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:50	7440-09-7	
Sodium	**<73.2**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:50	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.14**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:47	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:47	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:47	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<4.6**	mg/L	20.0	4.6	1		10/28/22 16:28		
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		10/28/22 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**0.70J**	mg/L	1.0	0.53	1		11/07/22 14:11	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 14:11	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		11/07/22 14:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-8D **Lab ID: 60413477020** Collected: 10/20/22 13:35 Received: 10/21/22 17:48 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	**382**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:52	7440-39-3	
Boron	**74.0J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:52	7440-42-8	
Calcium	**118000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:52	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:52	7440-48-4	
Iron	**6210**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:52	7439-89-6	
Lithium	**31.8**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:52	7439-93-2	
Magnesium	**26100**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:52	7439-95-4	
Manganese	**444**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:52	7439-96-5	
Molybdenum	**1.5J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:52	7439-98-7	
Potassium	**3960**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:52	7440-09-7	
Sodium	**6560**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:52	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.3**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:49	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:49	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:49	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**330**	mg/L	20.0	4.6	1		10/28/22 16:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**465**	mg/L	10.0	10.0	1		10/28/22 12:17		H3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**26.5**	mg/L	5.0	2.6	5		11/07/22 16:11	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 15:24	16984-48-8	
Sulfate	**32.5**	mg/L	5.0	2.8	5		11/07/22 16:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-FB-1 **Lab ID: 60413477021** Collected: 10/20/22 13:50 Received: 10/21/22 17:48 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	**<0.51**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 14:00	7440-39-3	
Boron	**<4.2**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 14:00	7440-42-8	
Calcium	**<33.7**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 14:00	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 14:00	7440-48-4	
Iron	**<5.6**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 14:00	7439-89-6	
Lithium	**<5.6**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 14:00	7439-93-2	
Magnesium	**<27.1**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 14:00	7439-95-4	
Manganese	**<0.24**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 14:00	7439-96-5	
Molybdenum	**<0.90**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 14:00	7439-98-7	
Potassium	**<87.6**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 14:00	7440-09-7	
Sodium	**<73.2**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 14:00	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**<0.14**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:54	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:54	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:54	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**7.6J**	mg/L	20.0	4.6	1		10/27/22 17:13		
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		10/27/22 16:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**0.60J**	mg/L	1.0	0.53	1		11/07/22 16:27	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 16:27	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		11/07/22 16:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-5D **Lab ID: 60413477023** Collected: 10/21/22 10:39 Received: 10/21/22 17:48 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	**147**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 14:04	7440-39-3	
Boron	**8250**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 14:04	7440-42-8	
Calcium	**116000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 14:04	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 14:04	7440-48-4	
Iron	**7610**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 14:04	7439-89-6	
Lithium	**34.1**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 14:04	7439-93-2	
Magnesium	**28600**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 14:04	7439-95-4	
Manganese	**895**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 14:04	7439-96-5	
Molybdenum	**677**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 14:04	7439-98-7	
Potassium	**4870**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 14:04	7440-09-7	
Sodium	**40800**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 14:04	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.25J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:59	7440-38-2	
Cadmium	**0.23J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:59	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:59	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**178**	mg/L	20.0	4.6	1		10/28/22 16:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**688**	mg/L	10.0	10.0	1		10/28/22 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**37.9**	mg/L	20.0	10.5	20		11/07/22 17:30	16887-00-6	
Fluoride	**0.13J**	mg/L	0.20	0.12	1		11/07/22 17:14	16984-48-8	
Sulfate	**256**	mg/L	20.0	11.0	20		11/07/22 17:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-BMW-3S **Lab ID: 60413477004** Collected: 10/18/22 14:06 Received: 10/20/22 04:13 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	**110**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:01	7440-39-3	
Boron	**84.2J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:01	7440-42-8	
Calcium	**131000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:01	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:01	7440-48-4	
Iron	**20.0J**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:01	7439-89-6	
Lithium	**10.9**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:01	7439-93-2	
Magnesium	**23900**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:01	7439-95-4	
Manganese	**210**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:01	7439-96-5	
Molybdenum	**1.2J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:01	7439-98-7	
Potassium	**525**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:01	7440-09-7	
Sodium	**5490**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:01	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.52J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:55	7440-38-2	
Cadmium	**<0.053**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:55	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:55	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**390**	mg/L	20.0	4.6	1		10/26/22 15:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**467**	mg/L	10.0	10.0	1		10/25/22 10:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**11.7**	mg/L	1.0	0.53	1		11/04/22 12:13	16887-00-6	
Fluoride	**0.22**	mg/L	0.20	0.12	1		11/04/22 12:13	16984-48-8	
Sulfate	**27.8**	mg/L	5.0	2.8	5		11/04/22 12:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-BMW-1S **Lab ID: 60413477005** Collected: 10/18/22 15:35 Received: 10/20/22 04:13 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	**173**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:03	7440-39-3	
Boron	**73.0J**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:03	7440-42-8	
Calcium	**168000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:03	7440-70-2	
Cobalt	**2.3J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:03	7440-48-4	
Iron	**32.9J**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:03	7439-89-6	
Lithium	**6.3J**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:03	7439-93-2	
Magnesium	**33400**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:03	7439-95-4	
Manganese	**1550**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:03	7439-96-5	
Molybdenum	**3.0J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:03	7439-98-7	
Potassium	**431J**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:03	7440-09-7	
Sodium	**5020**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:03	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.1**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 11:58	7440-38-2	
Cadmium	**0.11J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 11:58	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 11:58	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**479**	mg/L	20.0	4.6	1		10/26/22 15:39		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**711**	mg/L	10.0	10.0	1		10/25/22 10:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**9.2**	mg/L	1.0	0.53	1		11/04/22 12:42	16887-00-6	
Fluoride	**0.20J**	mg/L	0.20	0.12	1		11/04/22 12:42	16984-48-8	
Sulfate	**61.1**	mg/L	5.0	2.8	5		11/04/22 12:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-UG-3 **Lab ID: 60413477022** Collected: 10/21/22 09:27 Received: 10/21/22 17:48 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	**220**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 14:02	7440-39-3	
Boron	**302**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 14:02	7440-42-8	
Calcium	**126000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 14:02	7440-70-2	
Cobalt	**4.6J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 14:02	7440-48-4	
Iron	**10.9J**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 14:02	7439-89-6	
Lithium	**27.1**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 14:02	7439-93-2	
Magnesium	**24000**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 14:02	7439-95-4	
Manganese	**744**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 14:02	7439-96-5	
Molybdenum	**2.8J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 14:02	7439-98-7	
Potassium	**5330**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 14:02	7440-09-7	
Sodium	**27600**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 14:02	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.41J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:57	7440-38-2	
Cadmium	**0.24J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:57	7440-43-9	
Selenium	**2.3**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:57	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**353**	mg/L	20.0	4.6	1		10/28/22 16:38		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**496**	mg/L	10.0	10.0	1		10/28/22 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**39.5**	mg/L	5.0	2.6	5		11/07/22 16:58	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/07/22 16:43	16984-48-8	
Sulfate	**44.1**	mg/L	5.0	2.8	5		11/07/22 16:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-2S **Lab ID: 60413477006** Collected: 10/19/22 13:36 Received: 10/20/22 04:13 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	**130**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:11	7440-39-3	
Boron	**8550**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:11	7440-42-8	
Calcium	**205000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:11	7440-70-2	
Cobalt	**3.3J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:11	7440-48-4	
Iron	**150**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:11	7439-89-6	
Lithium	**34.0**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:11	7439-93-2	
Magnesium	**38100**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:11	7439-95-4	
Manganese	**625**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:11	7439-96-5	
Molybdenum	**628**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:11	7439-98-7	
Potassium	**8160**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:11	7440-09-7	
Sodium	**67600**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:11	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.0**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:00	7440-38-2	
Cadmium	**0.61**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:00	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:00	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**372**	mg/L	20.0	4.6	1		10/27/22 14:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**977**	mg/L	13.3	13.3	1		10/26/22 16:21		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**149**	mg/L	20.0	10.5	20		11/04/22 13:26	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/04/22 13:12	16984-48-8	
Sulfate	**243**	mg/L	20.0	11.0	20		11/04/22 13:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-1S **Lab ID: 60413477007** Collected: 10/19/22 11:40 Received: 10/20/22 04:13 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	**150**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:13	7440-39-3	
Boron	**339**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:13	7440-42-8	
Calcium	**85100**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:13	7440-70-2	
Cobalt	**2.5J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:13	7440-48-4	
Iron	**98.9**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:13	7439-89-6	
Lithium	**17.3**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:13	7439-93-2	
Magnesium	**20900**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:13	7439-95-4	
Manganese	**150**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:13	7439-96-5	
Molybdenum	**55.7**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:13	7439-98-7	
Potassium	**6060**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:13	7440-09-7	
Sodium	**16600**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:13	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**1.9**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:05	7440-38-2	
Cadmium	**0.082J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:05	7440-43-9	
Selenium	**1.7**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:05	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**216**	mg/L	20.0	4.6	1		10/27/22 14:56		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**383**	mg/L	5.0	5.0	1		10/26/22 16:21		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**36.2**	mg/L	20.0	10.5	20		11/04/22 13:55	16887-00-6	B
Fluoride	**0.28**	mg/L	0.20	0.12	1		11/04/22 13:41	16984-48-8	
Sulfate	**83.5**	mg/L	20.0	11.0	20		11/04/22 13:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-5S **Lab ID: 60413477008** Collected: 10/18/22 14:55 Received: 10/20/22 04:13 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	**50.6**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 13:15	7440-39-3	
Boron	**12700**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 13:15	7440-42-8	
Calcium	**238000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 13:15	7440-70-2	
Cobalt	**1.2J**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 13:15	7440-48-4	
Iron	**58.1**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 13:15	7439-89-6	
Lithium	**43.0**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 13:15	7439-93-2	
Magnesium	**47500**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 13:15	7439-95-4	
Manganese	**1330**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 13:15	7439-96-5	
Molybdenum	**1220**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 13:15	7439-98-7	
Potassium	**5730**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 13:15	7440-09-7	
Sodium	**142000**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 13:15	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.67J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 12:07	7440-38-2	
Cadmium	**0.79**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 12:07	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 12:07	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**338**	mg/L	20.0	4.6	1		10/26/22 15:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**1400**	mg/L	13.3	13.3	1		10/25/22 10:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**22.7**	mg/L	2.0	1.1	2		11/07/22 16:33	16887-00-6	
Fluoride	**0.51**	mg/L	0.20	0.12	1		11/04/22 14:10	16984-48-8	
Sulfate	**868**	mg/L	100	55.0	100		11/04/22 14:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-6S **Lab ID: 60413477024** Collected: 10/20/22 15:19 Received: 10/21/22 17:48 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	**47.2**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 14:06	7440-39-3	
Boron	**21600**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 14:06	7440-42-8	
Calcium	**278000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 14:06	7440-70-2	
Cobalt	**8.5**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 14:06	7440-48-4	
Iron	**23.8J**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 14:06	7439-89-6	
Lithium	**22.6**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 14:06	7439-93-2	
Magnesium	**66400**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 14:06	7439-95-4	
Manganese	**509**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 14:06	7439-96-5	
Molybdenum	**1.4J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 14:06	7439-98-7	
Potassium	**4970**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 14:06	7440-09-7	
Sodium	**99600**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 14:06	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.79J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 13:01	7440-38-2	
Cadmium	**1.0**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 13:01	7440-43-9	
Selenium	**<0.18**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 13:01	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**556**	mg/L	20.0	4.6	1		10/28/22 15:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**936**	mg/L	13.3	13.3	1		10/27/22 16:16		
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		11/09/22 16:49	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/09/22 16:49	16984-48-8	
Sulfate	**605**	mg/L	100	55.0	100		11/08/22 18:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-4S **Lab ID: 60413477025** Collected: 10/20/22 13:31 Received: 10/21/22 17:48 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	**232**	ug/L	5.0	0.51	1	10/28/22 16:57	11/10/22 14:08	7440-39-3	
Boron	**375**	ug/L	100	4.2	1	10/28/22 16:57	11/10/22 14:08	7440-42-8	
Calcium	**185000**	ug/L	200	33.7	1	10/28/22 16:57	11/10/22 14:08	7440-70-2	
Cobalt	**<0.82**	ug/L	5.0	0.82	1	10/28/22 16:57	11/10/22 14:08	7440-48-4	
Iron	**17.0J**	ug/L	50.0	5.6	1	10/28/22 16:57	11/10/22 14:08	7439-89-6	
Lithium	**27.8**	ug/L	10.0	5.6	1	10/28/22 16:57	11/10/22 14:08	7439-93-2	
Magnesium	**43600**	ug/L	50.0	27.1	1	10/28/22 16:57	11/10/22 14:08	7439-95-4	
Manganese	**203**	ug/L	5.0	0.24	1	10/28/22 16:57	11/10/22 14:08	7439-96-5	
Molybdenum	**1.8J**	ug/L	20.0	0.90	1	10/28/22 16:57	11/10/22 14:08	7439-98-7	
Potassium	**5070**	ug/L	500	87.6	1	10/28/22 16:57	11/10/22 14:08	7440-09-7	
Sodium	**10800**	ug/L	500	73.2	1	10/28/22 16:57	11/10/22 14:08	7440-23-5	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City								
Arsenic	**0.63J**	ug/L	1.0	0.14	1	10/28/22 16:57	11/10/22 13:04	7440-38-2	
Cadmium	**0.22J**	ug/L	0.50	0.053	1	10/28/22 16:57	11/10/22 13:04	7440-43-9	
Selenium	**0.79J**	ug/L	1.0	0.18	1	10/28/22 16:57	11/10/22 13:04	7782-49-2	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**592**	mg/L	20.0	4.6	1		10/28/22 15:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**724**	mg/L	10.0	10.0	1		10/27/22 16:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**3.1**	mg/L	1.0	0.53	1		11/08/22 18:37	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		11/08/22 18:37	16984-48-8	
Sulfate	**37.0**	mg/L	5.0	2.8	5		11/08/22 18:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815417
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: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015

METHOD BLANK: 3242907 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.51	5.0	0.51	11/10/22 12:46	
Boron	ug/L	<4.2	100	4.2	11/10/22 12:46	
Calcium	ug/L	<33.7	200	33.7	11/10/22 12:46	
Cobalt	ug/L	<0.82	5.0	0.82	11/10/22 12:46	
Iron	ug/L	<5.6	50.0	5.6	11/10/22 12:46	
Lithium	ug/L	<5.6	10.0	5.6	11/10/22 12:46	
Magnesium	ug/L	<27.1	50.0	27.1	11/10/22 12:46	
Manganese	ug/L	<0.24	5.0	0.24	11/10/22 12:46	
Molybdenum	ug/L	<0.90	20.0	0.90	11/10/22 12:46	
Potassium	ug/L	<87.6	500	87.6	11/10/22 12:46	
Sodium	ug/L	<73.2	500	73.2	11/10/22 12:46	

LABORATORY CONTROL SAMPLE: 3242908

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	967	97	85-115	
Calcium	ug/L	10000	10400	104	85-115	
Cobalt	ug/L	1000	1010	101	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lithium	ug/L	1000	993	99	85-115	
Magnesium	ug/L	10000	10400	104	85-115	
Manganese	ug/L	1000	1020	102	85-115	
Molybdenum	ug/L	1000	1000	100	85-115	
Potassium	ug/L	10000	10000	100	85-115	
Sodium	ug/L	10000	10300	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242909 3242910

Parameter	Units	60413477002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	214	1000	1000	1220	1210	101	100	70-130	1	20	
Boron	ug/L	7150	1000	1000	8000	8170	85	102	70-130	2	20	
Calcium	ug/L	73500	10000	10000	82500	83700	90	101	70-130	1	20	
Cobalt	ug/L	<0.82	1000	1000	989	986	99	99	70-130	0	20	
Iron	ug/L	2640	10000	10000	12700	12700	100	100	70-130	0	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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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242909 3242910

Parameter	Units	60413477002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	33.5	1000	1000	1040	1030	101	100	70-130	1	20	
Magnesium	ug/L	15600	10000	10000	25500	25600	99	100	70-130	0	20	
Manganese	ug/L	340	1000	1000	1340	1350	100	101	70-130	1	20	
Molybdenum	ug/L	461	1000	1000	1470	1490	101	103	70-130	1	20	
Potassium	ug/L	6740	10000	10000	16800	17000	101	103	70-130	1	20	
Sodium	ug/L	22600	10000	10000	32200	32200	97	96	70-130	0	20	

MATRIX SPIKE SAMPLE: 3242911

Parameter	Units	60413477013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	420	1000	1400	98	70-130	
Boron	ug/L	65.7J	1000	1030	96	70-130	
Calcium	ug/L	124000	10000	128000	41	70-130	M1
Cobalt	ug/L	<0.82	1000	974	97	70-130	
Iron	ug/L	7820	10000	17400	96	70-130	
Lithium	ug/L	28.5	1000	1030	100	70-130	
Magnesium	ug/L	31500	10000	40000	85	70-130	
Manganese	ug/L	523	1000	1500	97	70-130	
Molybdenum	ug/L	<0.90	1000	1000	100	70-130	
Potassium	ug/L	3910	10000	13900	100	70-130	
Sodium	ug/L	5600	10000	15800	102	70-130	

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 SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815419
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: 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

METHOD BLANK: 3242917 Matrix: Water
Associated Lab Samples: 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<0.51	5.0	0.51	11/10/22 13:35	
Boron	ug/L	<4.2	100	4.2	11/10/22 13:35	
Calcium	ug/L	<33.7	200	33.7	11/10/22 13:35	
Cobalt	ug/L	<0.82	5.0	0.82	11/10/22 13:35	
Iron	ug/L	<5.6	50.0	5.6	11/10/22 13:35	
Lithium	ug/L	<5.6	10.0	5.6	11/10/22 13:35	
Magnesium	ug/L	<27.1	50.0	27.1	11/10/22 13:35	
Manganese	ug/L	<0.24	5.0	0.24	11/10/22 13:35	
Molybdenum	ug/L	<0.90	20.0	0.90	11/10/22 13:35	
Potassium	ug/L	<87.6	500	87.6	11/10/22 13:35	
Sodium	ug/L	<73.2	500	73.2	11/10/22 13:35	

LABORATORY CONTROL SAMPLE: 3242918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	996	100	85-115	
Boron	ug/L	1000	955	95	85-115	
Calcium	ug/L	10000	10300	103	85-115	
Cobalt	ug/L	1000	995	100	85-115	
Iron	ug/L	10000	9920	99	85-115	
Lithium	ug/L	1000	977	98	85-115	
Magnesium	ug/L	10000	10000	100	85-115	
Manganese	ug/L	1000	1010	101	85-115	
Molybdenum	ug/L	1000	989	99	85-115	
Potassium	ug/L	10000	9960	100	85-115	
Sodium	ug/L	10000	9970	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242919 3242920

Parameter	Units	60413477016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	58.7	1000	1000	1050	1040	99	98	70-130	1	20	
Boron	ug/L	76.5J	1000	1000	1040	1030	97	95	70-130	1	20	
Calcium	ug/L	273000	10000	10000	288000	285000	151	127	70-130	1	20	M1
Cobalt	ug/L	<0.82	1000	1000	945	930	94	93	70-130	2	20	
Iron	ug/L	16000	10000	10000	26200	26000	102	100	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242919 3242920

Parameter	Units	60413477016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	45.2	1000	1000	1060	1040	101	100	70-130	2	20	
Magnesium	ug/L	72700	10000	10000	84300	83800	116	111	70-130	1	20	
Manganese	ug/L	1280	1000	1000	2280	2260	100	98	70-130	1	20	
Molybdenum	ug/L	<0.90	1000	1000	994	984	99	98	70-130	1	20	
Potassium	ug/L	6000	10000	10000	16500	16200	105	102	70-130	2	20	
Sodium	ug/L	25300	10000	10000	35600	35200	104	99	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815418
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: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015

METHOD BLANK: 3242912 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.14	1.0	0.14	11/10/22 11:38	
Cadmium	ug/L	<0.053	0.50	0.053	11/10/22 11:38	
Selenium	ug/L	<0.18	1.0	0.18	11/10/22 11:38	

LABORATORY CONTROL SAMPLE: 3242913

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.2	95	85-115	
Cadmium	ug/L	40	40.0	100	85-115	
Selenium	ug/L	40	39.6	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242914 3242915

Parameter	Units	60413477001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.3	40	40	39.5	38.9	95	94	70-130	1	20	
Cadmium	ug/L	0.071J	40	40	39.9	39.8	100	99	70-130	0	20	
Selenium	ug/L	<0.18	40	40	38.8	38.4	97	96	70-130	1	20	

MATRIX SPIKE SAMPLE: 3242916

Parameter	Units	60413477015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	0.31J	40	38.2	95	70-130	
Cadmium	ug/L	0.24J	40	39.5	98	70-130	
Selenium	ug/L	<0.18	40	38.2	95	70-130	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815420
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: 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

METHOD BLANK: 3242921 Matrix: Water
Associated Lab Samples: 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.14	1.0	0.14	11/10/22 12:28	
Cadmium	ug/L	<0.053	0.50	0.053	11/10/22 12:28	
Selenium	ug/L	<0.18	1.0	0.18	11/10/22 12:28	

LABORATORY CONTROL SAMPLE: 3242922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.3	96	85-115	
Cadmium	ug/L	40	39.9	100	85-115	
Selenium	ug/L	40	39.6	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242923 3242924

Parameter	Units	60413477016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	0.20J	40	40	38.0	37.1	95	92	70-130	2	20	
Cadmium	ug/L	<0.053	40	40	40.2	38.7	100	97	70-130	4	20	
Selenium	ug/L	<0.18	40	40	39.6	38.2	99	95	70-130	4	20	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 814616 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477008

METHOD BLANK: 3239748 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	10/26/22 14:59	

LABORATORY CONTROL SAMPLE: 3239749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	495	99	90-110	

SAMPLE DUPLICATE: 3239750

Parameter	Units	60413477001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	241	234	3	10	

SAMPLE DUPLICATE: 3239751

Parameter	Units	60413480006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	393	398	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815002
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477006, 60413477007, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015, 60413477016, 60413477021

METHOD BLANK: 3241292 Matrix: Water
Associated Lab Samples: 60413477006, 60413477007, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015, 60413477016, 60413477021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	10/27/22 14:32	

LABORATORY CONTROL SAMPLE: 3241293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	486	97	90-110	

SAMPLE DUPLICATE: 3241294

Parameter	Units	60413477006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	372	371	0	10	

SAMPLE DUPLICATE: 3241295

Parameter	Units	60413480003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	610	613	0	10	

SAMPLE DUPLICATE: 3241296

Parameter	Units	60413797001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	4.7J		10	

SAMPLE DUPLICATE: 3241297

Parameter	Units	60413477016 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	462	476	3	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815255
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477017, 60413477018, 60413477019, 60413477020, 60413477022, 60413477023, 60413477024, 60413477025

METHOD BLANK: 3242335 Matrix: Water
Associated Lab Samples: 60413477017, 60413477018, 60413477019, 60413477020, 60413477022, 60413477023, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	20.0	4.6	10/28/22 13:56	

LABORATORY CONTROL SAMPLE: 3242336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	489	98	90-110	

SAMPLE DUPLICATE: 3242337

Parameter	Units	60414043001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	501	507	1	10	

SAMPLE DUPLICATE: 3242338

Parameter	Units	60413641002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	365	371	1	10	

SAMPLE DUPLICATE: 3242339

Parameter	Units	60413642002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	453	454	0	10	

SAMPLE DUPLICATE: 3242340

Parameter	Units	60413642005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<4.6	<4.6		10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 814499
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477008

METHOD BLANK: 3239207 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/25/22 10:47	

LABORATORY CONTROL SAMPLE: 3239208

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	884	88	80-120	

SAMPLE DUPLICATE: 3239209

Parameter	Units	60413307001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2630	2720	3	10	

SAMPLE DUPLICATE: 3239210

Parameter	Units	60413477004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	467	467	0	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 814748
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477006, 60413477007

METHOD BLANK: 3240236 Matrix: Water
Associated Lab Samples: 60413477006, 60413477007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/26/22 16:18	

LABORATORY CONTROL SAMPLE: 3240237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	977	98	80-120	

SAMPLE DUPLICATE: 3240238

Parameter	Units	60413473006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	352	352	0	10	

SAMPLE DUPLICATE: 3240239

Parameter	Units	60413480003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1160	1170	1	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 814749
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477011, 60413477012

METHOD BLANK: 3240240 Matrix: Water
Associated Lab Samples: 60413477011, 60413477012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/26/22 16:21	

LABORATORY CONTROL SAMPLE: 3240241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	970	97	80-120	

SAMPLE DUPLICATE: 3240242

Parameter	Units	60413574002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L		1110	2	10	

SAMPLE DUPLICATE: 3240243

Parameter	Units	60413613010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	522	547	5	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 814752
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477013, 60413477014

METHOD BLANK: 3240244 Matrix: Water
Associated Lab Samples: 60413477013, 60413477014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/26/22 16:24	

LABORATORY CONTROL SAMPLE: 3240245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	980	98	80-120	

SAMPLE DUPLICATE: 3240246

Parameter	Units	60413477013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	492	480	2	10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 814996
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477015, 60413477016, 60413477021, 60413477024, 60413477025

METHOD BLANK: 3241273 Matrix: Water
Associated Lab Samples: 60413477015, 60413477016, 60413477021, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/27/22 16:14	

LABORATORY CONTROL SAMPLE: 3241274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	985	98	80-120	

SAMPLE DUPLICATE: 3241275

Parameter	Units	60413477016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1330	1310	2	10	

SAMPLE DUPLICATE: 3241276

Parameter	Units	60413641002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	<10.0	503		10	

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 815260 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60413477017, 60413477018, 60413477019, 60413477020, 60413477022, 60413477023

METHOD BLANK: 3242365 Matrix: Water
Associated Lab Samples: 60413477017, 60413477018, 60413477019, 60413477020, 60413477022, 60413477023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/28/22 12:15	

LABORATORY CONTROL SAMPLE: 3242366

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	984	98	80-120	

SAMPLE DUPLICATE: 3242367

Parameter	Units	60411568006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	876	879	0	10	H1

SAMPLE DUPLICATE: 3242368

Parameter	Units	60413638002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	649	638	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 816402
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: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

METHOD BLANK: 3246987 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/04/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/04/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/04/22 08:54	

METHOD BLANK: 3250187 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.61J	1.0	0.53	11/07/22 15:06	
Fluoride	mg/L	<0.12	0.20	0.12	11/07/22 15:06	
Sulfate	mg/L	<0.55	1.0	0.55	11/07/22 15:06	

LABORATORY CONTROL SAMPLE: 3246988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	92	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	5.2	104	90-110	

LABORATORY CONTROL SAMPLE: 3250188

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	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3246989 3246990

Parameter	Units	60413480003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	86.4	100	100	177	168	91	81	80-120	6	15	
Fluoride	mg/L	0.41	2.5	2.5	3.0	2.9	102	100	80-120	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3246989 3246990

Parameter	Units	60413480003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	285	100	100	436	386	151	100	80-120	12	15	E,M1

SAMPLE DUPLICATE: 3246991

Parameter	Units	60413480003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	86.4	85.8	1	15	
Fluoride	mg/L	0.41	0.48	15	15	
Sulfate	mg/L	285	279	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 816452
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: 60413477011

METHOD BLANK: 3247175 Matrix: Water
Associated Lab Samples: 60413477011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.60J	1.0	0.53	11/04/22 01:44	
Fluoride	mg/L	<0.12	0.20	0.12	11/04/22 01:44	
Sulfate	mg/L	<0.55	1.0	0.55	11/04/22 01:44	

METHOD BLANK: 3249492 Matrix: Water
Associated Lab Samples: 60413477011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.62J	1.0	0.53	11/04/22 08:58	
Fluoride	mg/L	<0.12	0.20	0.12	11/04/22 08:58	
Sulfate	mg/L	<0.55	1.0	0.55	11/04/22 08:58	

METHOD BLANK: 3250183 Matrix: Water
Associated Lab Samples: 60413477011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.61J	1.0	0.53	11/07/22 15:06	
Fluoride	mg/L	<0.12	0.20	0.12	11/07/22 15:06	
Sulfate	mg/L	<0.55	1.0	0.55	11/07/22 15:06	

LABORATORY CONTROL SAMPLE: 3247176

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	2.7	106	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

LABORATORY CONTROL SAMPLE: 3249493

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	2.6	105	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

LABORATORY CONTROL SAMPLE: 3250184

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	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3247177 3247178

Parameter	Units	60414717007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	1000	1000	1110	1130	96	97	80-120	1	15	H3
Fluoride	mg/L	ND	500	500	603	613	121	123	80-120	2	15	H3,M1
Sulfate	mg/L	1560	1000	1000	2560	2540	100	98	80-120	1	15	H3

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 816675
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: 60413477012, 60413477013, 60413477014

METHOD BLANK: 3248342 Matrix: Water
Associated Lab Samples: 60413477012, 60413477013, 60413477014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/07/22 05:43	
Fluoride	mg/L	<0.12	0.20	0.12	11/07/22 05:43	
Sulfate	mg/L	<0.55	1.0	0.55	11/07/22 05:43	

METHOD BLANK: 3250952 Matrix: Water
Associated Lab Samples: 60413477012, 60413477013, 60413477014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/08/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/08/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/08/22 08:54	

LABORATORY CONTROL SAMPLE: 3248343

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	102	90-110	
Sulfate	mg/L	5	4.8	95	90-110	

LABORATORY CONTROL SAMPLE: 3250953

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	2.4	98	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3248344 3248345

Parameter	Units	60414609001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	61.8	250	250	283	284	89	89	80-120	0	15	
Fluoride	mg/L	ND	125	125	130	133	104	106	80-120	2	15	
Sulfate	mg/L	246	250	250	609	460	145	85	80-120	28	15	M1,R1

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

SAMPLE DUPLICATE: 3248346

Parameter	Units	60414609001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	61.8	63.0	2	15	
Fluoride	mg/L	ND	<6.2		15	
Sulfate	mg/L	246	227	8	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 816676
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: 60413477015, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023

METHOD BLANK: 3248347 Matrix: Water
Associated Lab Samples: 60413477015, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/07/22 09:09	
Fluoride	mg/L	<0.12	0.20	0.12	11/07/22 09:09	
Sulfate	mg/L	<0.55	1.0	0.55	11/07/22 09:09	

LABORATORY CONTROL SAMPLE: 3248348

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	2.7	107	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3248350 3248351

Parameter	Units	60413810035 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	33.6	50	50	79.3	78.1	92	89	80-120	2	15	
Fluoride	mg/L	ND	2.5	2.5	2.7	2.8	108	110	80-120	2	15	
Sulfate	mg/L	50.5	50	50	102	98.8	102	97	80-120	3	15	

SAMPLE DUPLICATE: 3248349

Parameter	Units	60413810035 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	33.6	41.6	21	15	D6
Fluoride	mg/L	ND	<0.12		15	
Sulfate	mg/L	50.5	65.6	26	15	D6

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 816677
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: 60413477016, 60413477024, 60413477025

METHOD BLANK: 3248352 Matrix: Water
Associated Lab Samples: 60413477016, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/08/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/08/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/08/22 08:54	

METHOD BLANK: 3251718 Matrix: Water
Associated Lab Samples: 60413477016, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/09/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/09/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/09/22 08:54	

METHOD BLANK: 3252693 Matrix: Water
Associated Lab Samples: 60413477016, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/10/22 08:54	
Fluoride	mg/L	<0.12	0.20	0.12	11/10/22 08:54	
Sulfate	mg/L	<0.55	1.0	0.55	11/10/22 08:54	

METHOD BLANK: 3252716 Matrix: Water
Associated Lab Samples: 60413477016, 60413477024, 60413477025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	11/10/22 08:50	
Fluoride	mg/L	<0.12	0.20	0.12	11/10/22 08:50	
Sulfate	mg/L	<0.55	1.0	0.55	11/10/22 08:50	

LABORATORY CONTROL SAMPLE: 3248353

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	2.4	98	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

LABORATORY CONTROL SAMPLE: 3248353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 3251719

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	2.7	107	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 3252694

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	2.6	105	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

LABORATORY CONTROL SAMPLE: 3252717

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	2.4	97	90-110	
Sulfate	mg/L	5	4.7	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3248355 3248356

Parameter	Units	60413477016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	80.3	50	50	155	138	150	115	80-120	12	15	M1
Fluoride	mg/L	<0.12	2.5	2.5	2.7	2.6	110	105	80-120	4	15	
Sulfate	mg/L	501	250	250	732	738	92	95	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3248357 3248358

Parameter	Units	60413642002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.8	5	5	6.9	6.9	102	101	80-120	1	15	
Fluoride	mg/L	0.22	2.5	2.5	2.8	2.8	103	103	80-120	0	15	
Sulfate	mg/L	36.8	25	25	85.6	79.0	195	169	80-120	8	15	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

SAMPLE DUPLICATE: 3248354

Parameter	Units	60413477016 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	80.3	82.4	3	15	
Fluoride	mg/L	<0.12	0.20J		15	
Sulfate	mg/L	501	467	7	15	

SAMPLE DUPLICATE: 3248359

Parameter	Units	60413642002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	1.8	1.8	1	15	
Fluoride	mg/L	0.22	0.21	3	15	
Sulfate	mg/L	36.8	36.3	1	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-AM-1S **Lab ID: 60413477001** Collected: 10/18/22 10:56 Received: 10/20/22 04:13 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	**0.0544 ± 0.320 (0.653) C:NA T:90%**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.759 ± 0.429 (0.772) C:68% T:90%**	pCi/L	10/31/22 16:13	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-AM-1D **Lab ID: 60413477002** Collected: 10/18/22 11:53 Received: 10/20/22 04:13 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis. The samples were not preserved <2 within the required 5 days of collection.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.0496 ± 0.257 (0.595) C:NA T:95%**	pCi/L	11/05/22 13:33	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.933 ± 0.454 (0.780) C:69% T:95%**	pCi/L	10/31/22 16:13	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-DUP-1 **Lab ID: 60413477003** Collected: 10/18/22 00:00 Received: 10/20/22 04:13 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	**0.109 ± 0.477 (0.906) C:NA T:92%**	pCi/L	11/05/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.852 ± 0.434 (0.756) C:72% T:92%**	pCi/L	10/31/22 16:13	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-MSD-1 **Lab ID: 60413477009** Collected: 10/20/22 16:04 Received: 10/21/22 17:48 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	**109.86 %REC 23.81RPD ± NA (NA) C:NA T:NA**	pCi/L	11/08/22 16:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**89.62 %REC ± NA (NA) C:NA T:NA**	pCi/L	11/10/22 15:17	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-MS-1 **Lab ID: 60413477010** Collected: 10/20/22 16:04 Received: 10/21/22 17:48 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	**86.48 %REC ± NA (NA) C:NA T:NA**	pCi/L	11/08/22 16:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**81.42 %REC 9.58RPD ± NA (NA) C:NA T:NA**	pCi/L	11/10/22 15:17	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-PZ-9D **Lab ID: 60413477011** Collected: 10/19/22 17:51 Received: 10/21/22 17:48 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	**0.163 ± 0.640 (1.23) C:NA T:77%**	pCi/L	11/08/22 16:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.719 ± 0.465 (0.901) C:73% T:93%**	pCi/L	11/10/22 15:17	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-6S **Lab ID: 60413477012** Collected: 10/19/22 15:35 Received: 10/21/22 17:48 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	**0.344 ± 0.406 (0.638) C:NA T:91%**	pCi/L	11/08/22 16:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.380 ± 0.328 (0.664) C:75% T:105%**	pCi/L	11/10/22 15:17	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-6D **Lab ID: 60413477013** Collected: 10/19/22 16:20 Received: 10/21/22 17:48 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	**0.315 ± 0.618 (1.11) C:NA T:89%**	pCi/L	11/08/22 16:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.920 ± 0.394 (0.627) C:71% T:101%**	pCi/L	11/10/22 15:18	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-DUP-2 **Lab ID: 60413477014** Collected: 10/19/22 00:00 Received: 10/21/22 17:48 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	**0.636 ± 0.701 (1.12) C:NA T:92%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.679 ± 0.326 (0.537) C:70% T:109%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-PZ-1S **Lab ID: 60413477015** Collected: 10/20/22 10:28 Received: 10/21/22 17:48 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 ± 0.393 (0.852) C:NA T:87%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.717 ± 0.380 (0.656) C:68% T:96%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-2D **Lab ID: 60413477016** Collected: 10/20/22 16:04 Received: 10/21/22 17:48 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 ± 0.248 (0.400) C:NA T:90%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.593 ± 0.422 (0.819) C:68% T:89%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-3D **Lab ID: 60413477017** Collected: 10/21/22 10:32 Received: 10/21/22 17:48 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	**0.140 ± 0.435 (0.842) C:NA T:88%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.823 ± 0.388 (0.638) C:71% T:93%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-4D **Lab ID: 60413477018** Collected: 10/21/22 11:53 Received: 10/21/22 17:48 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	**0.738 ± 0.445 (0.182) C:NA T:90%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.496 ± 0.339 (0.643) C:71% T:96%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-FB-2 **Lab ID: 60413477019** Collected: 10/21/22 12:03 Received: 10/21/22 17:48 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 ± 0.429 (0.929) C:NA T:85%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.256 ± 0.323 (0.685) C:68% T:101%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-8D **Lab ID: 60413477020** Collected: 10/20/22 13:35 Received: 10/21/22 17:48 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	**0.419 ± 0.437 (0.617) C:NA T:91%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.529 ± 0.443 (0.901) C:65% T:105%**	pCi/L	11/10/22 15:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-CA-FB-1 **Lab ID: 60413477021** Collected: 10/20/22 13:50 Received: 10/21/22 17:48 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	**0.537 ± 0.623 (1.01) C:NA T:89%**	pCi/L	11/08/22 16:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.447 ± 0.396 (0.808) C:72% T:95%**	pCi/L	11/10/22 15:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-TP-5D **Lab ID: 60413477023** Collected: 10/21/22 10:39 Received: 10/21/22 17:48 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 ± 0.587 (1.06) C:NA T:88%**	pCi/L	11/08/22 16:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.147 ± 0.388 (0.874) C:72% T:93%**	pCi/L	11/10/22 18:46	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-BMW-3S **Lab ID: 60413477004** Collected: 10/18/22 14:06 Received: 10/20/22 04:13 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	**-0.0562 ± 0.330 (0.736) C:NA T:90%**	pCi/L	11/05/22 13:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.885 ± 0.442 (0.765) C:72% T:90%**	pCi/L	10/31/22 16:13	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-BMW-1S **Lab ID: 60413477005** Collected: 10/18/22 15:35 Received: 10/20/22 04:13 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	**0.0540 ± 0.246 (0.397) C:NA T:88%**	pCi/L	11/05/22 13:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.04 ± 0.460 (0.739) C:70% T:88%**	pCi/L	10/31/22 16:13	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-UG-3 **Lab ID: 60413477022** Collected: 10/21/22 09:27 Received: 10/21/22 17:48 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 ± 0.409 (0.731) C:NA T:88%**	pCi/L	11/08/22 16:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.11 ± 0.560 (0.955) C:67% T:104%**	pCi/L	11/10/22 18:46	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-2S **Lab ID: 60413477006** Collected: 10/19/22 13:36 Received: 10/20/22 04:13 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	**0.219 ± 0.304 (0.508) C:NA T:88%**	pCi/L	11/05/22 13:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.15 ± 0.627 (1.17) C:68% T:88%**	pCi/L	10/31/22 16:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-1S **Lab ID: 60413477007** Collected: 10/19/22 11:40 Received: 10/20/22 04:13 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	**0.214 ± 0.258 (0.394) C:NA T:88%**	pCi/L	11/05/22 13:49	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.998 ± 0.682 (1.36) C:67% T:88%**	pCi/L	10/31/22 16:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-5S **Lab ID: 60413477008** Collected: 10/18/22 14:55 Received: 10/20/22 04:13 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	**0.184 ± 0.398 (0.735) C:NA T:86%**	pCi/L	11/05/22 13:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.277 ± 0.640 (1.41) C:69% T:86%**	pCi/L	10/31/22 16:19	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-6S **Lab ID: 60413477024** Collected: 10/20/22 15:19 Received: 10/21/22 17:48 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	**0.564 ± 0.483 (0.654) C:NA T:89%**	pCi/L	11/08/22 16:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.109 ± 0.374 (0.853) C:75% T:90%**	pCi/L	11/10/22 18:46	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Sample: S-LMW-4S **Lab ID: 60413477025** Collected: 10/20/22 13:31 Received: 10/21/22 17:48 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	**0.207 ± 0.450 (0.830) C:NA T:92%**	pCi/L	11/08/22 16:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.224 ± 0.402 (0.881) C:71% T:97%**	pCi/L	11/10/22 18:46	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 541945
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: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

METHOD BLANK: 2630304 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.360 ± 0.322 (0.649) C:75% T:92%	pCi/L	10/31/22 12:41	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 541944
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: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

METHOD BLANK: 2630303 Matrix: Water
Associated Lab Samples: 60413477001, 60413477002, 60413477003, 60413477004, 60413477005, 60413477006, 60413477007, 60413477008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0532 ± 0.276 (0.573) C:NA T:92%	pCi/L	11/05/22 13:16	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 543627 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 60413477009, 60413477010, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015, 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

METHOD BLANK: 2638304 Matrix: Water

Associated Lab Samples: 60413477009, 60413477010, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015, 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0631 ± 0.288 (0.171) C:NA T:79%	pCi/L	11/08/22 16:02	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

QC Batch: 543628
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: 60413477009, 60413477010, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015, 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

METHOD BLANK: 2638305
Matrix: Water
Associated Lab Samples: 60413477009, 60413477010, 60413477011, 60413477012, 60413477013, 60413477014, 60413477015, 60413477016, 60413477017, 60413477018, 60413477019, 60413477020, 60413477021, 60413477022, 60413477023, 60413477024, 60413477025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.514 ± 0.299 (0.540) C:76% T:108%	pCi/L	11/10/22 15:16	

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QUALIFIERS

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

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.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H1	Analysis conducted outside the EPA method holding time.
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.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60413477001	S-AM-1S	EPA 200.7	815417	EPA 200.7	815453
60413477002	S-AM-1D	EPA 200.7	815417	EPA 200.7	815453
60413477003	S-CA-DUP-1	EPA 200.7	815417	EPA 200.7	815453
60413477004	S-BMW-3S	EPA 200.7	815417	EPA 200.7	815453
60413477005	S-BMW-1S	EPA 200.7	815417	EPA 200.7	815453
60413477006	S-LMW-2S	EPA 200.7	815417	EPA 200.7	815453
60413477007	S-LMW-1S	EPA 200.7	815417	EPA 200.7	815453
60413477008	S-LMW-5S	EPA 200.7	815417	EPA 200.7	815453
60413477011	S-PZ-9D	EPA 200.7	815417	EPA 200.7	815453
60413477012	S-TP-6S	EPA 200.7	815417	EPA 200.7	815453
60413477013	S-TP-6D	EPA 200.7	815417	EPA 200.7	815453
60413477014	S-CA-DUP-2	EPA 200.7	815417	EPA 200.7	815453
60413477015	S-PZ-1S	EPA 200.7	815417	EPA 200.7	815453
60413477016	S-TP-2D	EPA 200.7	815419	EPA 200.7	815455
60413477017	S-TP-3D	EPA 200.7	815419	EPA 200.7	815455
60413477018	S-TP-4D	EPA 200.7	815419	EPA 200.7	815455
60413477019	S-CA-FB-2	EPA 200.7	815419	EPA 200.7	815455
60413477020	S-TP-8D	EPA 200.7	815419	EPA 200.7	815455
60413477021	S-CA-FB-1	EPA 200.7	815419	EPA 200.7	815455
60413477022	S-UG-3	EPA 200.7	815419	EPA 200.7	815455
60413477023	S-TP-5D	EPA 200.7	815419	EPA 200.7	815455
60413477024	S-LMW-6S	EPA 200.7	815419	EPA 200.7	815455
60413477025	S-LMW-4S	EPA 200.7	815419	EPA 200.7	815455
60413477001	S-AM-1S	EPA 200.8	815418	EPA 200.8	815454
60413477002	S-AM-1D	EPA 200.8	815418	EPA 200.8	815454
60413477003	S-CA-DUP-1	EPA 200.8	815418	EPA 200.8	815454
60413477004	S-BMW-3S	EPA 200.8	815418	EPA 200.8	815454
60413477005	S-BMW-1S	EPA 200.8	815418	EPA 200.8	815454
60413477006	S-LMW-2S	EPA 200.8	815418	EPA 200.8	815454
60413477007	S-LMW-1S	EPA 200.8	815418	EPA 200.8	815454
60413477008	S-LMW-5S	EPA 200.8	815418	EPA 200.8	815454
60413477011	S-PZ-9D	EPA 200.8	815418	EPA 200.8	815454
60413477012	S-TP-6S	EPA 200.8	815418	EPA 200.8	815454
60413477013	S-TP-6D	EPA 200.8	815418	EPA 200.8	815454
60413477014	S-CA-DUP-2	EPA 200.8	815418	EPA 200.8	815454
60413477015	S-PZ-1S	EPA 200.8	815418	EPA 200.8	815454
60413477016	S-TP-2D	EPA 200.8	815420	EPA 200.8	815456
60413477017	S-TP-3D	EPA 200.8	815420	EPA 200.8	815456
60413477018	S-TP-4D	EPA 200.8	815420	EPA 200.8	815456
60413477019	S-CA-FB-2	EPA 200.8	815420	EPA 200.8	815456
60413477020	S-TP-8D	EPA 200.8	815420	EPA 200.8	815456
60413477021	S-CA-FB-1	EPA 200.8	815420	EPA 200.8	815456
60413477022	S-UG-3	EPA 200.8	815420	EPA 200.8	815456
60413477023	S-TP-5D	EPA 200.8	815420	EPA 200.8	815456
60413477024	S-LMW-6S	EPA 200.8	815420	EPA 200.8	815456
60413477025	S-LMW-4S	EPA 200.8	815420	EPA 200.8	815456
60413477001	S-AM-1S	EPA 903.1	541944		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60413477002	S-AM-1D	EPA 903.1	541944		
60413477003	S-CA-DUP-1	EPA 903.1	541944		
60413477004	S-BMW-3S	EPA 903.1	541944		
60413477005	S-BMW-1S	EPA 903.1	541944		
60413477006	S-LMW-2S	EPA 903.1	541944		
60413477007	S-LMW-1S	EPA 903.1	541944		
60413477008	S-LMW-5S	EPA 903.1	541944		
60413477009	S-CA-MSD-1	EPA 903.1	543627		
60413477010	S-CA-MS-1	EPA 903.1	543627		
60413477011	S-PZ-9D	EPA 903.1	543627		
60413477012	S-TP-6S	EPA 903.1	543627		
60413477013	S-TP-6D	EPA 903.1	543627		
60413477014	S-CA-DUP-2	EPA 903.1	543627		
60413477015	S-PZ-1S	EPA 903.1	543627		
60413477016	S-TP-2D	EPA 903.1	543627		
60413477017	S-TP-3D	EPA 903.1	543627		
60413477018	S-TP-4D	EPA 903.1	543627		
60413477019	S-CA-FB-2	EPA 903.1	543627		
60413477020	S-TP-8D	EPA 903.1	543627		
60413477021	S-CA-FB-1	EPA 903.1	543627		
60413477022	S-UG-3	EPA 903.1	543627		
60413477023	S-TP-5D	EPA 903.1	543627		
60413477024	S-LMW-6S	EPA 903.1	543627		
60413477025	S-LMW-4S	EPA 903.1	543627		
60413477001	S-AM-1S	EPA 904.0	541945		
60413477002	S-AM-1D	EPA 904.0	541945		
60413477003	S-CA-DUP-1	EPA 904.0	541945		
60413477004	S-BMW-3S	EPA 904.0	541945		
60413477005	S-BMW-1S	EPA 904.0	541945		
60413477006	S-LMW-2S	EPA 904.0	541945		
60413477007	S-LMW-1S	EPA 904.0	541945		
60413477008	S-LMW-5S	EPA 904.0	541945		
60413477009	S-CA-MSD-1	EPA 904.0	543628		
60413477010	S-CA-MS-1	EPA 904.0	543628		
60413477011	S-PZ-9D	EPA 904.0	543628		
60413477012	S-TP-6S	EPA 904.0	543628		
60413477013	S-TP-6D	EPA 904.0	543628		
60413477014	S-CA-DUP-2	EPA 904.0	543628		
60413477015	S-PZ-1S	EPA 904.0	543628		
60413477016	S-TP-2D	EPA 904.0	543628		
60413477017	S-TP-3D	EPA 904.0	543628		
60413477018	S-TP-4D	EPA 904.0	543628		
60413477019	S-CA-FB-2	EPA 904.0	543628		
60413477020	S-TP-8D	EPA 904.0	543628		
60413477021	S-CA-FB-1	EPA 904.0	543628		
60413477022	S-UG-3	EPA 904.0	543628		
60413477023	S-TP-5D	EPA 904.0	543628		

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60413477024	S-LMW-6S	EPA 904.0	543628		
60413477025	S-LMW-4S	EPA 904.0	543628		
60413477001	S-AM-1S	SM 2320B	814616		
60413477002	S-AM-1D	SM 2320B	814616		
60413477003	S-CA-DUP-1	SM 2320B	814616		
60413477004	S-BMW-3S	SM 2320B	814616		
60413477005	S-BMW-1S	SM 2320B	814616		
60413477006	S-LMW-2S	SM 2320B	815002		
60413477007	S-LMW-1S	SM 2320B	815002		
60413477008	S-LMW-5S	SM 2320B	814616		
60413477011	S-PZ-9D	SM 2320B	815002		
60413477012	S-TP-6S	SM 2320B	815002		
60413477013	S-TP-6D	SM 2320B	815002		
60413477014	S-CA-DUP-2	SM 2320B	815002		
60413477015	S-PZ-1S	SM 2320B	815002		
60413477016	S-TP-2D	SM 2320B	815002		
60413477017	S-TP-3D	SM 2320B	815255		
60413477018	S-TP-4D	SM 2320B	815255		
60413477019	S-CA-FB-2	SM 2320B	815255		
60413477020	S-TP-8D	SM 2320B	815255		
60413477021	S-CA-FB-1	SM 2320B	815002		
60413477022	S-UG-3	SM 2320B	815255		
60413477023	S-TP-5D	SM 2320B	815255		
60413477024	S-LMW-6S	SM 2320B	815255		
60413477025	S-LMW-4S	SM 2320B	815255		
60413477001	S-AM-1S	SM 2540C	814499		
60413477002	S-AM-1D	SM 2540C	814499		
60413477003	S-CA-DUP-1	SM 2540C	814499		
60413477004	S-BMW-3S	SM 2540C	814499		
60413477005	S-BMW-1S	SM 2540C	814499		
60413477006	S-LMW-2S	SM 2540C	814748		
60413477007	S-LMW-1S	SM 2540C	814748		
60413477008	S-LMW-5S	SM 2540C	814499		
60413477011	S-PZ-9D	SM 2540C	814749		
60413477012	S-TP-6S	SM 2540C	814749		
60413477013	S-TP-6D	SM 2540C	814752		
60413477014	S-CA-DUP-2	SM 2540C	814752		
60413477015	S-PZ-1S	SM 2540C	814996		
60413477016	S-TP-2D	SM 2540C	814996		
60413477017	S-TP-3D	SM 2540C	815260		
60413477018	S-TP-4D	SM 2540C	815260		
60413477019	S-CA-FB-2	SM 2540C	815260		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN SEC SCPA-CA
Pace Project No.: 60413477

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60413477020	S-TP-8D	SM 2540C	815260		
60413477021	S-CA-FB-1	SM 2540C	814996		
60413477022	S-UG-3	SM 2540C	815260		
60413477023	S-TP-5D	SM 2540C	815260		
60413477024	S-LMW-6S	SM 2540C	814996		
60413477025	S-LMW-4S	SM 2540C	814996		
60413477001	S-AM-1S	EPA 300.0	816402		
60413477002	S-AM-1D	EPA 300.0	816402		
60413477003	S-CA-DUP-1	EPA 300.0	816402		
60413477004	S-BMW-3S	EPA 300.0	816402		
60413477005	S-BMW-1S	EPA 300.0	816402		
60413477006	S-LMW-2S	EPA 300.0	816402		
60413477007	S-LMW-1S	EPA 300.0	816402		
60413477008	S-LMW-5S	EPA 300.0	816402		
60413477011	S-PZ-9D	EPA 300.0	816452		
60413477012	S-TP-6S	EPA 300.0	816675		
60413477013	S-TP-6D	EPA 300.0	816675		
60413477014	S-CA-DUP-2	EPA 300.0	816675		
60413477015	S-PZ-1S	EPA 300.0	816676		
60413477016	S-TP-2D	EPA 300.0	816677		
60413477017	S-TP-3D	EPA 300.0	816676		
60413477018	S-TP-4D	EPA 300.0	816676		
60413477019	S-CA-FB-2	EPA 300.0	816676		
60413477020	S-TP-8D	EPA 300.0	816676		
60413477021	S-CA-FB-1	EPA 300.0	816676		
60413477022	S-UG-3	EPA 300.0	816676		
60413477023	S-TP-5D	EPA 300.0	816676		
60413477024	S-LMW-6S	EPA 300.0	816677		
60413477025	S-LMW-4S	EPA 300.0	816677		

WO# : 60413477

60413477

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

Client Name: WSP Golder

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** 2.3/2.4 **Corr. Factor** 0.0 **Corrected** 2.3/2.1

Date and initials of person examining contents: PM 10/20/22

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#:** 55192	☑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.

Page: 1 of 1

Section A Required Client Information:

Company:	WSP Golder
Address:	701 Emerson Road, Suite 250
	Creve Coeur, Missouri, 63141
Email To:	jeffrey_ingram@golder.com
Phone: 636-724-9191	Fax: 636-724-9323
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeffrey Ingram
Copy To:	Eric Schneider
Purchase Order No.:	COC #8
Project Name:	Ameren Sioux Energy Center SCPA-CA
Project Number:	153140604. 0003

Section C Invoice Information:

Attention:	
Company Name:	WSP Golder
Address:	
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	9285

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **	Radium 226	Radium 228					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N	N	N	N						6041477
1	~~S-CA-MSD-1~~	WT	G																											
2	S-AM-1S	WT	G			10-18-22	1056		4	1		3						✓	✓	✓	✓	✓	✓	✓					BP3N	BP1U	2BPIN
3	S-AM-1D	WT	G			10-18-22	1153		4	1		3						✓	✓	✓	✓	✓	✓	✓							
4	S-CA-DUP-1	WT	G			10-18-22	—		4	1		3						✓	✓	✓	✓	✓	✓	✓							
5	S-BMW-3S	WT	G			10-18-22	1406		4	1		3						✓	✓	✓	✓	✓	✓	✓							
6	S-BMW-1S	WT	G			10-18-22	1535		4	1		3						✓	✓	✓	✓	✓	✓	✓							
7	S-LMW-2S	WT	G			10-19-22	1336		4	1		3						✓	✓	✓	✓	✓	✓	✓							
8	S-LMW-1S	WT	G			10-19-22	1140		4	1		3						✓	✓	✓	✓	✓	✓	✓							
9	~~S-LMW-4S~~	WT	G			~~10-18-22~~			~~4~~	~~1~~		~~3~~						✓	✓	✓	✓	✓	✓	✓							
10	~~S-LMW-6S~~	WT	G			~~10-18-22~~			~~4~~	~~1~~		~~3~~						✓	✓	✓	✓	✓	✓	✓							
11	S-LMW-5S	WT	G			10-18-22	1455		4	1		3						✓	✓	✓	✓	✓	✓	✓							
12		WT	G																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Shawn Christensen	10/19/22	1530							
**App IV Metals - EPA 200.7: Ba, Co, Li, Mo EPA 200.8: As, Cd, Se					10/20	0413	2.1	Y	Y	Y
							1-9	↓		
							9.7	N		

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: Grant Morey

DATE Signed (MM/DD/YY): 10/19/22

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

Pace	DC#_Title: ENV-FRM-LENE-000	WO#: 60413477
	Revision: 2	Effective Date:

60413477

Client Name: WSP Golder

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: T-299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 1.9/0.4/14.9/14.8/0.7 Corr. Factor 0 Corrected 1.9/0.4/14.9/14.8/0.7/0.6

Date and initials of person examining contents: BC 10/22

Temperature should be above freezing to 6°C 0.6

Chain of Custody present:	☒Yes ☐No ☐N/A	S-LMW-4S on COC # 9
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	S-LMW-6S on COC #9
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#: 610600	☒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

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	WSP Golder	Report To:	Jeffrey Ingram	Attention:	
Address:	701 Emerson Road, Suite 250	Copy To:	Eric Schneider	Company Name:	WSP Golder
	Creve Coeur, Missouri, 63141			Address:	
Email To:	jeffrey_ingram@golder.com	Purchase Order No.:	COC #8	Pace Quote Reference:	
Phone:	636-724-9191 Fax: 636-724-9323	Project Name:	Ameren Sioux Energy Center SCPA-CA	Pace Project Manager:	Jamie Church
Requested Due Date/TAT:	Standard	Project Number:	153140604. 0003	Pace Profile #:	9285

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **	Radium 226	Radium 228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N	N		60413477
1	S-CA-MSD-1	WT	G			10-20-22	1604		4	1		3							✓	✓	✓	✓	✓	✓	✓		Collected @ S-TP-2D
2	S-CA-MS-1	WT	G			10-20-22	1604		4	1		3							✓	✓	✓	✓	✓	✓	✓		Collected @ S-TP-2D
3	S-PZ-9D	WT	G			10-19-22	1751		4	1		3							✓	✓	✓	✓	✓	✓	✓		
4	S-TP-6S	WT	G			〃	1535		4	1		3							✓	✓	✓	✓	✓	✓	✓		
5	S-TP-6D	WT	G			〃	1620		4	1		3							✓	✓	✓	✓	✓	✓	✓		
6	S-CA-DUP-2	WT	G			10-19-22	—		4	1		3							✓	✓	✓	✓	✓	✓	✓		
7	S-PZ-1S	WT	G			10-20-22	1028		4	1		3							✓	✓	✓	✓	✓	✓	✓		
8	S-TP-2D	WT	G			10-20-22	1604		4	1		3							✓	✓	✓	✓	✓	✓	✓		
9	S-TP-3D	WT	G			10-21-22	1032		4	1		3							✓	✓	✓	✓	✓	—	✓		
10	S-TP-4D	WT	G			10-21-22	1153		4	1		3							✓	✓	✓	✓	✓	✓	✓		
11	S-CA-FB-2	WT	G			10-21-22	1203		4	1		3							✓	✓	✓	✓	✓	✓	✓		
12	S-TP-8D	WT	G			10-20-22	1335		4	1		3							✓	✓	✓	✓	✓	✓	✓		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Grant Morey / Golder	10-21-22	1500	[illegible]	10/21/22	1748	0.6 / 1.4 / 0.4
**App IV Metals - EPA 200.7: Ba, Co, Li, Mo EPA 200.8: As, Cd, Se							4.9 / 0.2 / 1.4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/21/22

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

*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.

Pace Analytical
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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:		Section B Required Project Information:		Section C Invoice Information:	
Company:	WSP Golder	Report To:	Jeffrey Ingram	Attention:	
Address:	701 Emerson Road, Suite 250	Copy To:	Eric Schneider	Company Name:	WSP Golder
	Creve Coeur, Missouri, 63141			Address:	
Email To:	jeffrey_ingram@golder.com	Purchase Order No.:	COC #8	Pace Quote Reference:	
Phone: 636-724-9191	Fax: 636-724-9323	Project Name:	Ameren Sioux Energy Center SCPA-CA	Pace Project Manager:	Jamie Church
Requested Due Date/TAT:	Standard	Project Number:	153140604. 0003	Pace Profile #:	9285

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/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **	Radium 226	Radium 228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~S-CA-MSD-1~~	WT	G																								
2	S-CA-EB-1	WT	G			10-20-22	1350		4	1		3						N	✓	✓	✓	✓	✓	✓	✓		
3	S-LMW-4S	WT	G			1	1331		4	1		3						N	✓	✓	✓	✓	✓	✓	✓		
4	S-LMW-6S	WT	G			1	1519		4	1		3						N	✓	✓	✓	✓	✓	✓	✓		
5	S-UG-3	WT	G			10-21-22	0907		4	1		3						N	✓	✓	✓	✓	✓	✓	✓		
6	S-TP-5D	WT	G			10-21-22	1039		4	1		3						N	✓	✓	✓	✓	✓	✓	✓		
7		WT	G															N									
8		WT	G															N									
9		WT	G															N									
10		WT	G															N									
11		WT	G															N									
12		WT	G															N									

Residual Chlorine (Y/N)

Pace Project No./ Lab I.D.: 60413477

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App III and Cat/An Metals - EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B	Grant Morey / Golder	10-21-22	1500	[illegible]	10/21/22	1748	0.6 1.9
**App IV Metals - EPA 200.7: Ba, Co, Li, Mo EPA 200.8: As, Cd, Se							0.4 1.9
							0.7 1.8

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Grant Morey

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/21/22

*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.

1/2

Client: WSP Golder Profile # 9285

Site: CoC #8 SCPA-CA 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	BP1N
1	WT																		1				1								2
2	WT																														2
3	WT																		1				1								2
4	WT																		1				1								2
5	WT																		1				1								2
6	WT																		1				1								2
7	WT																		1				1								2
8	WT																		3				3								2
9	WT																		1				1								2
10	WT																		1				1								2
11	WT																		1				1								2
12	WT																		1				1								2

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: 60413477

2/2

Client: WSP Golder

Profile # 9285

Site: COC #8 SCPA-CA

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	BPN
1																															
2	WT																		1				1								2
3	~~WT~~																		1				1								2
4	~~WT~~																		1				1								2
5	WT																		2				2								2
6	WT																		1				1								2
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: 60413477

MEMORANDUM

DATE January 13, 2023 **Project No.** 153140604

TO Project File
WSP USA Inc.

CC Amanda Derhake, Jeff Ingram

FROM Rahel Pommerenke **EMAIL rahel.pommerenke@wsp.com**

DATA VALIDATION SUMMARY, SIOUX ENERGY CENTER – SCPA-CA – CORRECTIVE ACTION SAMPLING OCTOBER 2022 - DATA PACKAGE 60413477rev1

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

- When duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a compound was detected in a sample result between the MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).
- When a compound was analyzed outside of hold time, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).

WSP USA Inc.
701 Emerson Road, Suite 250,
Creve Coeur, Missouri, USA 63141
T: +1 314 984-8800 F: +1 314 984-8770

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: WSP USA Inc.
Project Manager: J. Ingram
Project Name: Ameren SEC - SCPA-CA
Project Number: 153140604
Reviewer: R.Pommerenke
Validation Date: 1/13/2023

Laboratory: Pace Analytical Services
SDG #: 60413477rev1
Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 903.1/904.0 (Radium 226/228); SM2320B (Alkalinity);
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ SM2540C (TDS); EPA 300.0 (Anions)
Sample Names S-AM-1S, S-AM-1D, S-CA-DUP-1, S-BMW-3S, S-BMW-1S, S-LMW-2S, S-LMW-1S, S-LMW-5S, S-CA-MSD-1, S-CA-MS-1, S-PZ-9D, S-TP-6S, S-TP-6D, S-CA-DUP-2, S-PZ-1S, S-TP-2D, S-TP-3D, S-TP-4D, S-CA-FB-2, S-TP-8D, S-CA-FB-1, S-UG-3, S-TP-5D, S-LMW-6S, S-LMW-4S

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			10/18/2022 - 10/21/2022
b) Sampling team indicated?	x			GTM/PCS/SMA
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, Sp.Cond, ORP, Temp, DO, Turb
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:

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			See notes.

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)?				S-CA-DUP-1 @ S-AM-1D
	x			S-CA-DUP-2 @ S-TP-6D
b) Were field dup. precision criteria met (note RPD)?		x		See notes.
c) Were lab duplicates analyzed (note original and duplicate samples)?				
	x			
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,			x	
analytes included and concentrations)?				
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:

S-TP-8D collection date revised from 10/21/2022 to 10/20/2022.

Total Dissolved Solids analyzed out of hold time for S-TP-8D: qualified as estimate.

Dilutions:

Sulfate, and chloride analyzed at a dilution. No qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

MB3250187: Chloride (0.61J); Associated with samples -001 through -008. Result > RL and x10 blank: no qualification.

MB3247175: Chloride (0.60J); Associated samples -011. Result > RL and x10 blank: no qualification.

3249492: Chloride (0.62J), associated with sample -011. Result >RL and 10x blank: no qualification.

MB3250183: Chloride (0.61J); Associated with sample -011. Result > RL and x10 blank: no qualification.

S-CA-FB-2 @ S-TP-4D: Chloride (0.70J).
Result > RL and x10 blank: no qualification.

S-CA-FB-1 @ S-TP-8D: Chloride (0.60J), Alkalinity (7.6J).
Result > RL and x10 blank: no qualification.

Duplicates:

S-CA-DUP-1 @ S-AM-1D: RPD exceeds limit (20%) for total dissolved solids (145%).

S-CA-DUP-2 @ S-TP-6D: RPD exceeds limit (20%) for radium 228 (30.1). Arsenic detected in parent sample, ND in dup sample. Cadmium and cobalt detected in dup, ND in parent sample.

Sample Duplicate 3242367: analyzed outside of hold time. Performed on unrelated sample. No qualification necessary.

Sample Duplicate 3248349: RPD exceeds limit (15%) for Chloride (21%) and Sulfate (26%). Performed on unrelated sample. No qualification necessary.

MS/MSD:

3242911: MS % recovery low for calcium. Associated with sample S-TP-6D. Only one QC indicator outside of control limits; no qualification necessary.

3242919/3242920: MS % recover high for calcium. Associated sample S-TP-2D. Only one QC indicator outside of control limits; no qualification necessary.

3246989/3246990: MS % recovery high for sulfate. Performed on unrelated sample, no qualification necessary.

3247177/3247178: Analyzed out of hold time and MS/MSD % recover high. Performed on unrelated sample, no qualification necessary.

3248344/3248345: MS % recovery high for sulfate and RPD (28%) exceeds limit (20%.). Performed on unrelated sample, no qualification necessary.

3248355/3248356: MS % recovery high for chloride. Associated sample S-TP-2D. Only one QC indicator outside of control limits; no qualification necessary.

3248357/3248358: MS/MSD % recovery high for sulfate. Performed on unrelated sample, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
S-AM-1D	Total Dissolved Solids	66.5	J	DUP RPD exceeds limit.
S-CA-DUP-1	"	413	J	"
S-CA-DUP-2	Radium 228	0.679	J	"
S-CA-DUP-2	Arsenic	1.0	UJ	Detected in parent sample, ND in dup.
S-CA-DUP-2	Cadmium	0.066	J	Detected in dup, ND in parent sample.
S-CA-DUP-2	Cobalt	0.97	J	"
S-TP-6D	Radium 228	0.92	J	DUP RPD exceeds limit.
S-TP-6D	Arsenic	0.15	J	Detected in parent sample, ND in dup.
S-TP-6D	Cadmium	0.50	UJ	Detected in dup, ND in parent sample.
S-TP-6D	Cobalt	5.0	UJ	"
S-TP-8D	Total Dissolved Solids	465	J	Analyzed outside of hold time.

Signature: _____ _____ Date: 1/13/2023

APPENDIX B

November 2021 Assessment Monitoring Statistical Evaluation

TECHNICAL MEMORANDUM

DATE March 18, 2022 **Project No.** 153140603

TO Bill Kutosky
Ameren Missouri

CC Susan Knowles, Craig Giesmann, Charlie Henderson

FROM Jeffrey Ingram, Sean Paulsen, Mark Haddock **EMAIL** **Jeffrey_Ingram@golder.com**

ASSESSMENT MONITORING STATISTICAL EVALUATION SCPA SURFACE IMPOUNDMENT SIOUX ENERGY CENTER, ST. CHARLES COUNTY, MISSOURI

This Technical Memorandum provides the results of the Assessment Monitoring Statistical Evaluation for the November 2021 sampling event at the SCPA Surface Impoundment of the Sioux Energy Center located in St. Charles County, Missouri. Included in this 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). The following outliers were removed prior to the calculation of confidence limits:

- Barium
  - S-UMW-6D at 152 micrograms per liter (µg/L) on 5/14/2018: Value is statistically higher than other values at the same well. The high result has not been confirmed during subsequent sampling events.
- Cadmium
  - S-UMW-1D at 0.25 J µg/L on 4/14/2021: Value is statistically higher than other values at the same well. The high result has not been confirmed during subsequent sampling events.
- Chromium
  - S-UMW-1D at 1.5 µg/L on 3/9/2017: Value is statistically higher than other values at the same well. The high result has not been confirmed during subsequent sampling events.
  - S-UMW-2D at 1.7 J µg/L on 3/9/2017: Value is statistically higher than other values at the same well. The high result has not been confirmed during subsequent sampling events.
- Lithium
  - S-UMW-2D at Non-Detect (ND) on 11/11/2021: Value is statistically higher than other values at the same well. Analysis of the November 2021 sampling event data revealed that laboratory dilution was required for analysis of the sample. This sample dilution caused the Method Detection Limit (MDL) to be greater than the Groundwater Protection Standard (GWPS). The sample was re-analyzed on 2/9/2022 and the resultant concentration is within

the range of concentrations for lithium in S-UMW-2D. The diluted result reported for 11/11/2021 is considered an outlier.

- S-UMW-3D at ND on 11/11/2021: Value is statistically higher than other values at the same well. Analysis of the November 2021 sampling event data revealed that laboratory dilution was required for analysis of the sample. This sample dilution caused the MDL to be greater than the GWPS. The sample was re-analysed on 2/9/2022 and the resultant concentration is within the range of concentrations for lithium in S-UMW-3D. The diluted result reported for 11/11/2021 is considered an outlier.

- S-UMW-4D at ND on 11/11/2021: Analysis of the November 2021 sampling event data revealed that laboratory dilution was required for analysis of the sample. This sample dilution caused the MDL to be greater than the GWPS. The sample was re-analysed on 2/9/2022 and the resultant concentration is within the range of concentrations for lithium in S-UMW-4D. The diluted result reported for 11/11/2021 is considered an outlier.

- S-UMW-6D at 5.2 J µg/L on 11/12/2020: Value is statistically lower than other values at the same well. The low result has not been confirmed during subsequent sampling events.

An analysis of the outliers removed to date was completed and the statistical outliers that were previously removed are all considered outliers and remain excluded from the statistical dataset used for analysis.

No new SSLs were identified in the November 2021 sampling event. The SSLs reported for the November 2021 monitoring event are as follows:

- Molybdenum at UMW-2D, UMW-3D, UMW-4D, and UMW-5D

Golder appreciates this opportunity to provide hydrogeological and engineering support services to Ameren. If you have any questions or comments regarding the information provided, please call our office at (314) 984-8800.

Jeffrey Ingram

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EMS/JSI/SCP/MNH

Attachments Table 1 – SCPA Groundwater Protection Standards
Appendix A – Sanitas Confidence Intervals Statistical Output
Appendix B – Sanitas Trending Confidence Bands Statistical Output

Table 1 - SCPA Groundwater Protection Standards
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

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	10	0.6933
Barium	µg/L	2000	2000	699
Beryllium	µg/L	4	4	DQR
Cadmium	µg/L	5	5	DQR
Chromium	µg/L	100	100	DQR
Cobalt	µg/L	6	6	DQR
Fluoride	mg/L	4	4	0.403
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	40	28.86
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	2.537
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

Prepared by: EMS
Checked by: LMS
Reviewed by: SCP

1. µg/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.

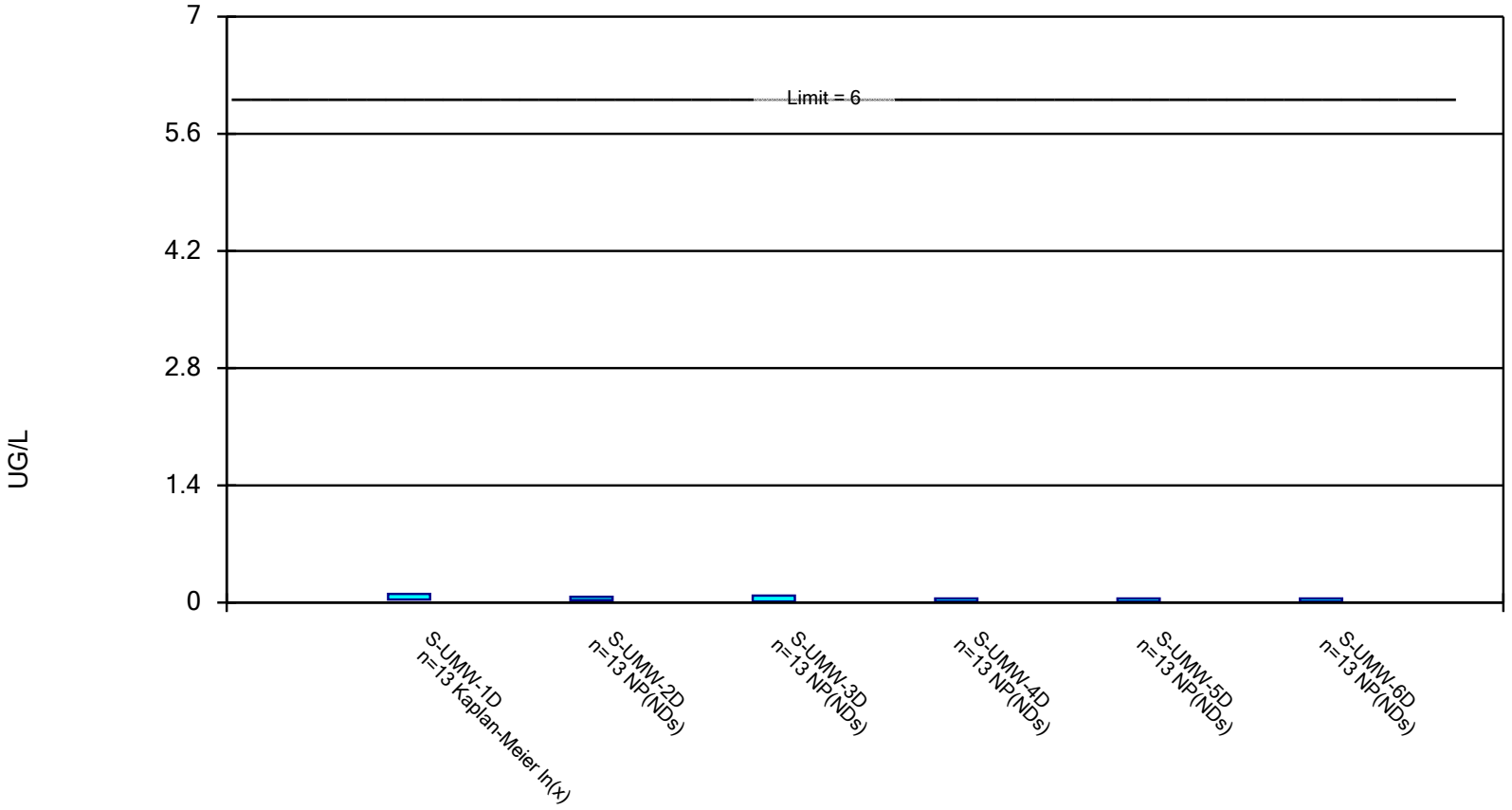
4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) Drinking Water Standards and Health Advisories.
5. Health Based Groundwater Protection Standards (GWPS) were adoped for Appendix IV parameters without an MCL (i.e. cobalt, lithium, molybdenum, and lead). 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.
(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 2021 from monitoring wells BMW-1D and BMW-3D.

APPENDIX A

Sanitas Confidence Interval Statistical Output

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.

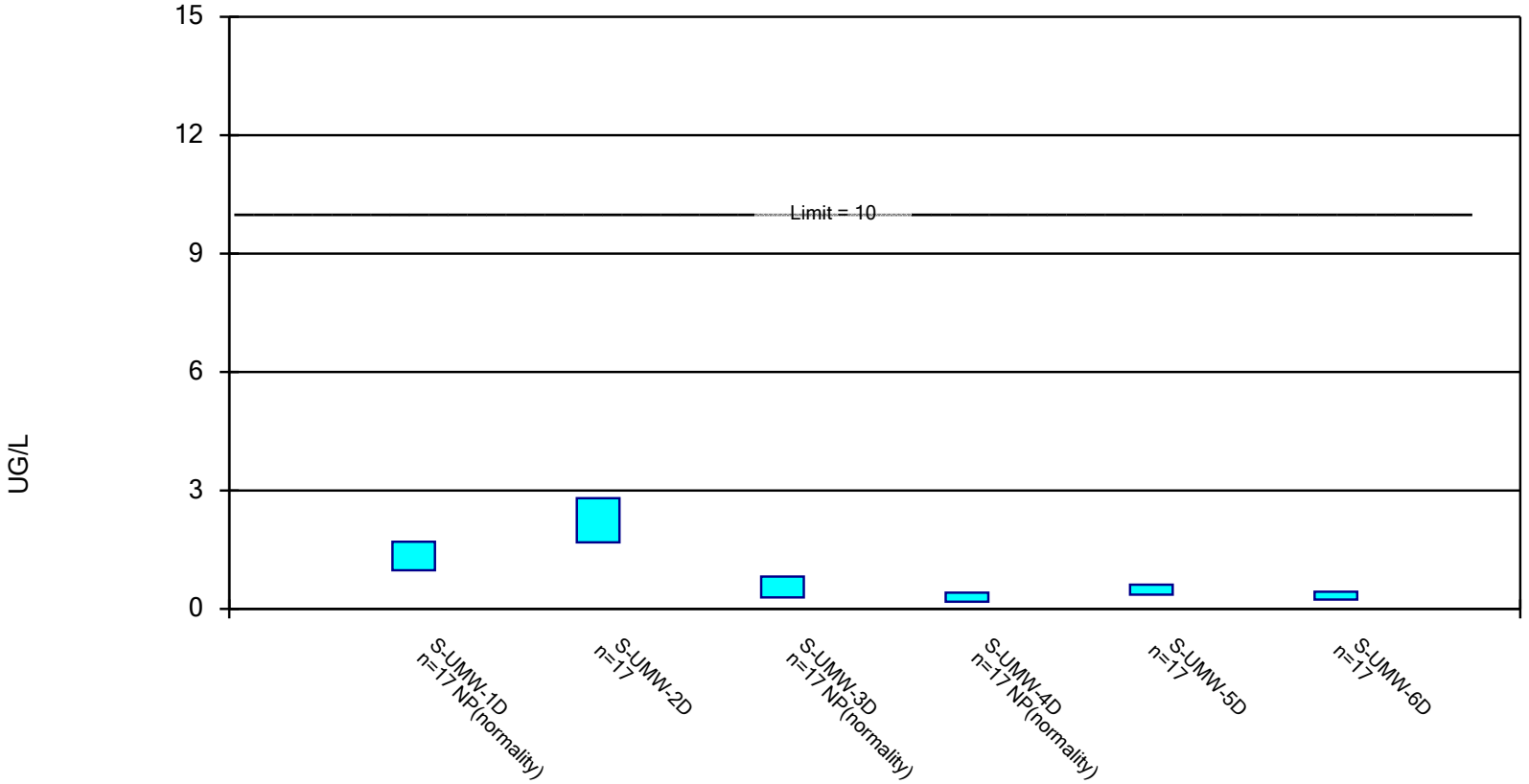


Constituent: ANTIMONY, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_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.

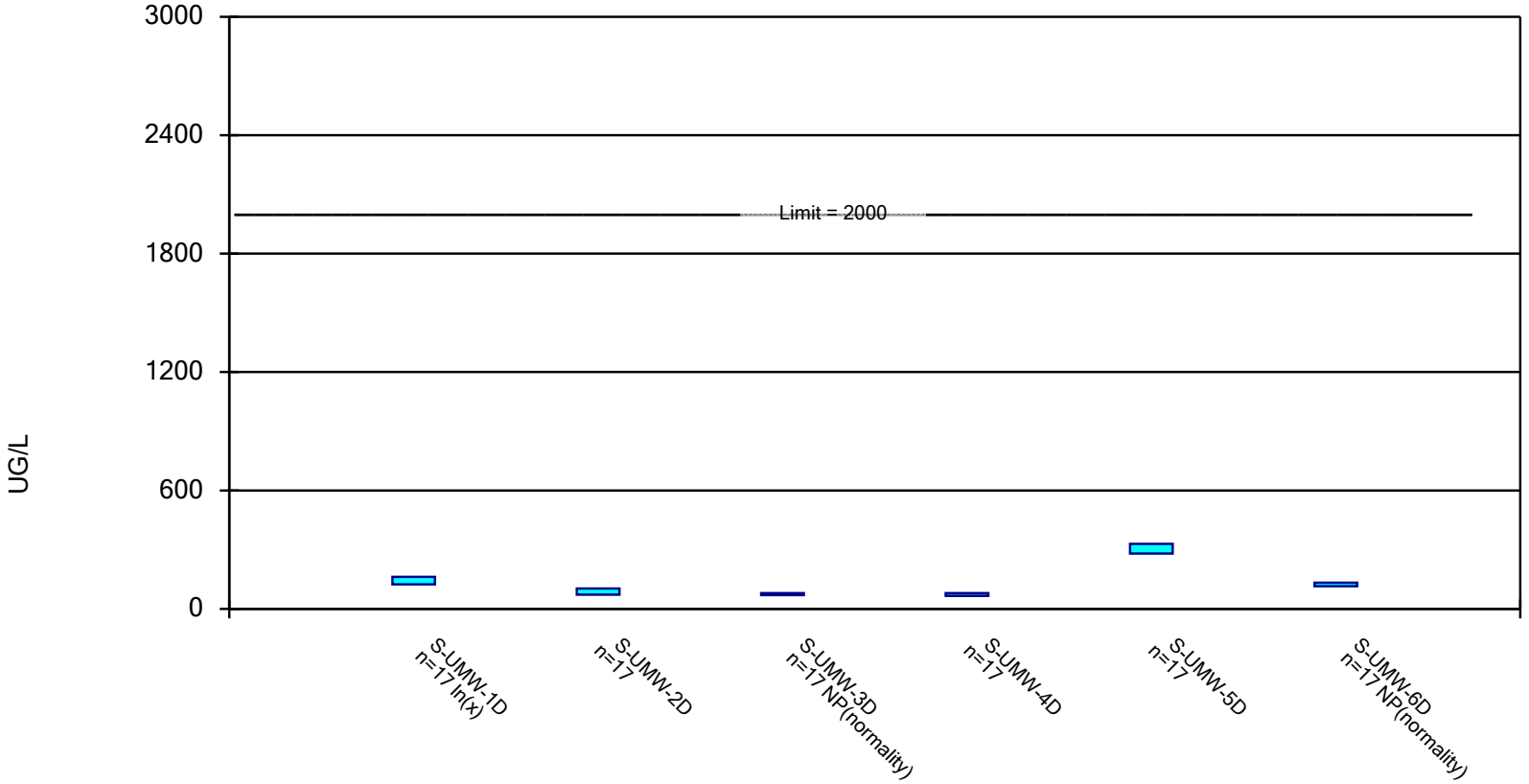


Constituent: ARSENIC, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_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.

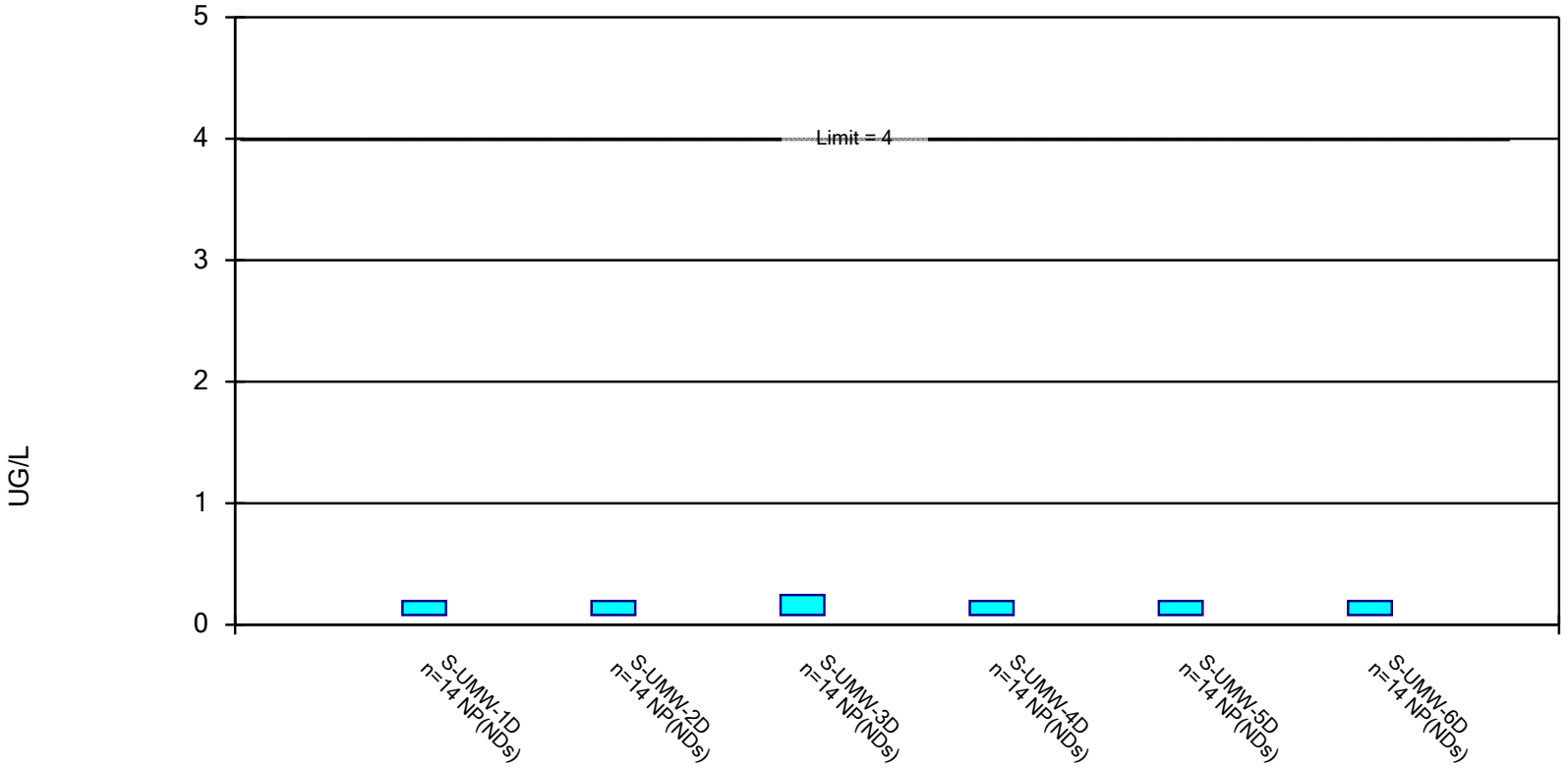


Constituent: BARIUM, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

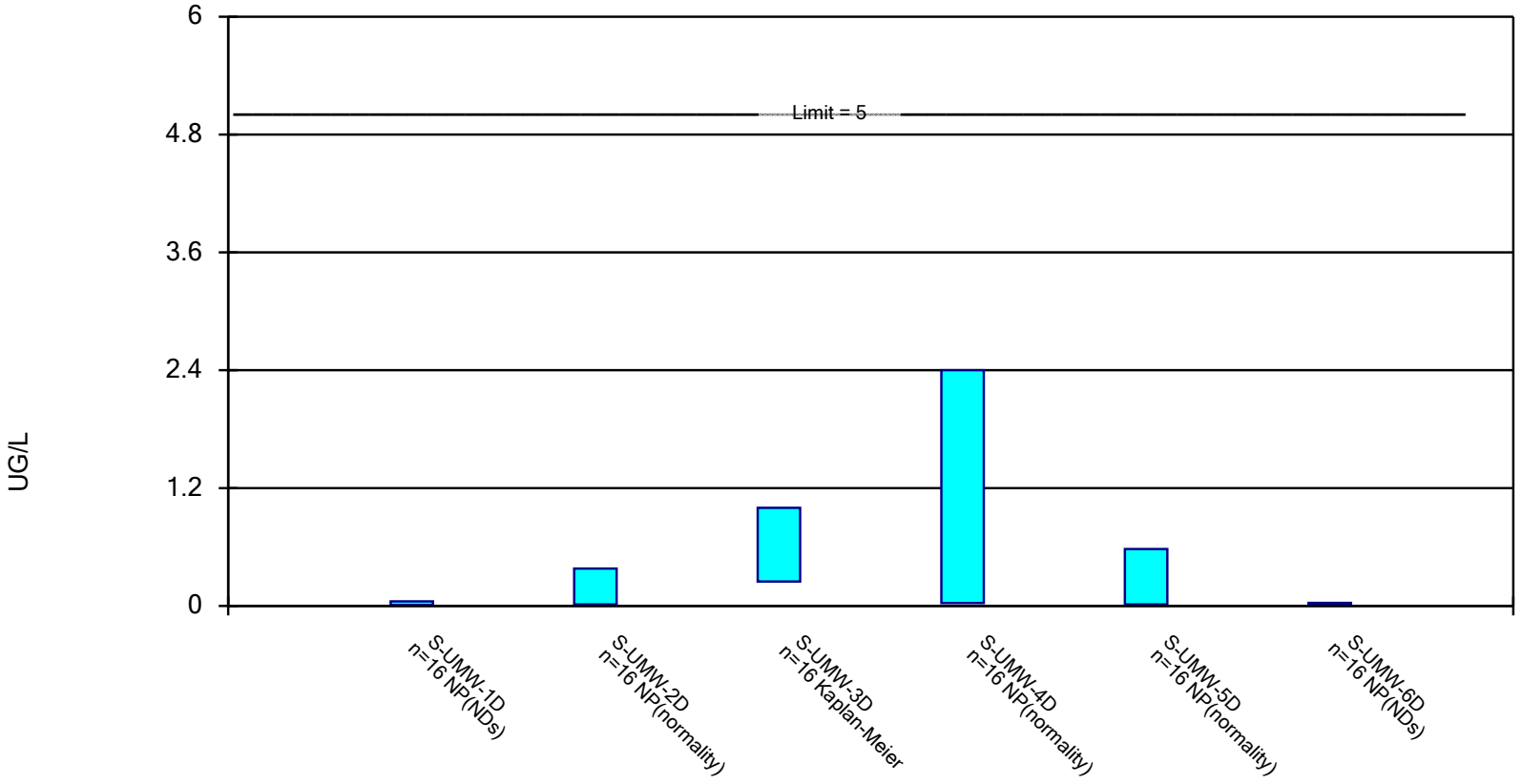


Constituent: BERYLLIUM, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_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.

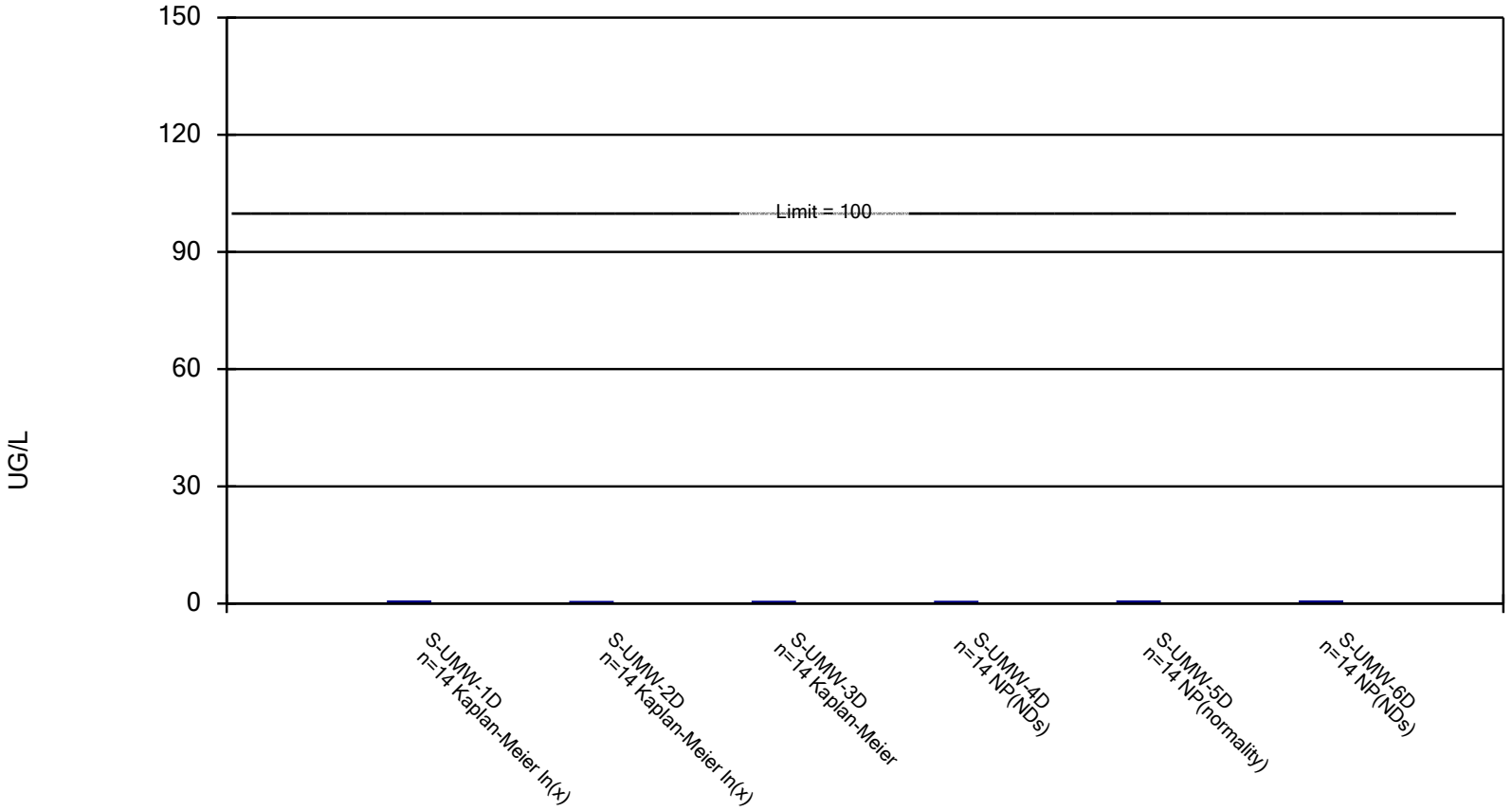


Constituent: CADMIUM, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_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.

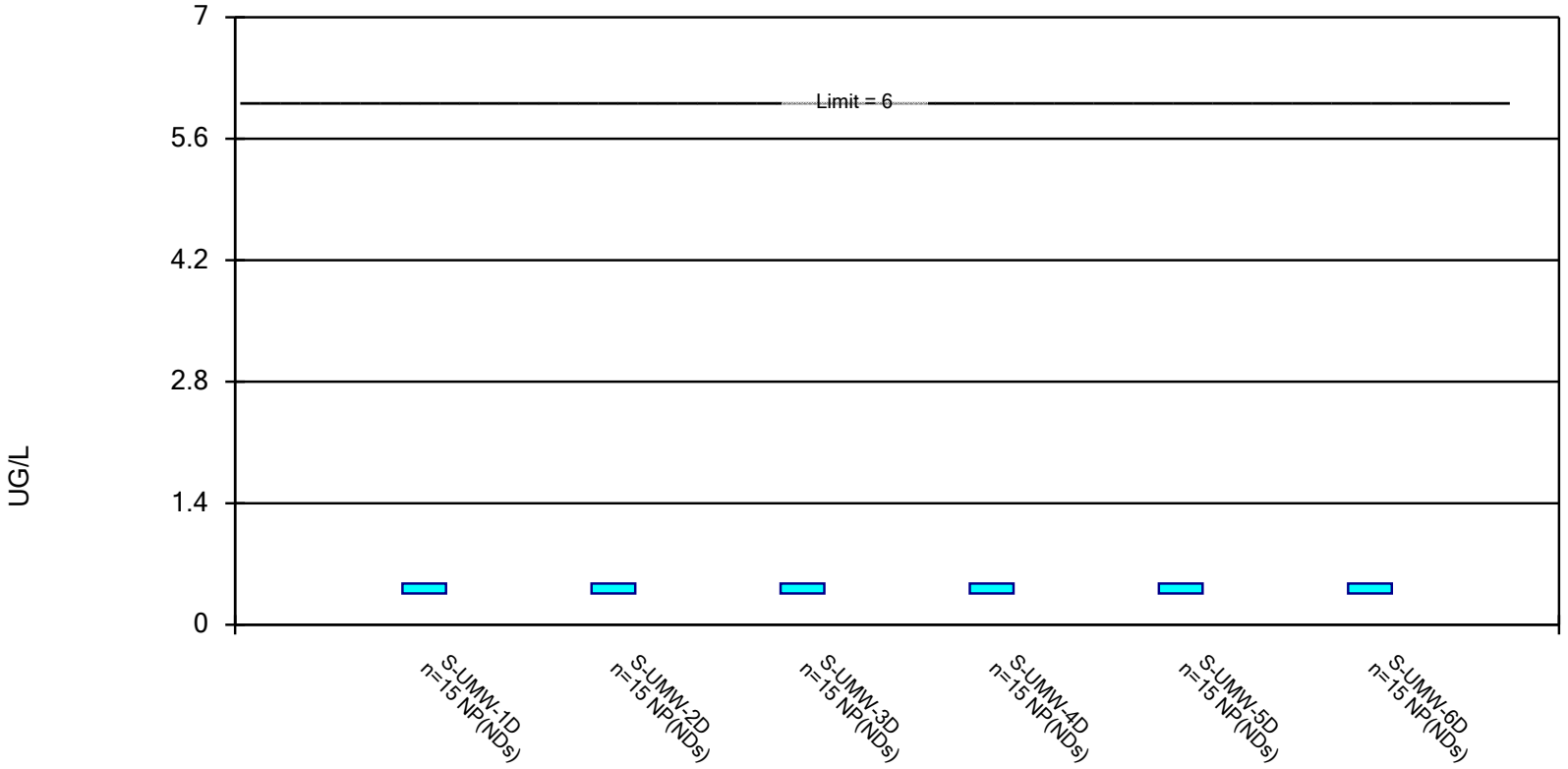


Constituent: CHROMIUM, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

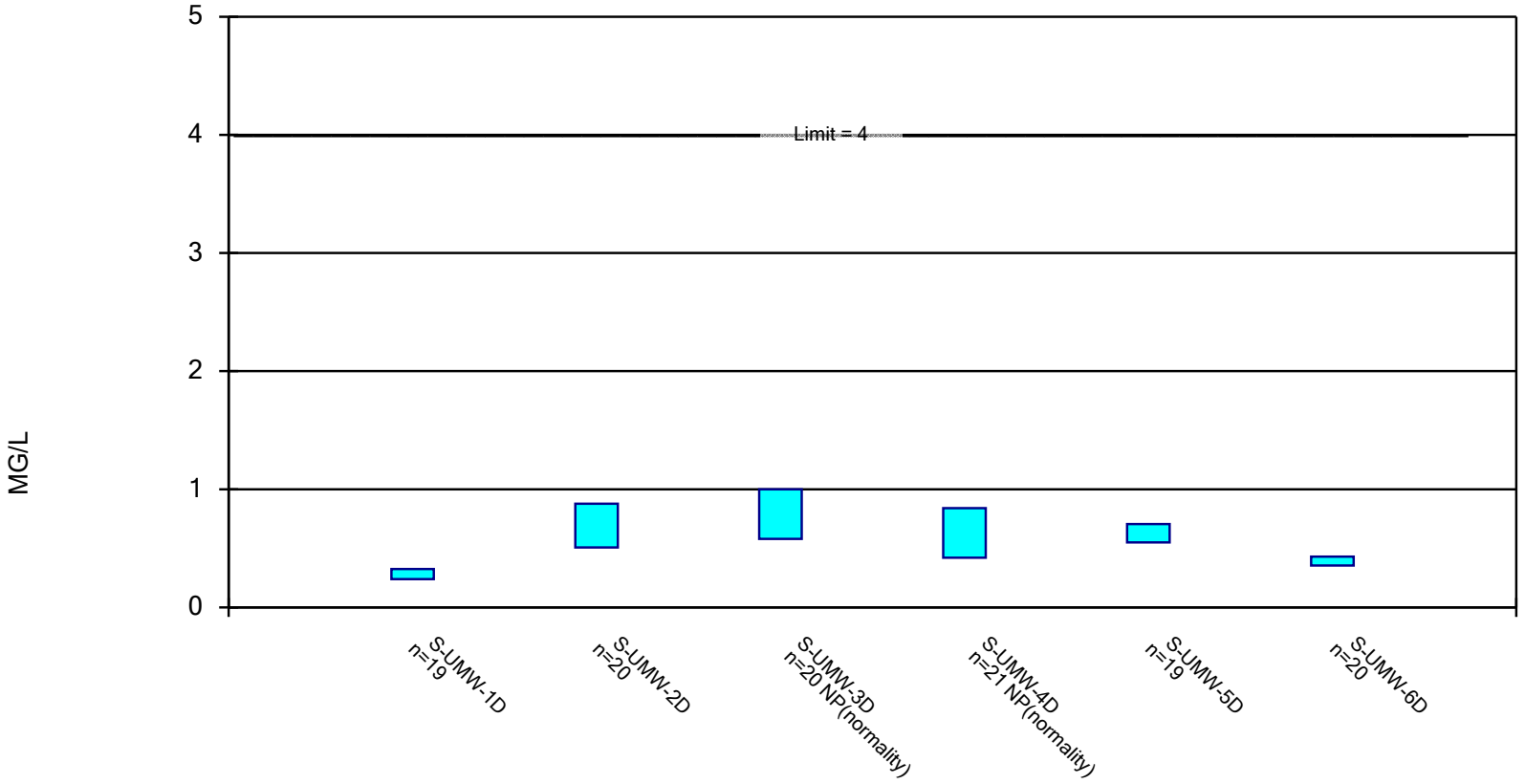


Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:22 PM

Sioux E.C. Client: Ameren Data: SEC_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.

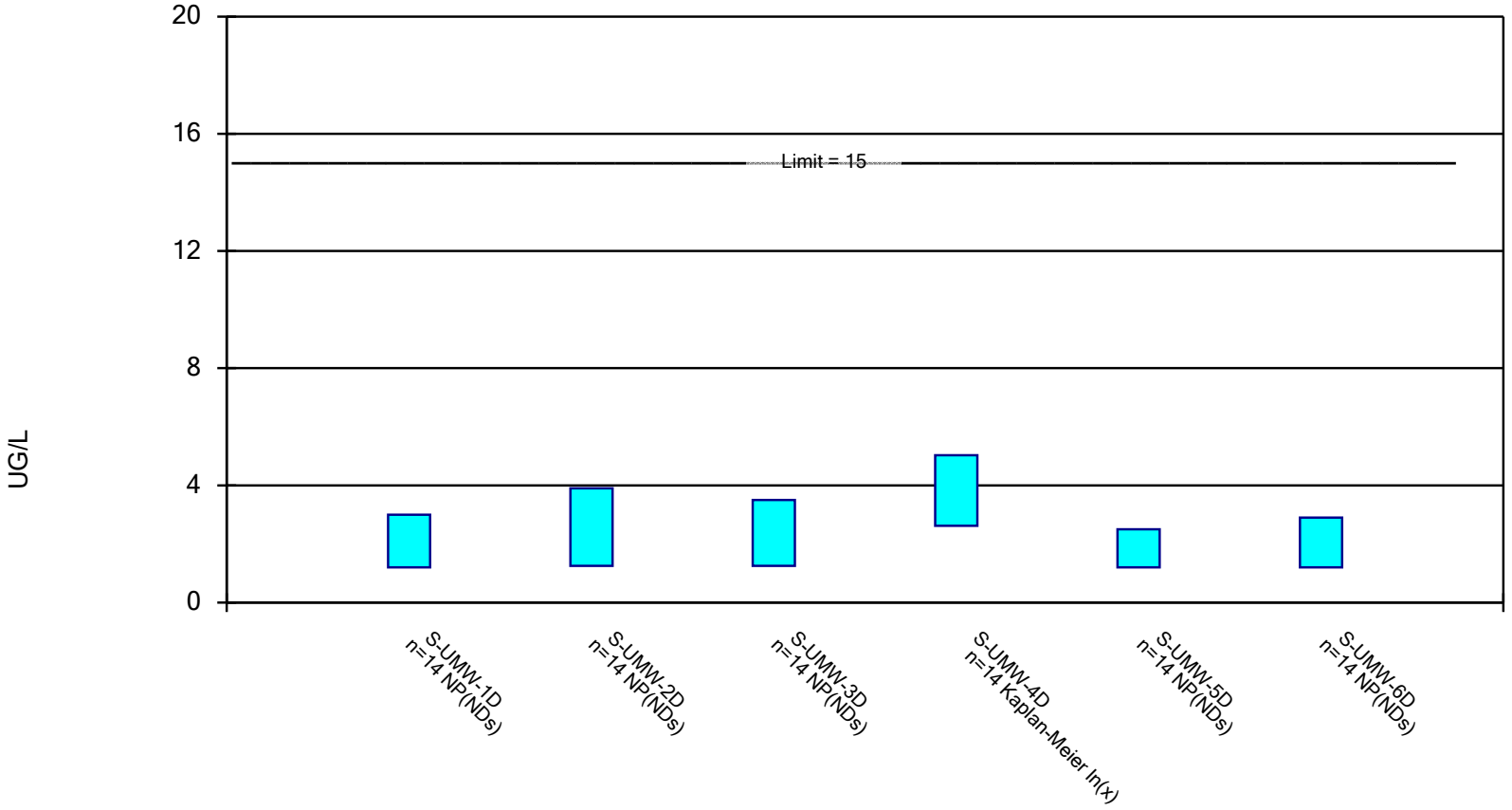


Constituent: FLUORIDE, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_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.

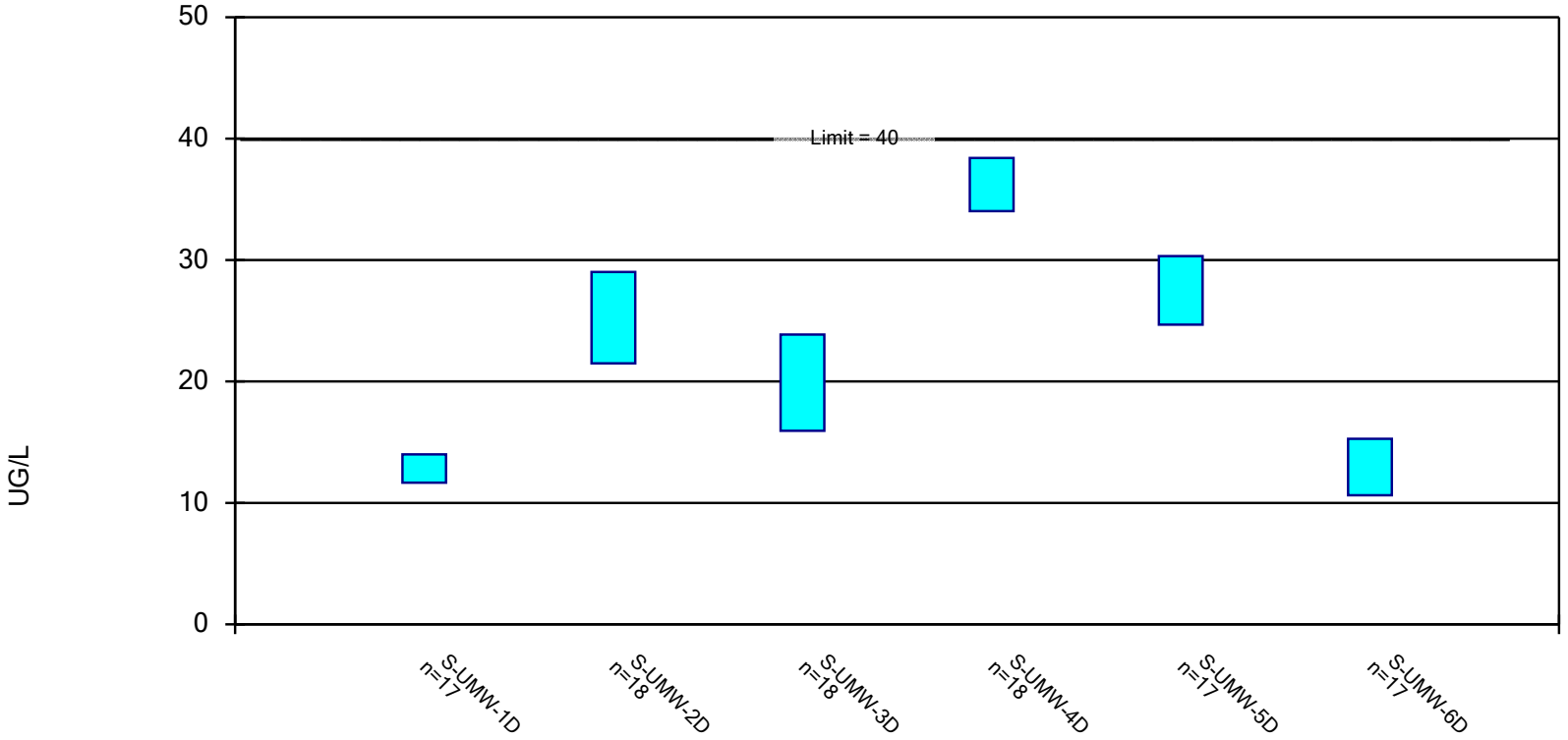


Constituent: LEAD, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

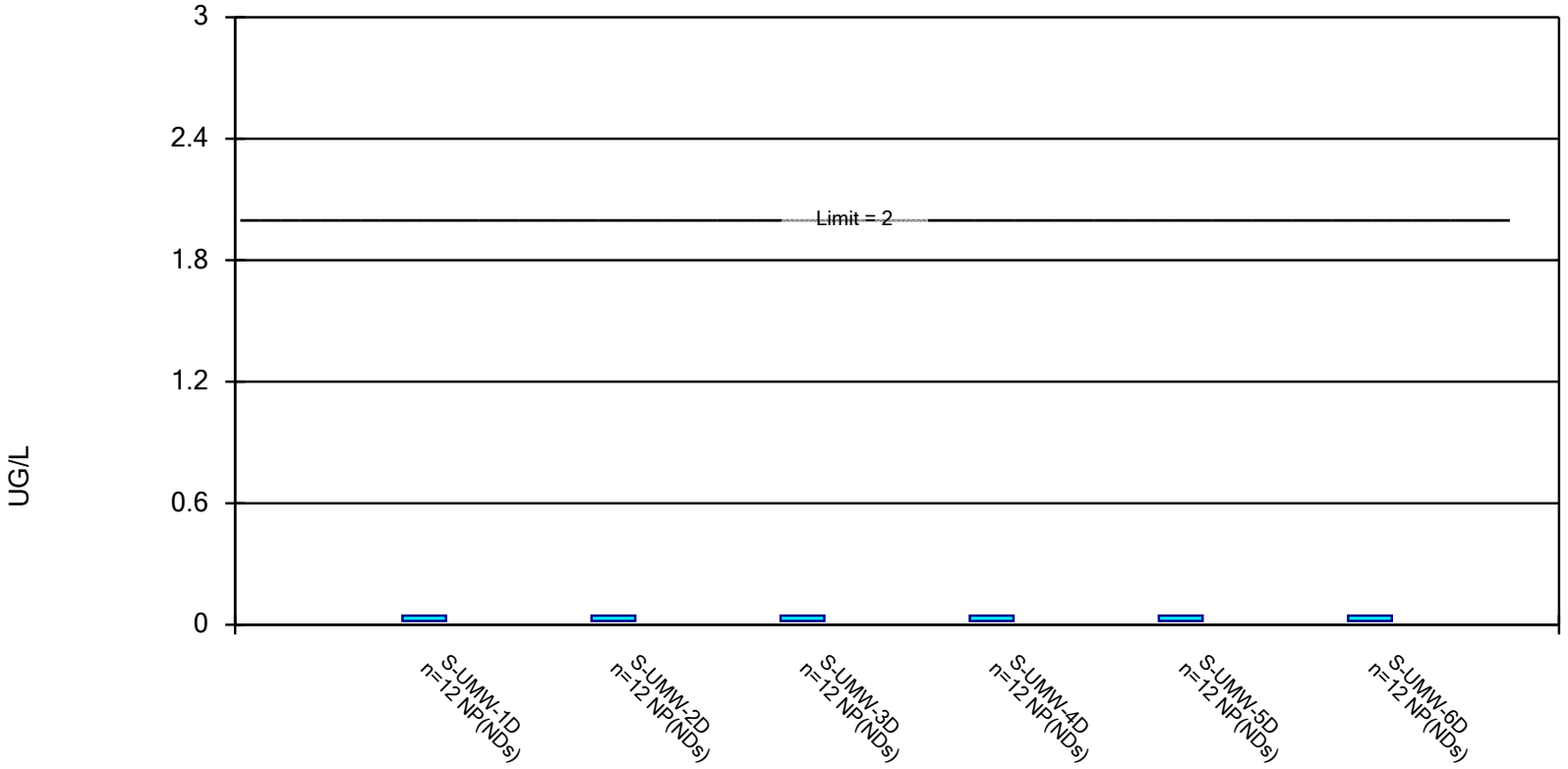


Constituent: LITHIUM, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

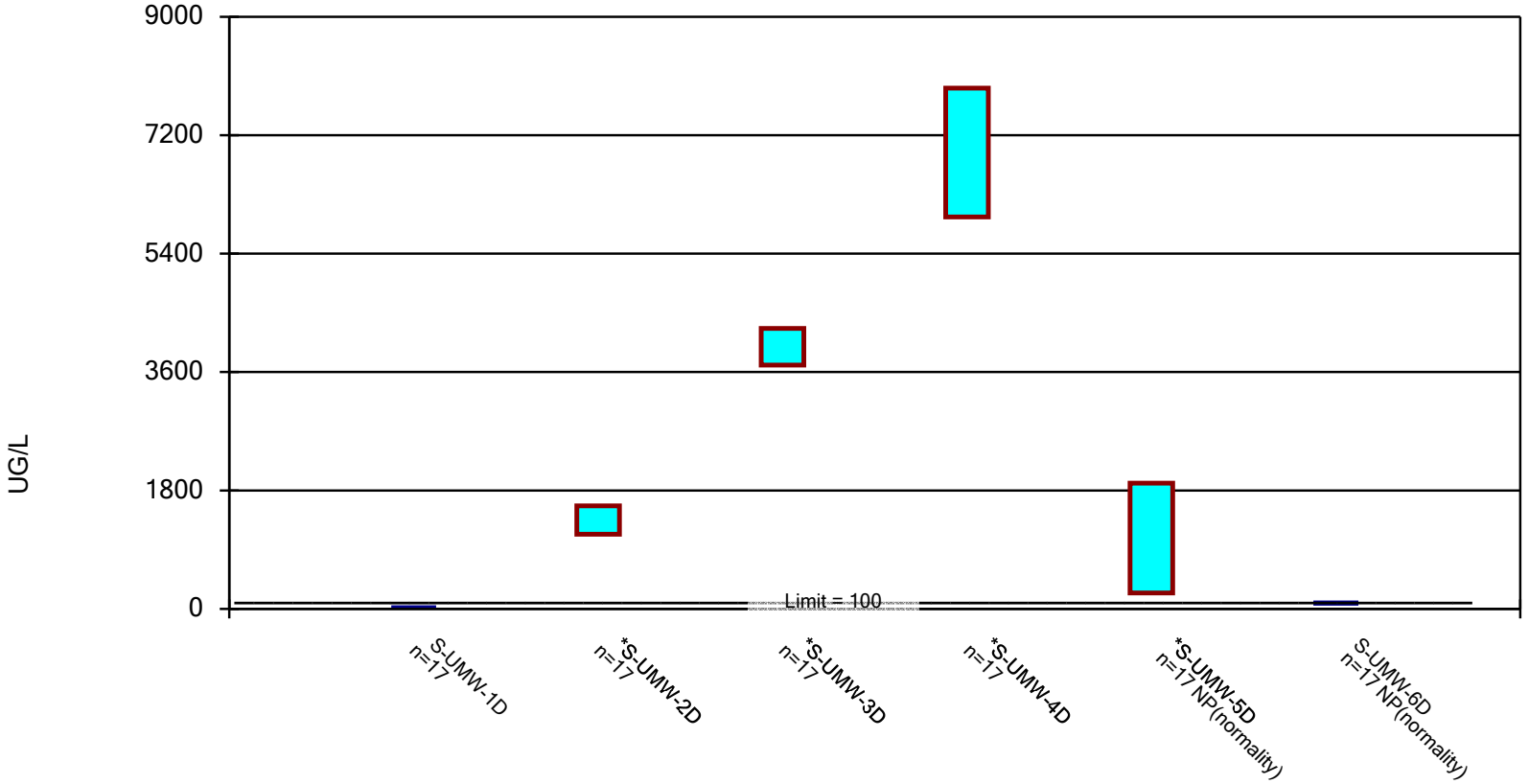


Constituent: MERCURY, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

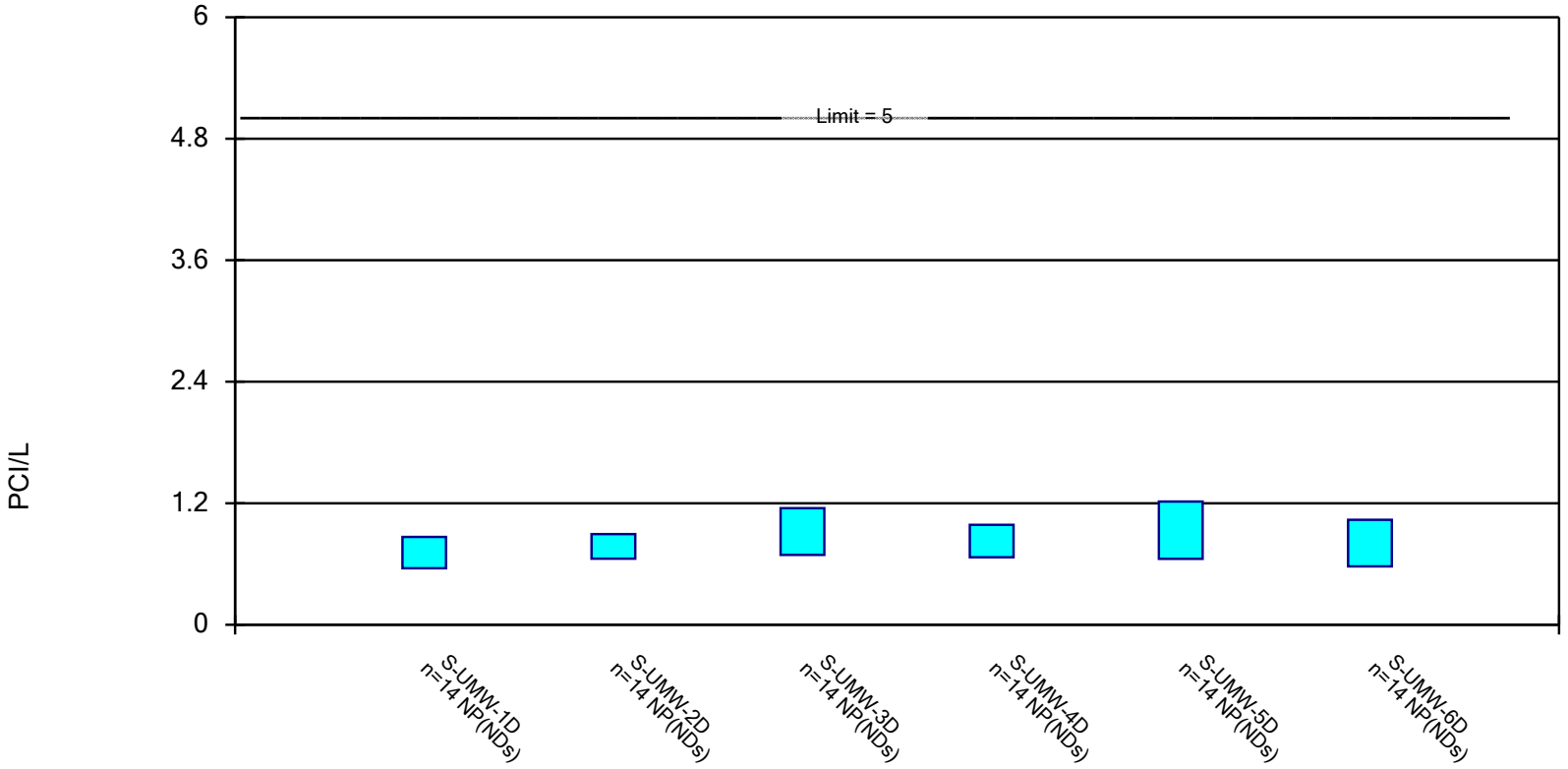


Constituent: MOLYBDENUM, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

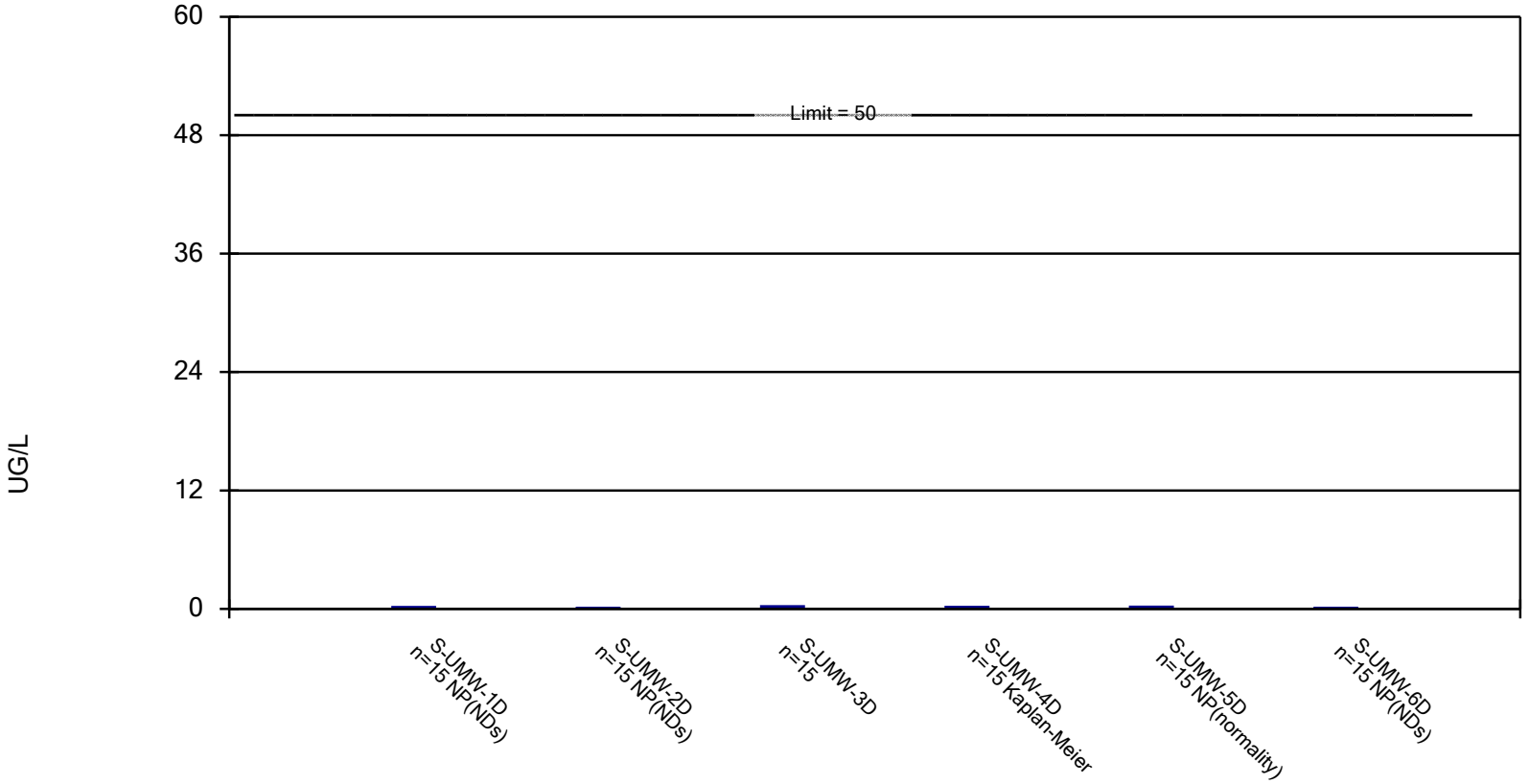


Constituent: RADIUM [226 + 228] Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_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.

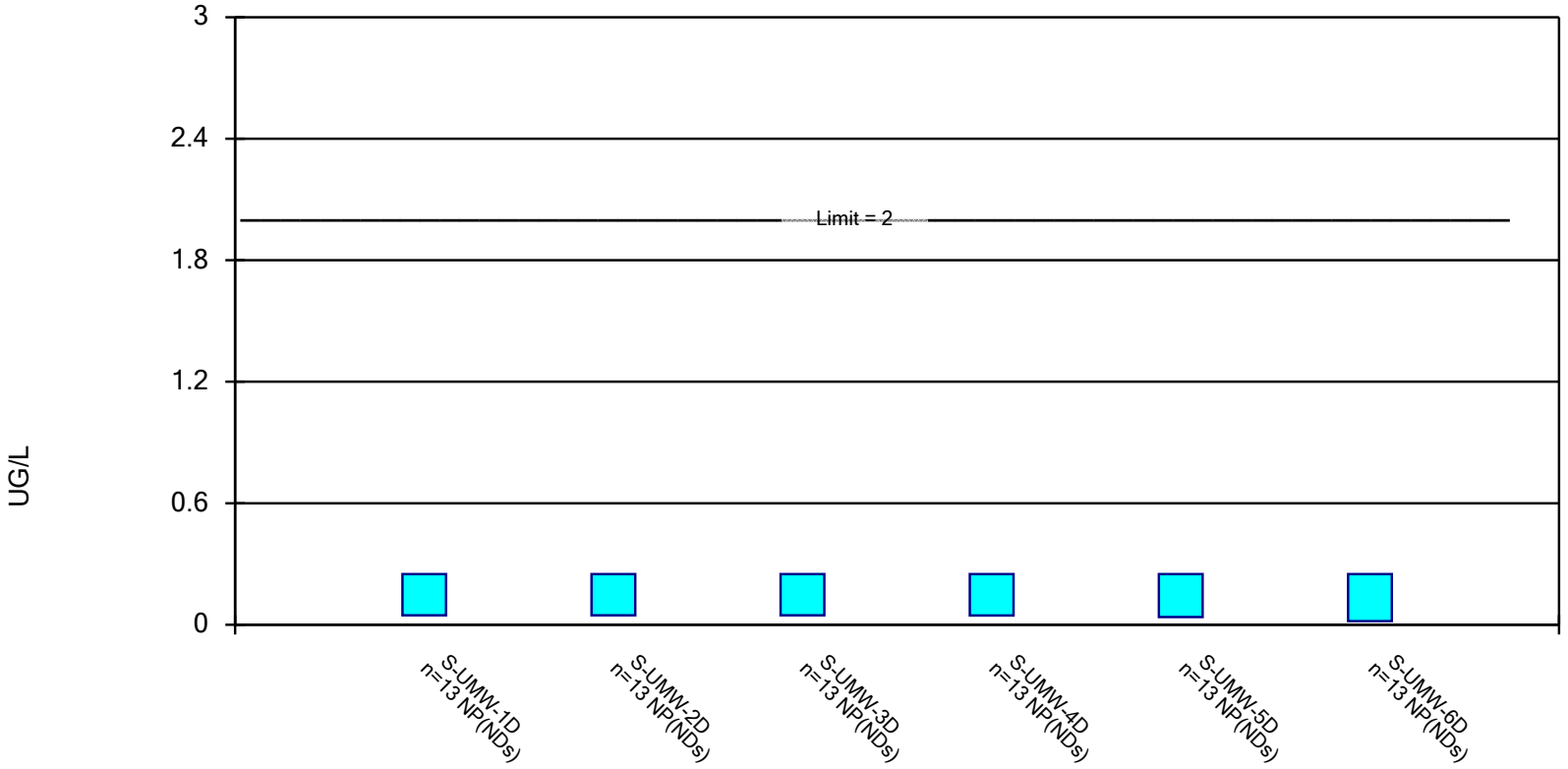


Constituent: SELENIUM, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: THALLIUM, TOTAL Analysis Run 3/2/2022 4:23 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Confidence Interval

Sioux E.C. Client: Ameren Data: SEC_DATA Printed 3/2/2022, 4:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	S-UMW-1D	0.1034	0.03668	6	No	13	38.46	ln(x)	0.01	Param.
ANTIMONY, TOTAL (UG/L)	S-UMW-2D	0.068	0.029	6	No	13	61.54	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-3D	0.083	0.013	6	No	13	76.92	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-4D	0.0485	0.013	6	No	13	92.31	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-5D	0.0485	0.013	6	No	13	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-6D	0.0485	0.013	6	No	13	100	No	0.01	NP (NDs)
ARSENIC, TOTAL (UG/L)	S-UMW-1D	1.7	0.98	10	No	17	0	No	0.01	NP (normality)
ARSENIC, TOTAL (UG/L)	S-UMW-2D	2.804	1.687	10	No	17	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-3D	0.82	0.29	10	No	17	5.882	No	0.01	NP (normality)
ARSENIC, TOTAL (UG/L)	S-UMW-4D	0.41	0.18	10	No	17	17.65	No	0.01	NP (normality)
ARSENIC, TOTAL (UG/L)	S-UMW-5D	0.6111	0.3602	10	No	17	5.882	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-6D	0.4352	0.235	10	No	17	5.882	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-1D	162.5	123.9	2000	No	17	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-2D	103.1	72.33	2000	No	17	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-3D	79.8	70.1	2000	No	17	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	S-UMW-4D	80.17	66.05	2000	No	17	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-5D	329	280.7	2000	No	17	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-6D	133	115	2000	No	17	0	No	0.01	NP (normality)
BERYLLIUM, TOTAL (UG/L)	S-UMW-1D	0.195	0.08	4	No	14	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-2D	0.195	0.08	4	No	14	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-3D	0.245	0.08	4	No	14	92.86	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-4D	0.195	0.08	4	No	14	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-5D	0.195	0.08	4	No	14	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-6D	0.195	0.08	4	No	14	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	S-UMW-1D	0.046	0.009	5	No	16	75	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	S-UMW-2D	0.38	0.0145	5	No	16	37.5	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	S-UMW-3D	0.9985	0.248	5	No	16	25	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	S-UMW-4D	2.4	0.029	5	No	16	25	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	S-UMW-5D	0.58	0.0145	5	No	16	43.75	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	S-UMW-6D	0.031	0.0145	5	No	16	75	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	S-UMW-1D	0.4848	0.1006	100	No	14	42.86	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	S-UMW-2D	0.3836	0.09465	100	No	14	42.86	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	S-UMW-3D	0.4191	0.1089	100	No	14	50	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	S-UMW-4D	0.4	0.039	100	No	14	57.14	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	S-UMW-5D	0.5	0.027	100	No	14	50	No	0.01	NP (normality)
CHROMIUM, TOTAL (UG/L)	S-UMW-6D	0.5	0.039	100	No	14	57.14	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-1D	0.475	0.36	6	No	15	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-2D	0.475	0.36	6	No	15	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-3D	0.475	0.36	6	No	15	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-4D	0.475	0.36	6	No	15	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-5D	0.475	0.36	6	No	15	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-6D	0.475	0.36	6	No	15	100	No	0.01	NP (NDs)
FLUORIDE, TOTAL (MG/L)	S-UMW-1D	0.3245	0.2397	4	No	19	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	S-UMW-2D	0.8778	0.5075	4	No	20	5	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	S-UMW-3D	1	0.58	4	No	20	5	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	S-UMW-4D	0.84	0.42	4	No	21	4.762	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	S-UMW-5D	0.705	0.5498	4	No	19	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	S-UMW-6D	0.43	0.355	4	No	20	0	No	0.01	Param.
LEAD, TOTAL (UG/L)	S-UMW-1D	3	1.2	15	No	14	85.71	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-2D	3.9	1.25	15	No	14	71.43	No	0.01	NP (NDs)

Confidence Interval

Sioux E.C. Client: Ameren Data: SEC_DATA Printed 3/2/2022, 4:30 PM

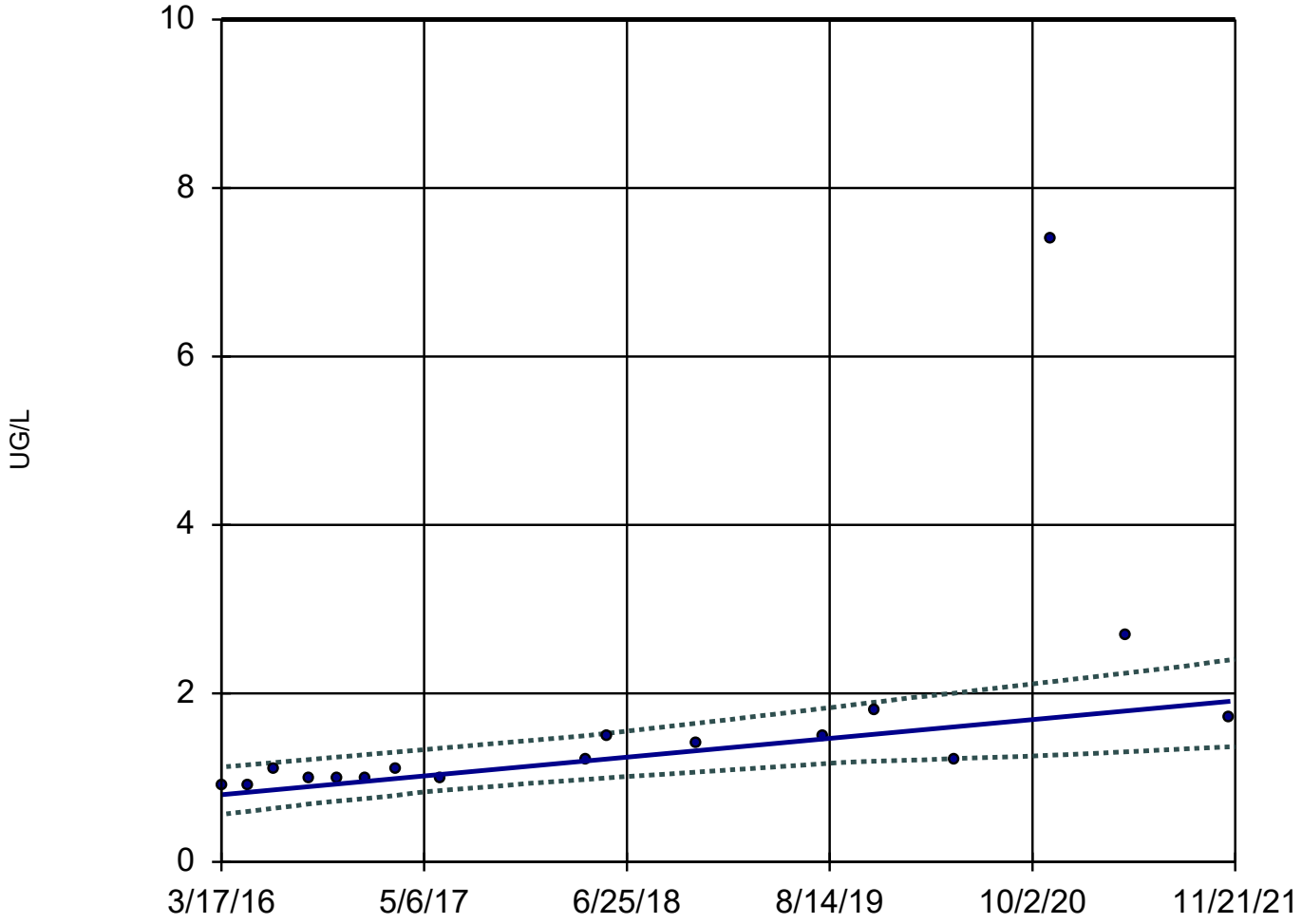
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
LEAD, TOTAL (UG/L)	S-UMW-3D	3.5	1.25	15	No	14	57.14	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-4D	5.028	2.618	15	No	14	50	ln(x)	0.01	Param.
LEAD, TOTAL (UG/L)	S-UMW-5D	2.5	1.2	15	No	14	78.57	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-6D	2.9	1.2	15	No	14	92.86	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	S-UMW-1D	13.99	11.67	40	No	17	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-2D	29.02	21.49	40	No	18	5.556	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-3D	23.87	15.94	40	No	18	11.11	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-4D	38.4	34.03	40	No	18	5.556	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-5D	30.32	24.68	40	No	17	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-6D	15.28	10.63	40	No	17	0	No	0.01	Param.
MERCURY, TOTAL (UG/L)	S-UMW-1D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-2D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-3D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-4D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-5D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-6D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	S-UMW-1D	37.56	27.4	100	No	17	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-2D**	**1565**	**1134**	**100**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-3D**	**4262**	**3706**	**100**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-4D**	**7916**	**5957**	**100**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-5D**	**1910**	**242**	**100**	**Yes**	**17**	**0**	**No**	**0.01**	**NP (normality)**
MOLYBDENUM, TOTAL (UG/L)	S-UMW-6D	110	66.1	100	No	17	0	No	0.01	NP (normality)
RADIUM [226 + 228] (PCI/L)	S-UMW-1D	0.8665	0.557	5	No	14	100	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-2D	0.8955	0.652	5	No	14	92.86	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-3D	1.151	0.689	5	No	14	78.57	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-4D	0.987	0.667	5	No	14	92.86	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-5D	1.216	0.6505	5	No	14	78.57	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-6D	1.036	0.576	5	No	14	92.86	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	S-UMW-1D	0.19	0.043	50	No	15	73.33	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	S-UMW-2D	0.096	0.043	50	No	15	73.33	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	S-UMW-3D	0.2557	0.163	50	No	15	13.33	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	S-UMW-4D	0.2033	0.1407	50	No	15	26.67	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	S-UMW-5D	0.22	0.09	50	No	15	26.67	No	0.01	NP (normality)
SELENIUM, TOTAL (UG/L)	S-UMW-6D	0.09	0.043	50	No	15	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-1D	0.25	0.0465	2	No	13	92.31	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-2D	0.25	0.0465	2	No	13	84.62	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-3D	0.25	0.0465	2	No	13	84.62	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-4D	0.25	0.046	2	No	13	84.62	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-5D	0.25	0.038	2	No	13	92.31	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-6D	0.25	0.018	2	No	13	100	No	0.01	NP (NDs)

APPENDIX B

Sanitas Trending Confidence Bands Statistical Output

Sen's Slope and 95% Confidence Band

S-UMW-1D



n = 17

Slope = 0.1962 units per year.

Mann-Kendall statistic = 97
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

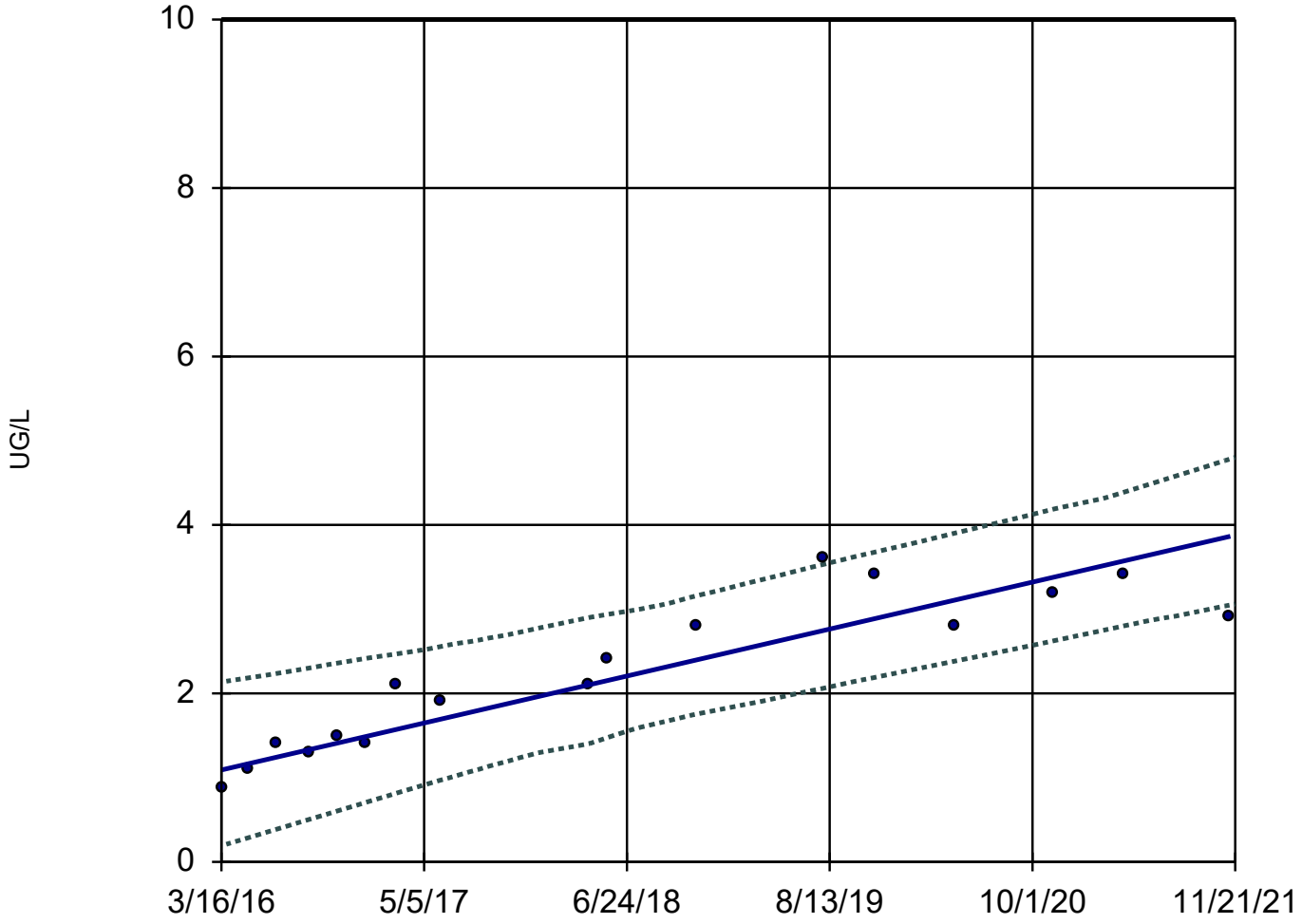
GWPS = 10.

Constituent: ARSENIC, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 17

Slope = 0.4901 units per year.

Mann-Kendall statistic = 106
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

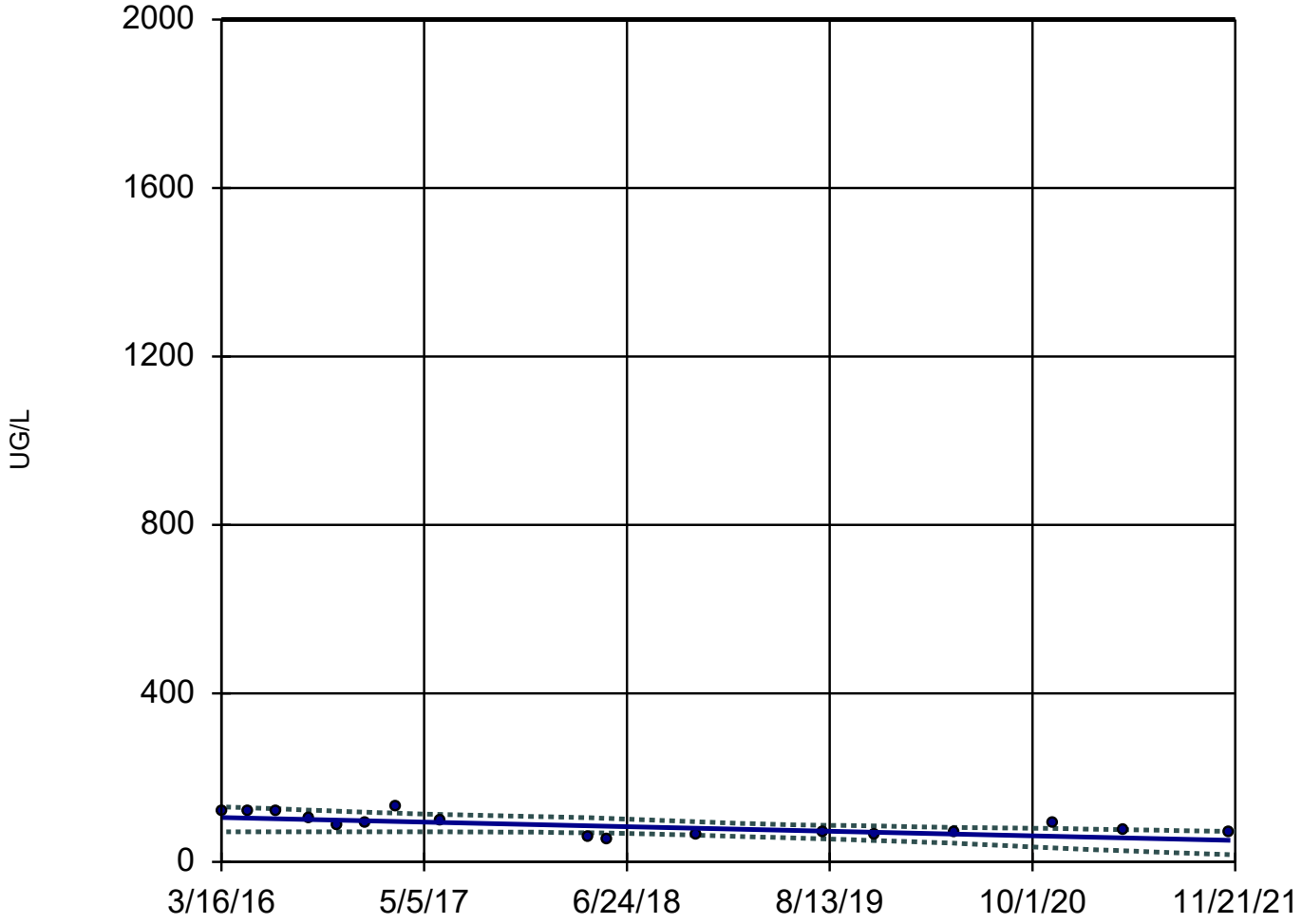
GWPS = 10.

Constituent: ARSENIC, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 17

Slope = -9.597 units per year.

Mann-Kendall statistic = -60
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 2000.

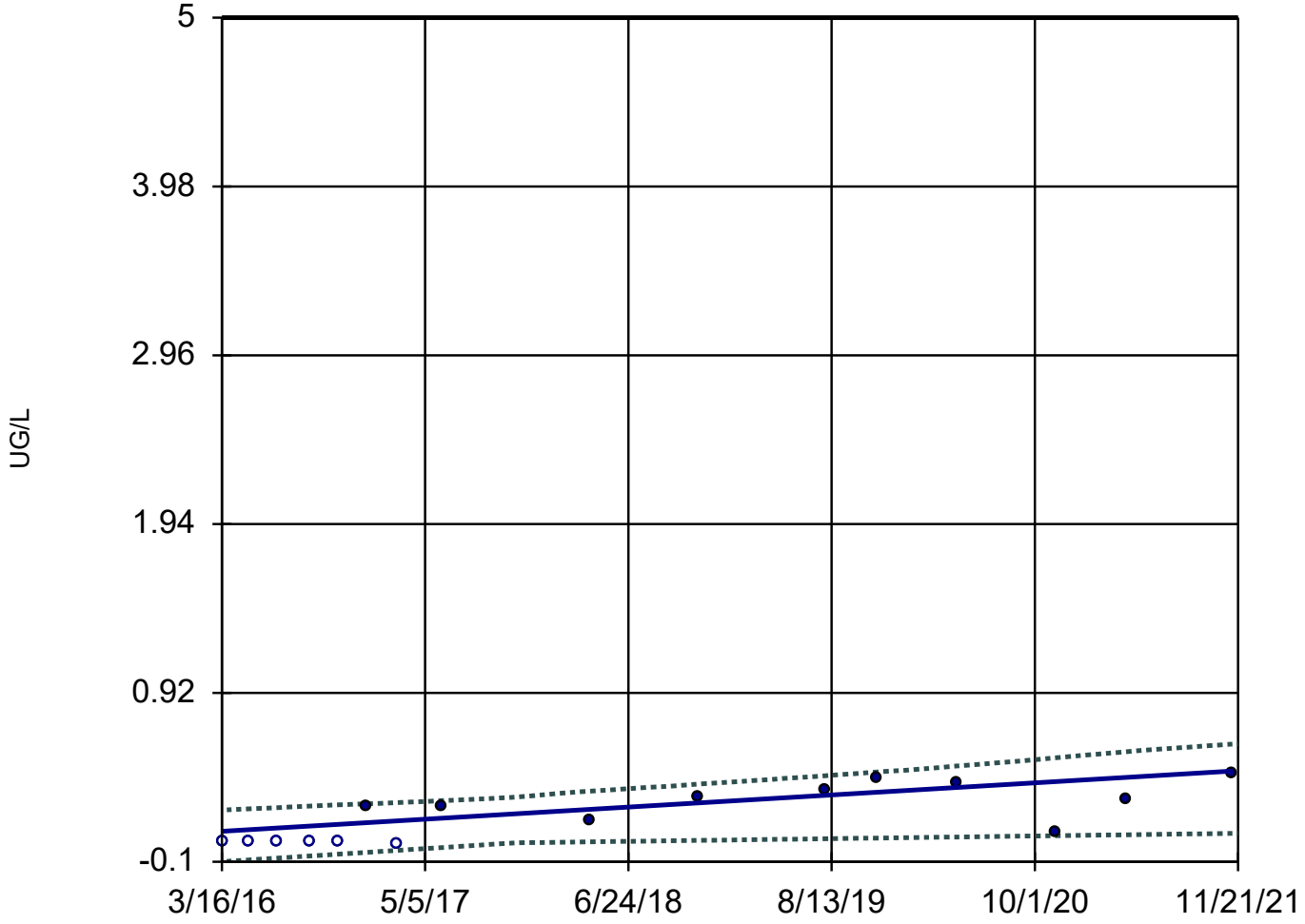
Constituent: BARIUM, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 16

Slope = 0.06439 units per year.

Mann-Kendall statistic = 70
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 5.

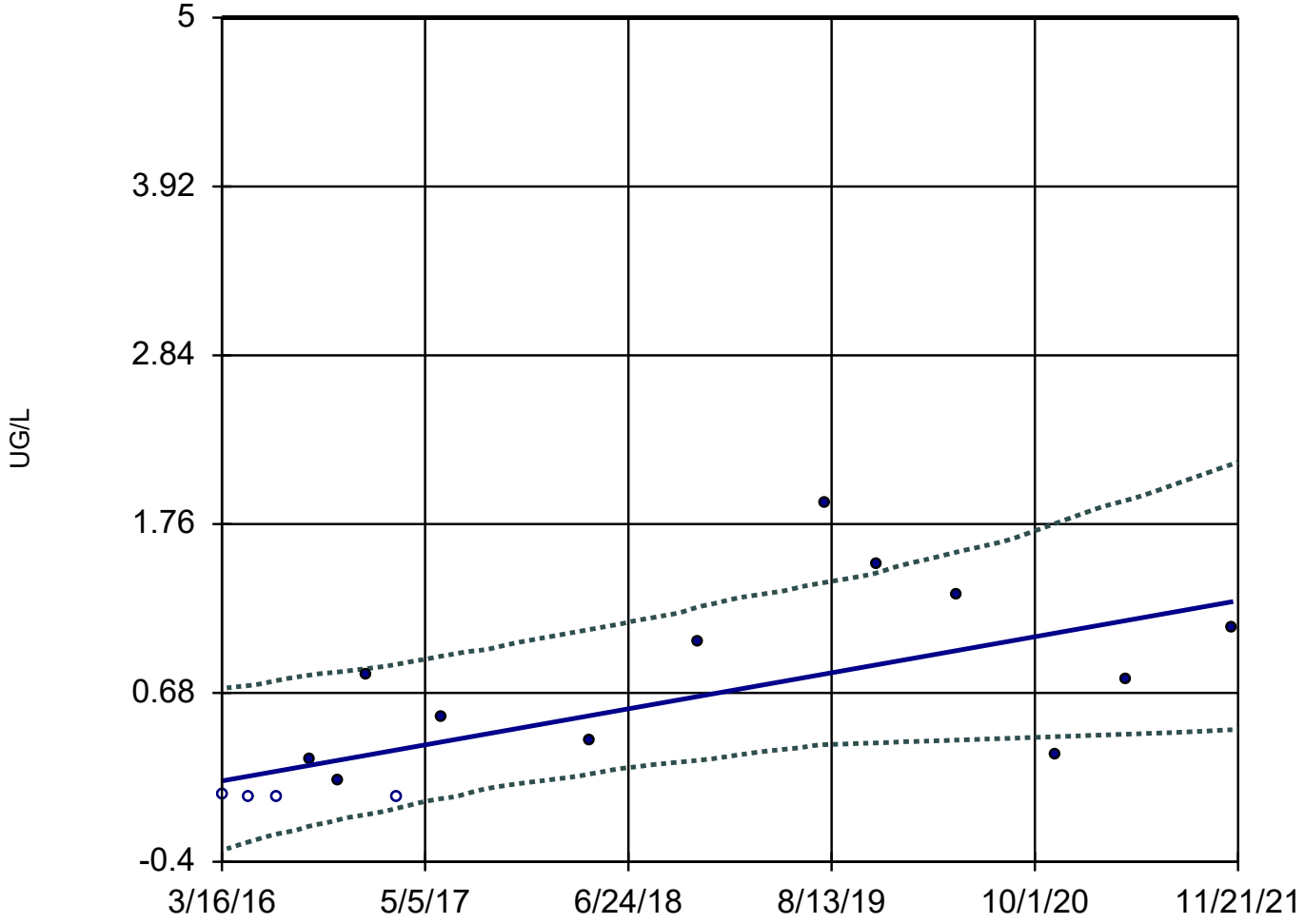
Constituent: CADMIUM, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 16

Slope = 0.2027 units per year.

Mann-Kendall statistic = 59
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 5.

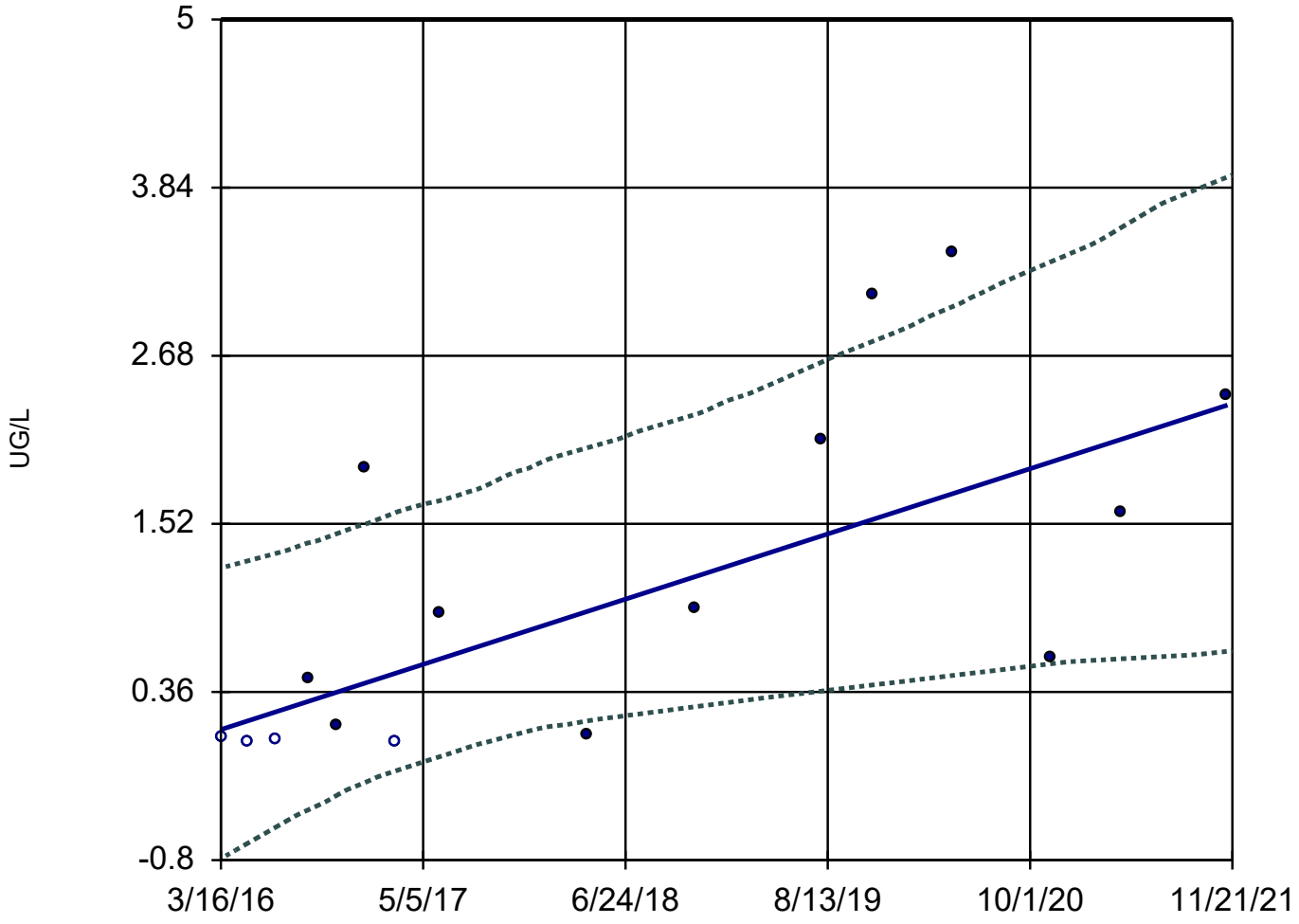
Constituent: CADMIUM, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 16

Slope = 0.3955 units per year.

Mann-Kendall statistic = 66
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 5.

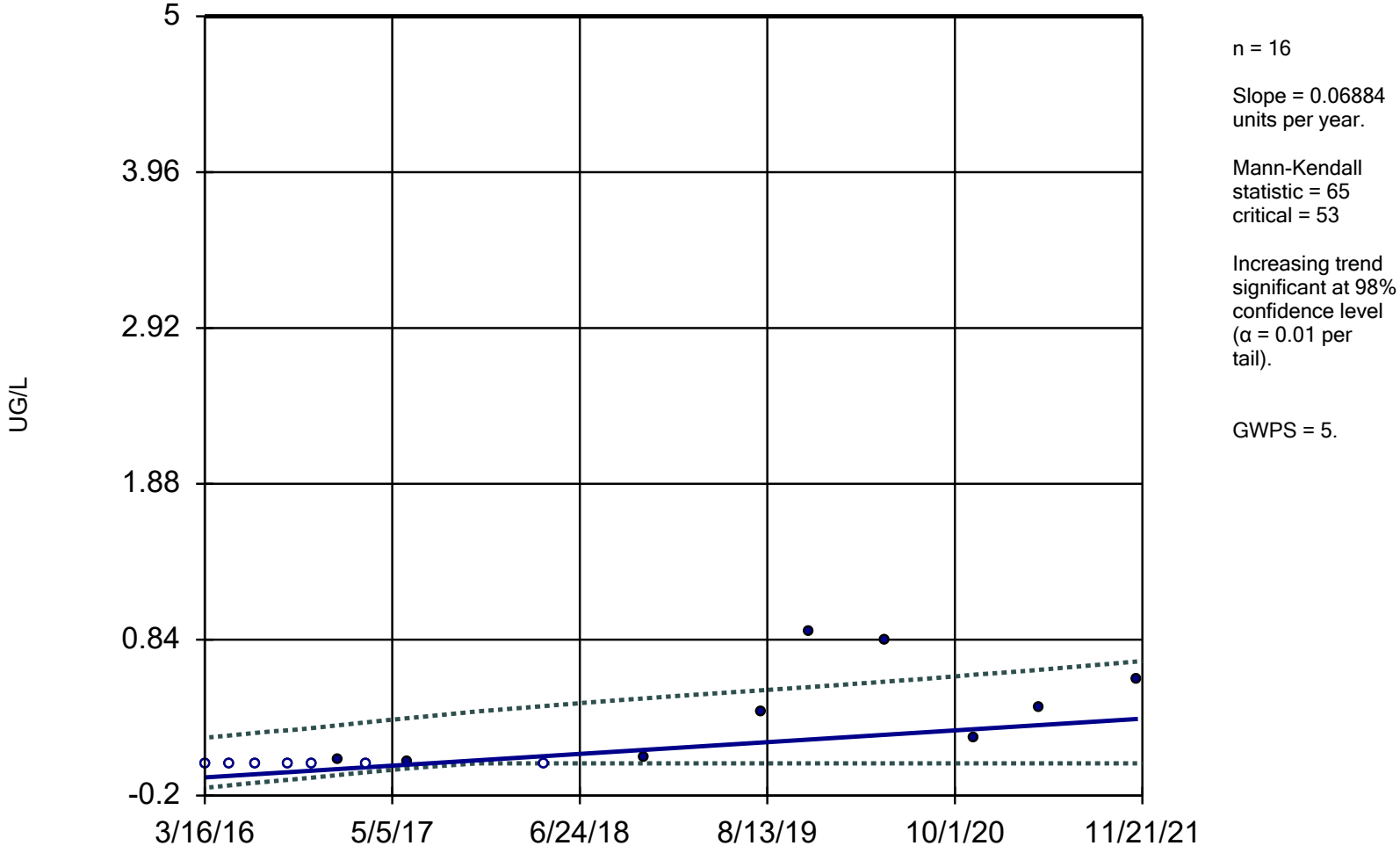
Constituent: CADMIUM, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-5D



n = 16

Slope = 0.06884 units per year.

Mann-Kendall statistic = 65
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 5.

Constituent: CADMIUM, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

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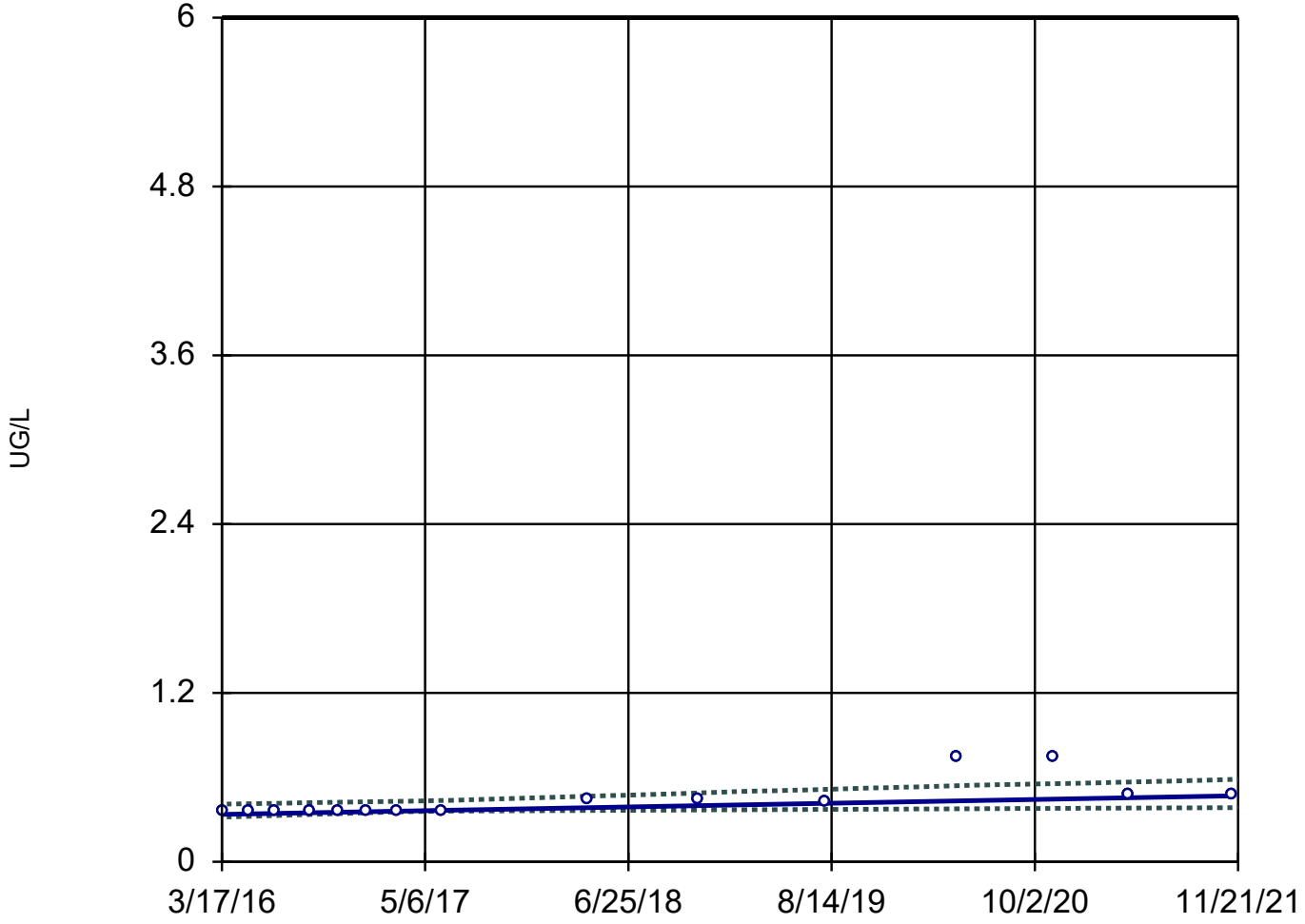
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-1D



n = 15

Slope = 0.02332 units per year.

Mann-Kendall statistic = 74
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 6.

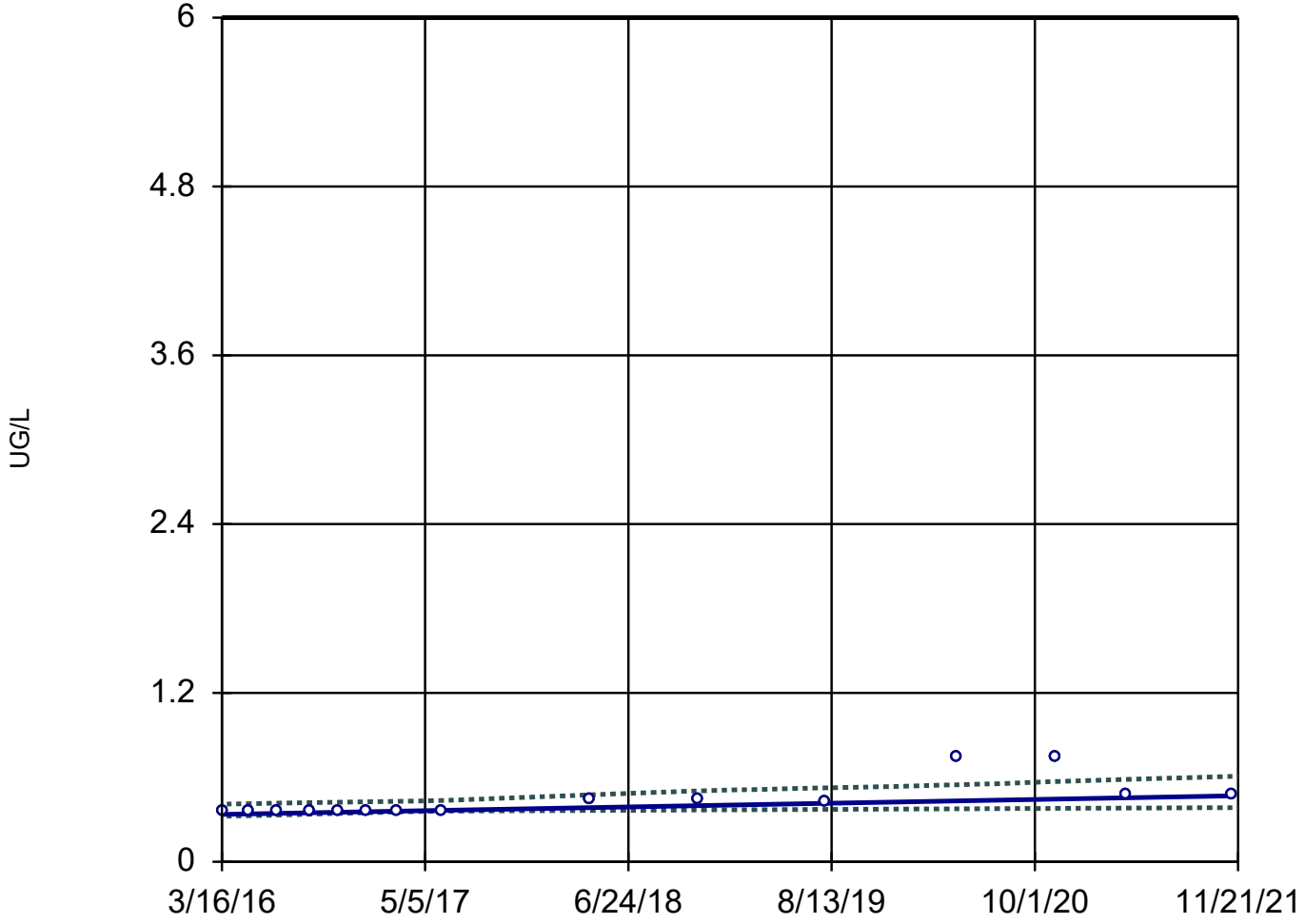
Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 15

Slope = 0.02335 units per year.

Mann-Kendall statistic = 74
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 6.

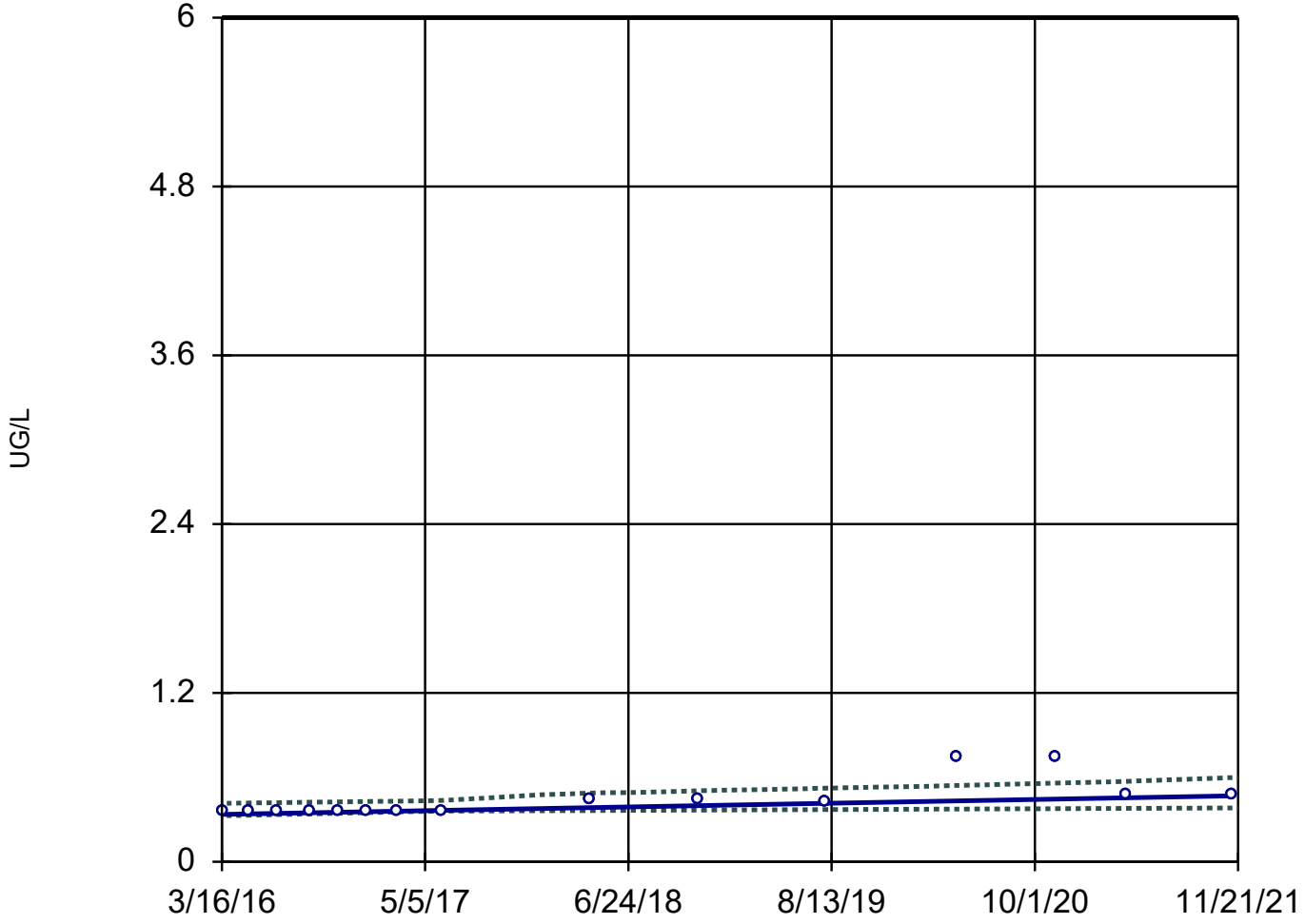
Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 15

Slope = 0.02335 units per year.

Mann-Kendall statistic = 74
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 6.

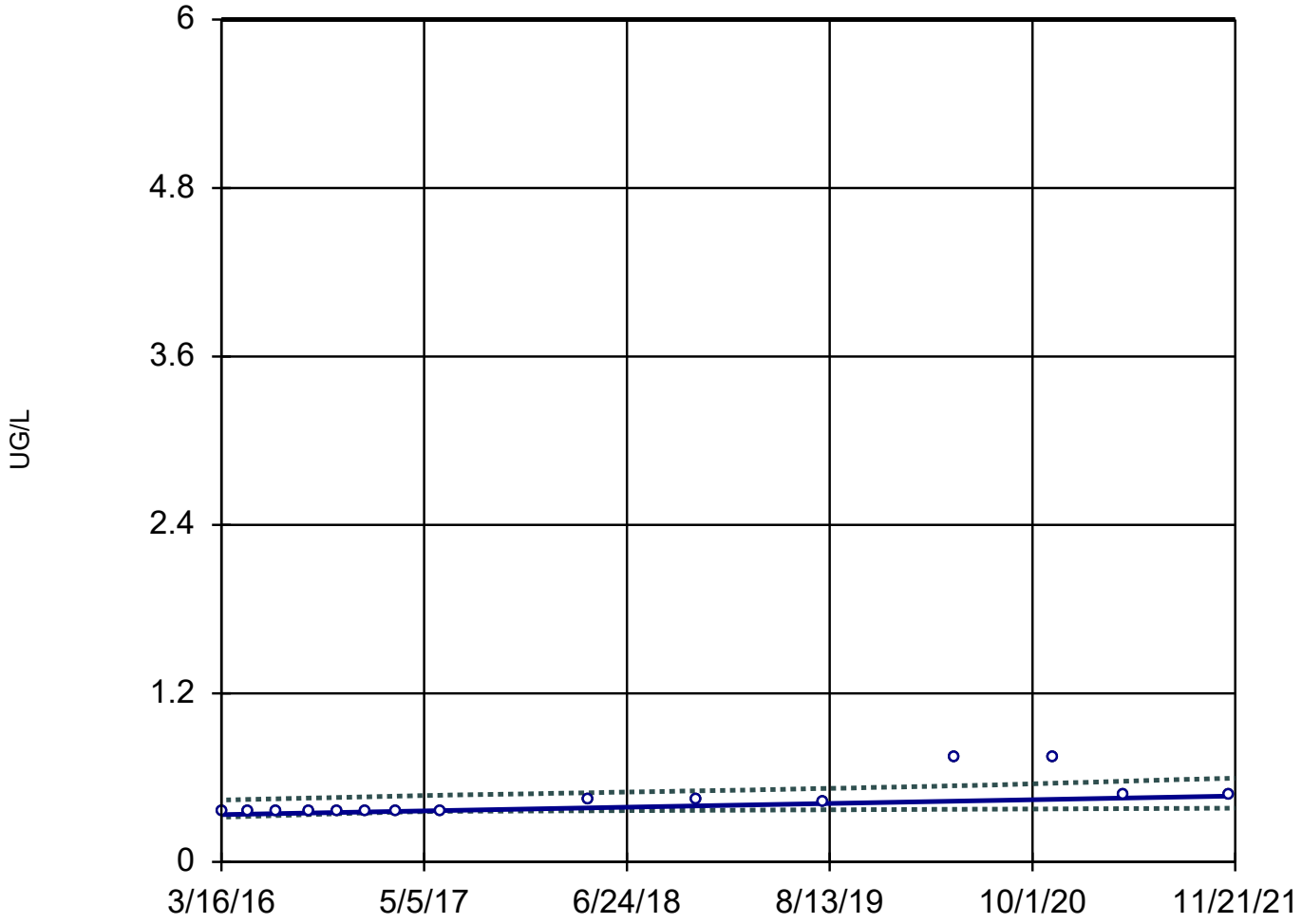
Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 15

Slope = 0.02335 units per year.

Mann-Kendall statistic = 74
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 6.

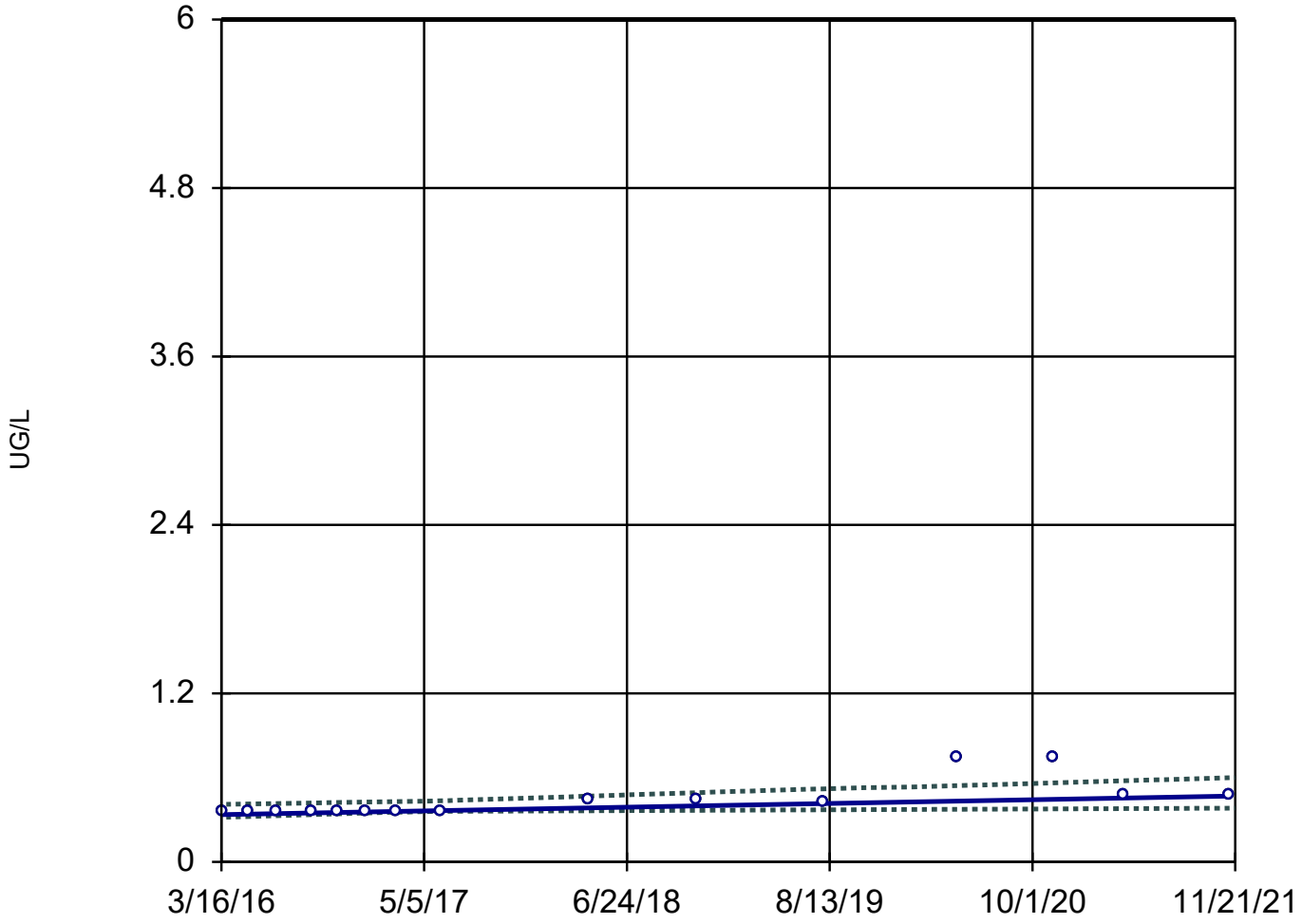
Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:34 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-5D



n = 15

Slope = 0.02332 units per year.

Mann-Kendall statistic = 74
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

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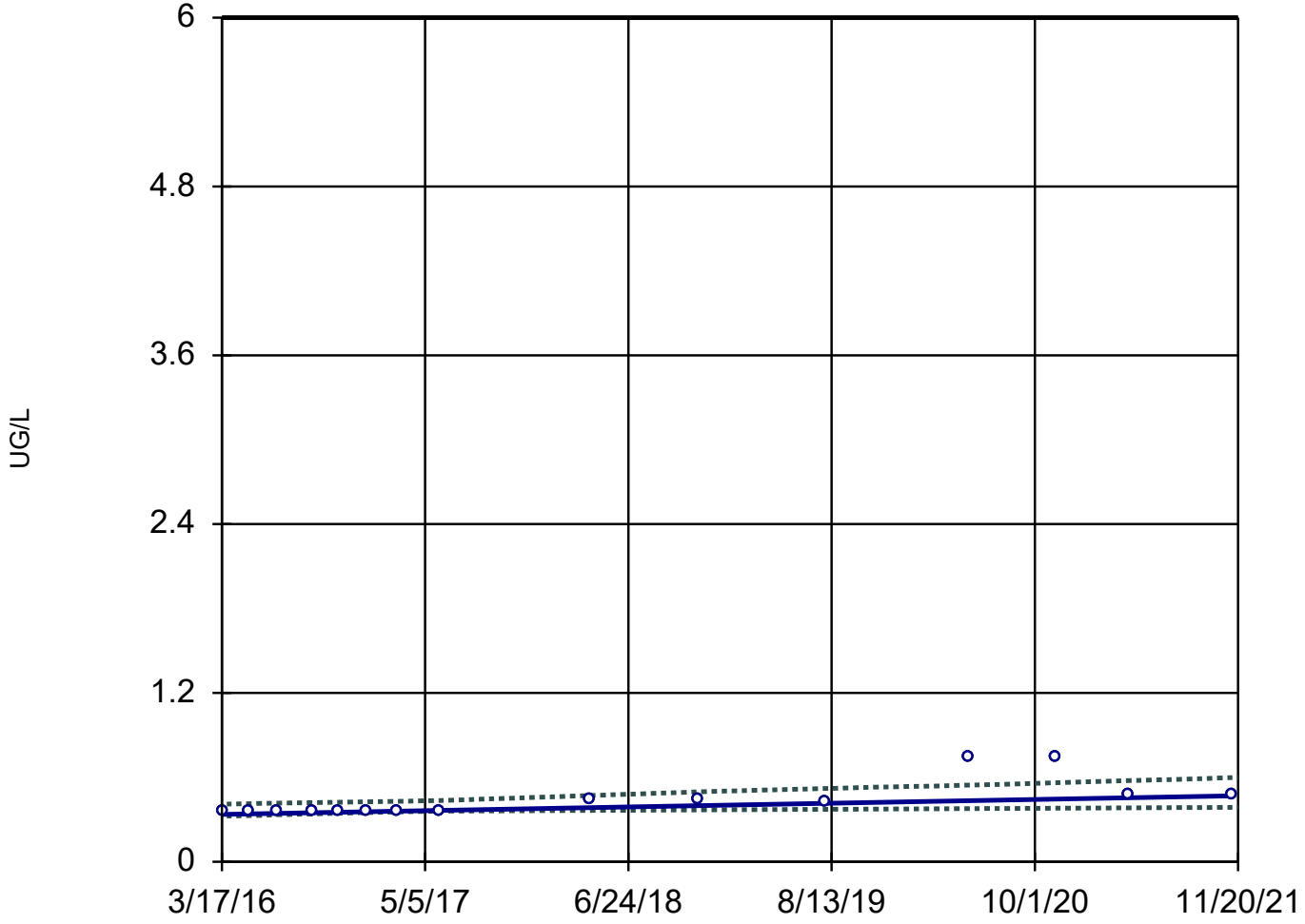
Sen's Slope and 95% Confidence Band

S-UMW-6D



n = 15

Slope = 0.02332 units per year.

Mann-Kendall statistic = 74
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 6.

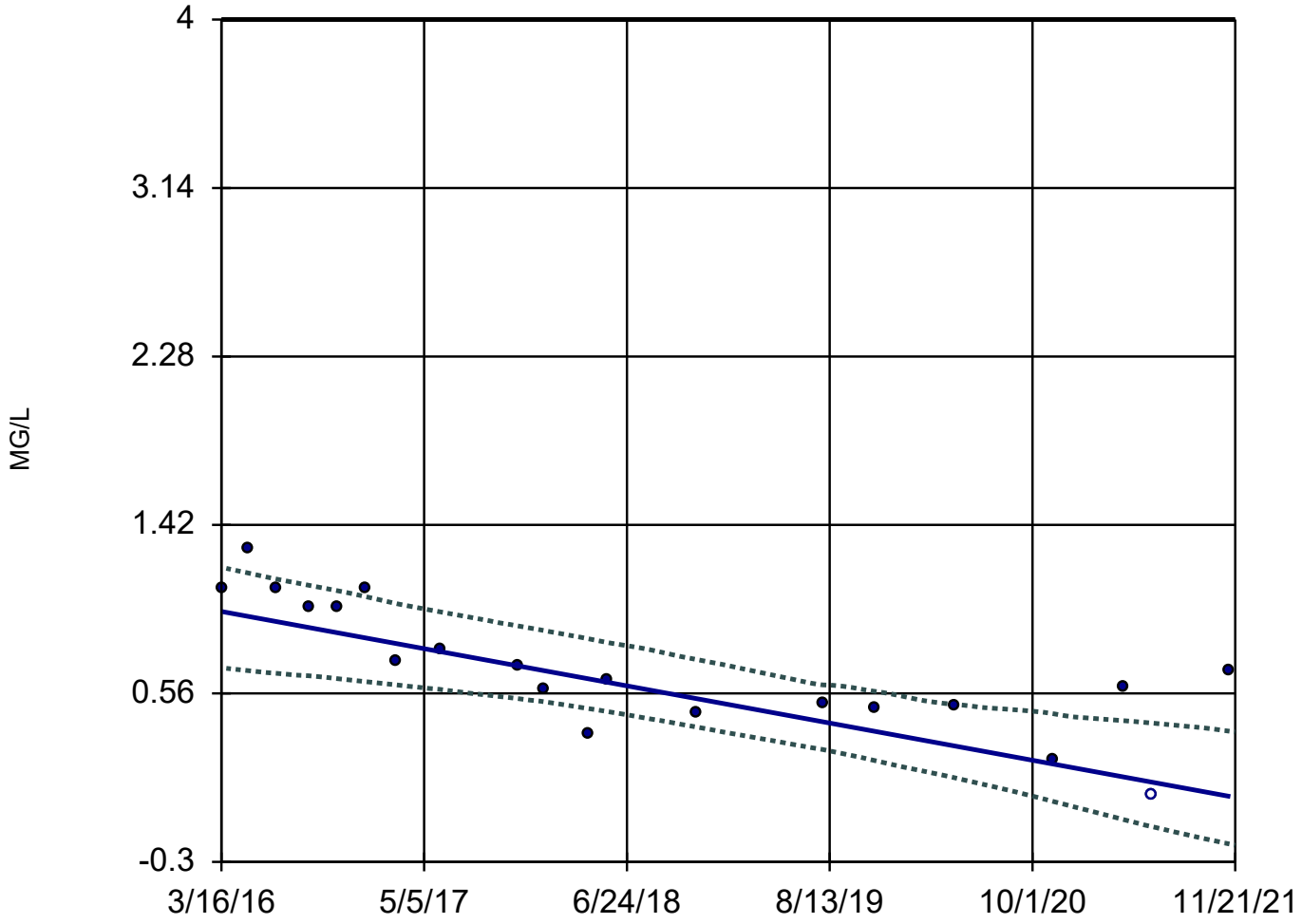
Constituent: COBALT, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 20

Slope = -0.1669 units per year.

Mann-Kendall statistic = -124
critical = -73

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 4.

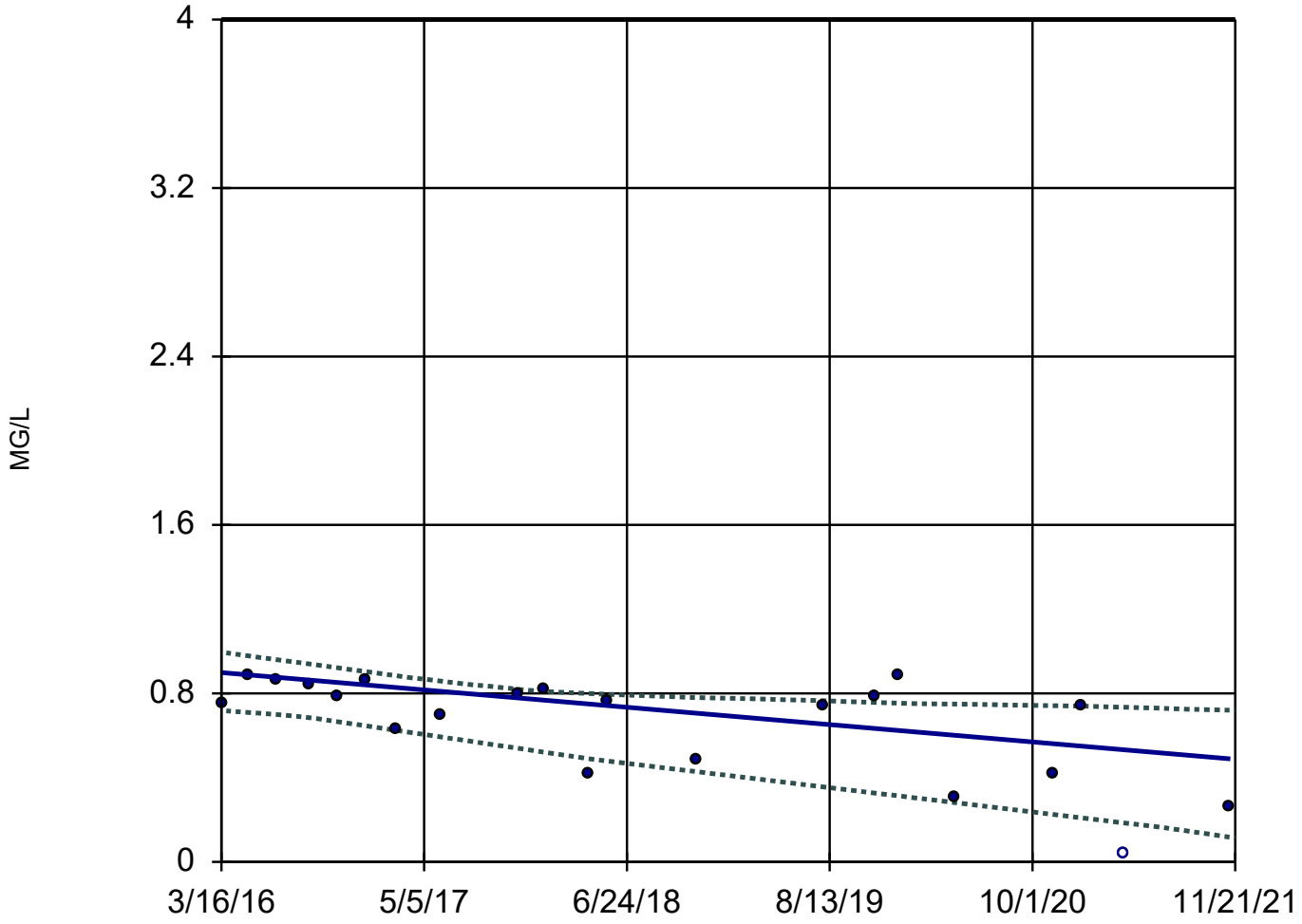
Constituent: FLUORIDE, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 21

Slope = -0.07231 units per year.

Mann-Kendall statistic = -94
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

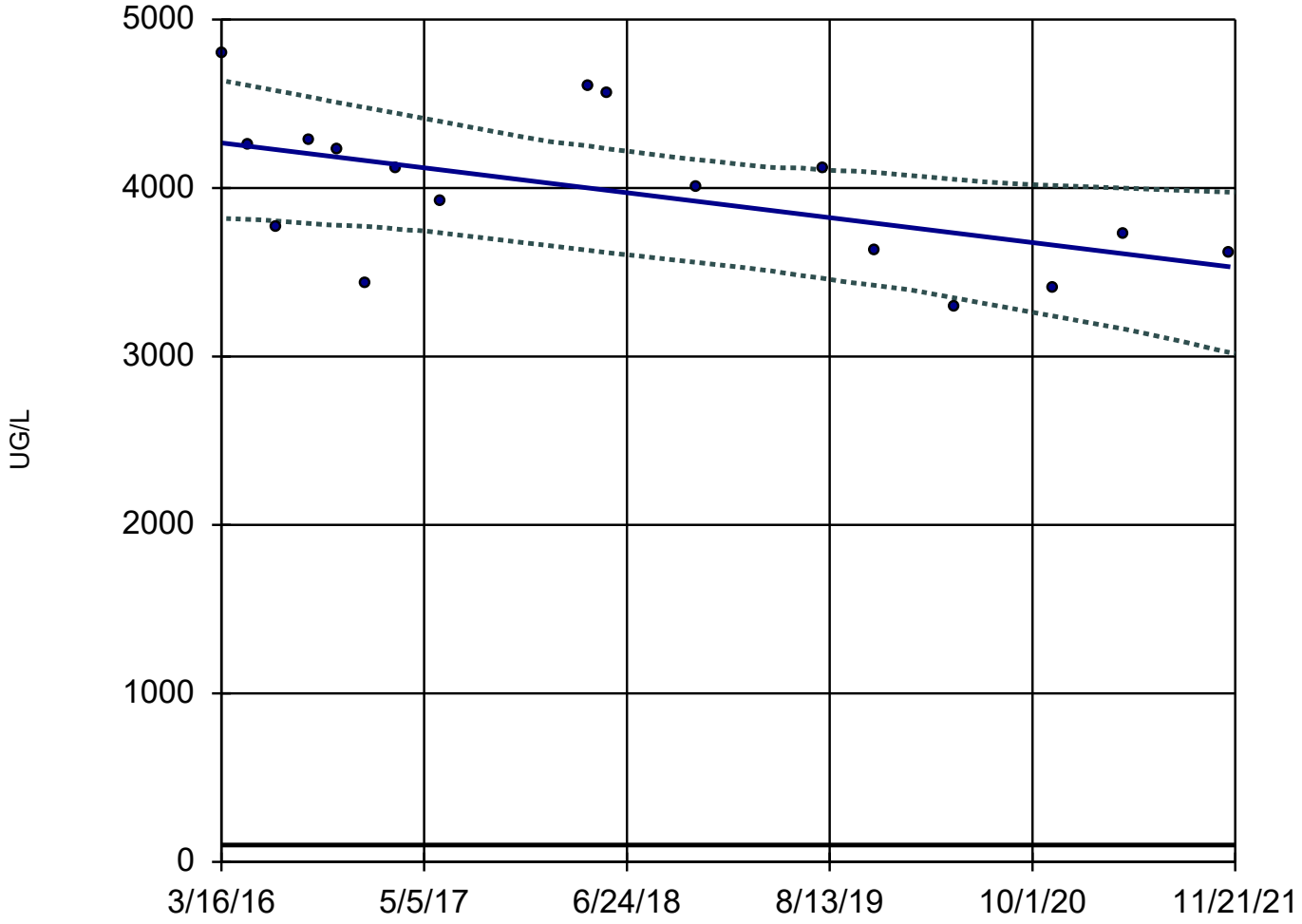
GWPS = 4.

Constituent: FLUORIDE, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 17

Slope = -130 units per year.

Mann-Kendall statistic = -61
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

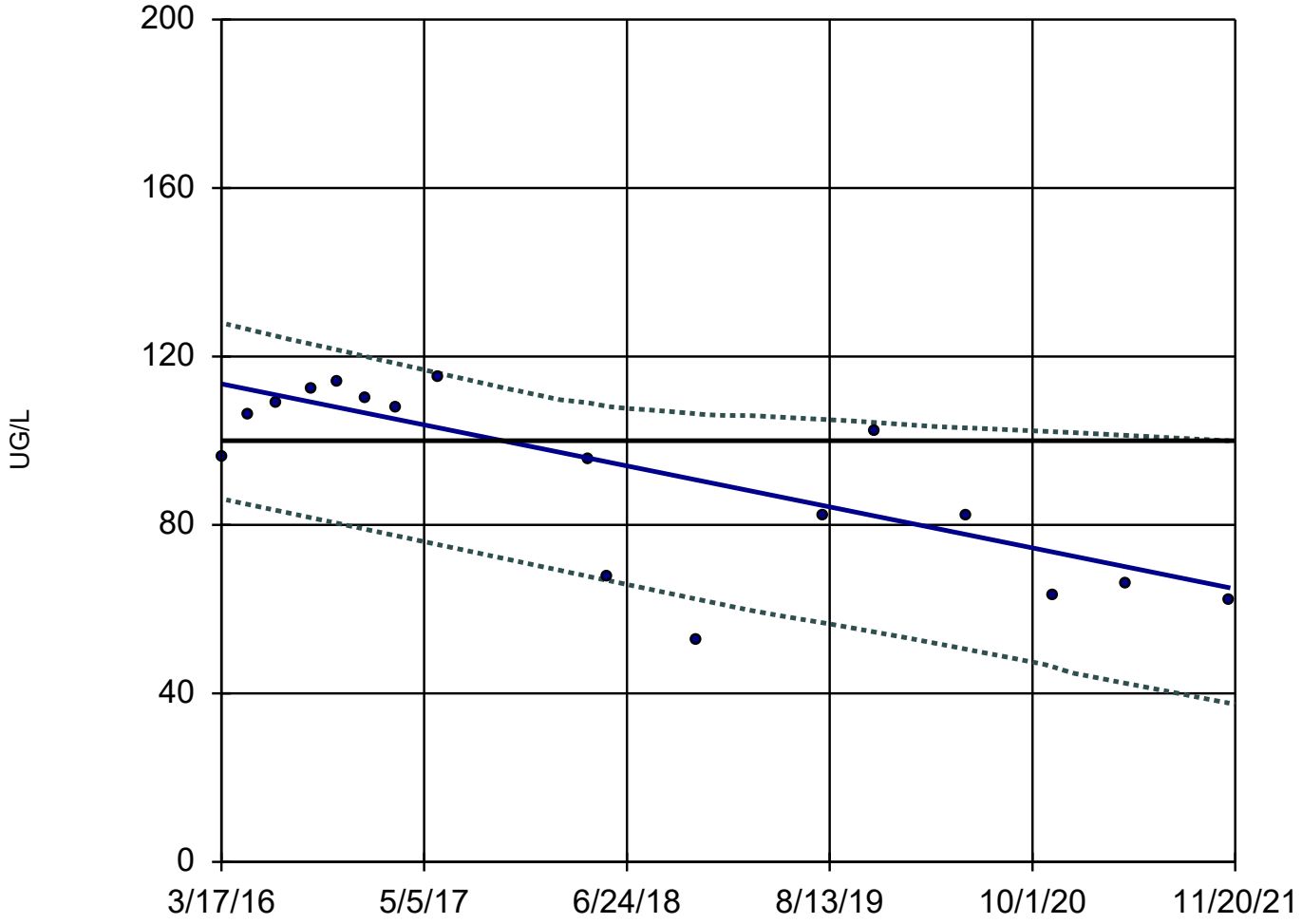
GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Sen's Slope and 95% Confidence Band

S-UMW-6D



n = 17

Slope = -8.566 units per year.

Mann-Kendall statistic = -64
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

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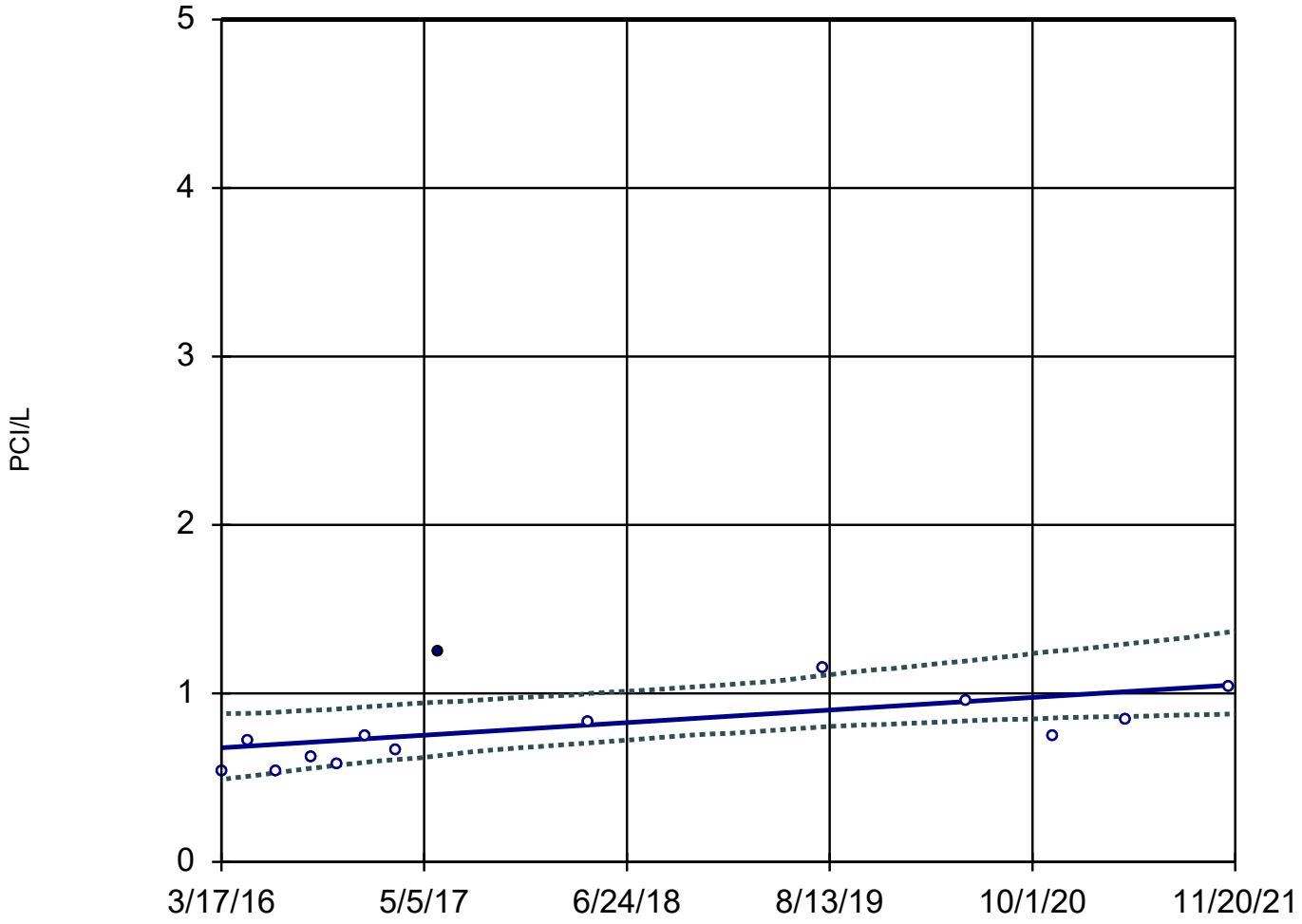
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-6D



n = 14

Slope = 0.06577 units per year.

Mann-Kendall statistic = 52
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 5.

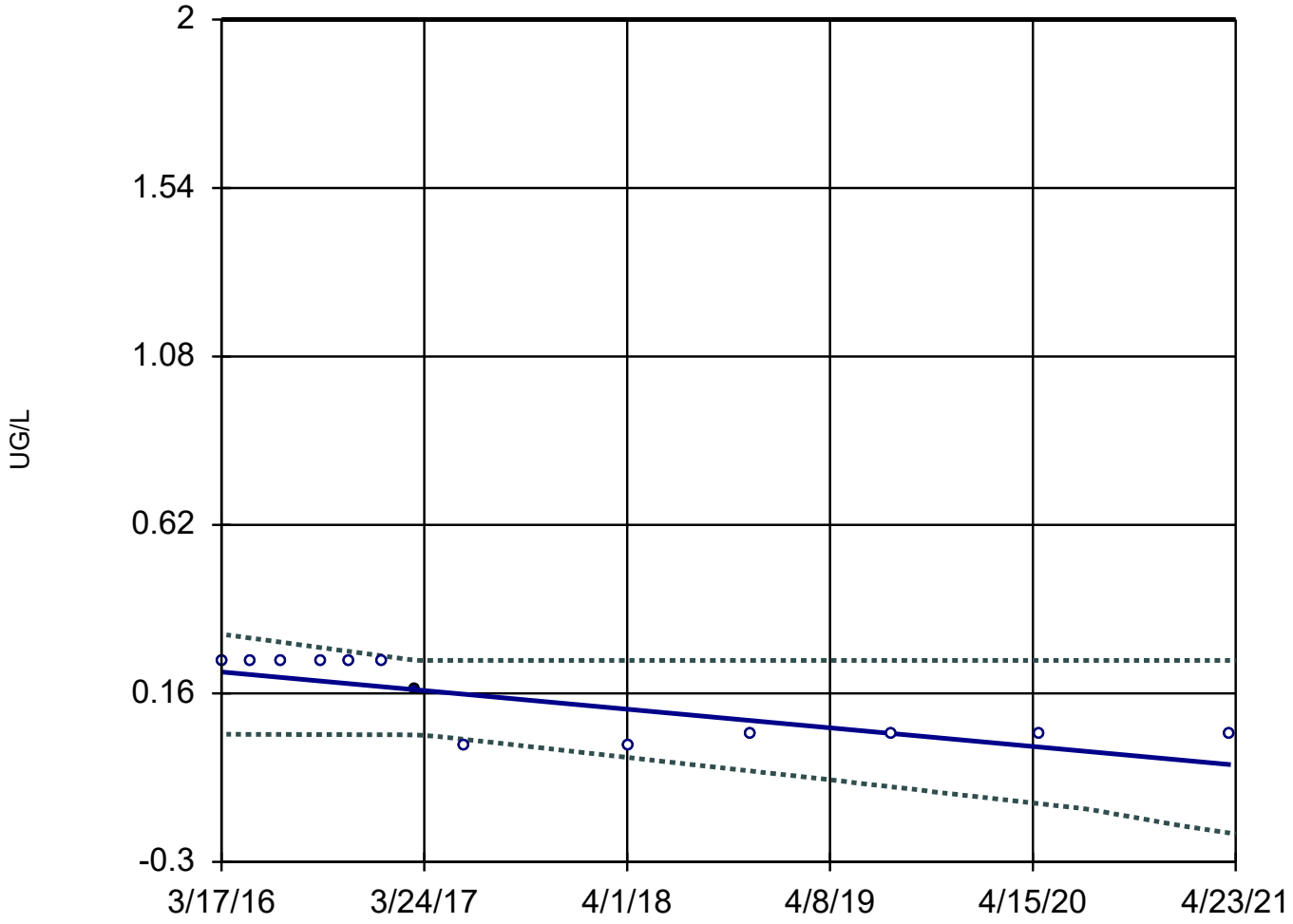
Constituent: RADIUM [226 + 228] Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-1D



n = 13

Slope = -0.04981 units per year.

Mann-Kendall statistic = -43
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 2.

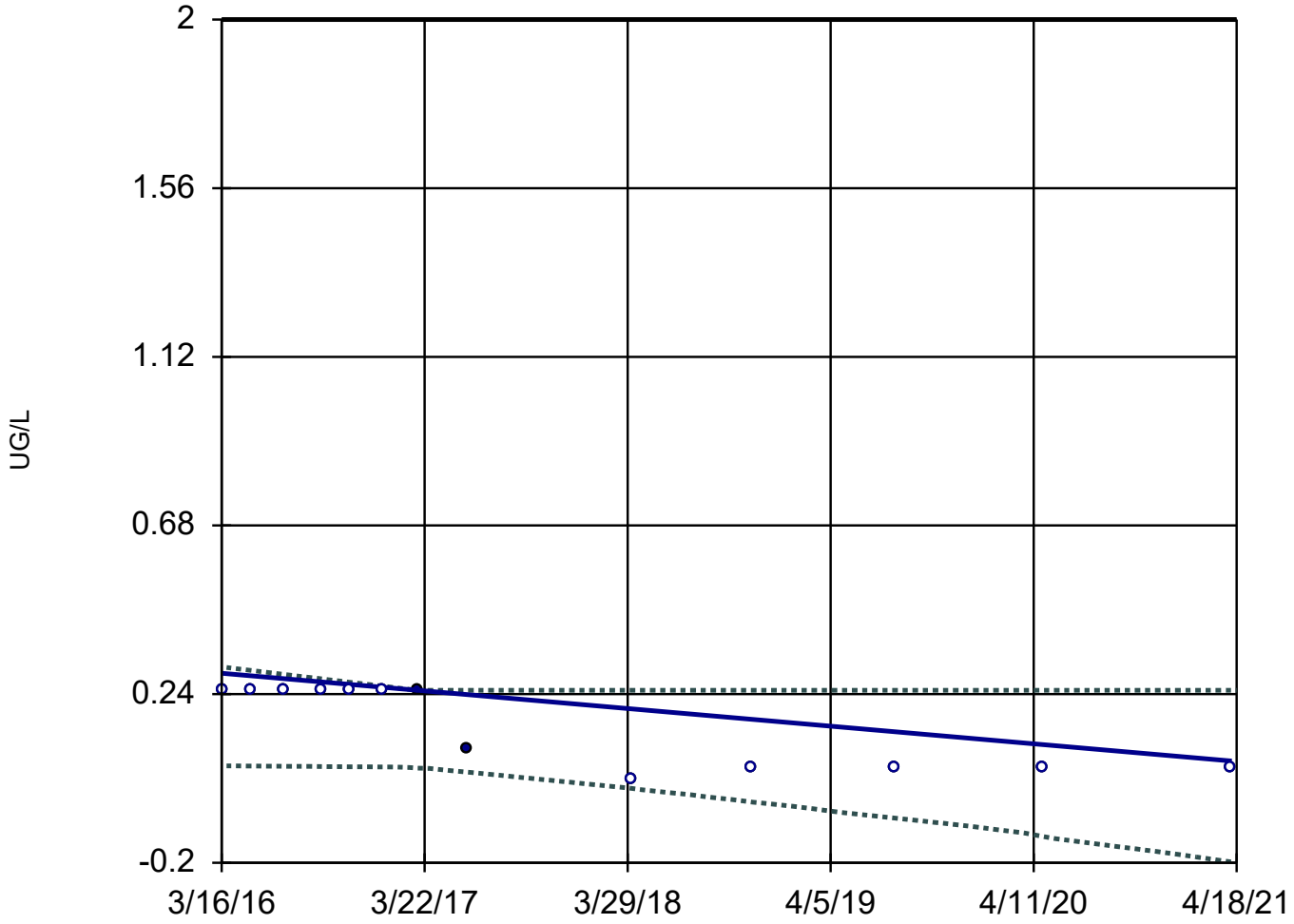
Constituent: THALLIUM, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 13

Slope = -0.04516 units per year.

Mann-Kendall statistic = -46
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 2.

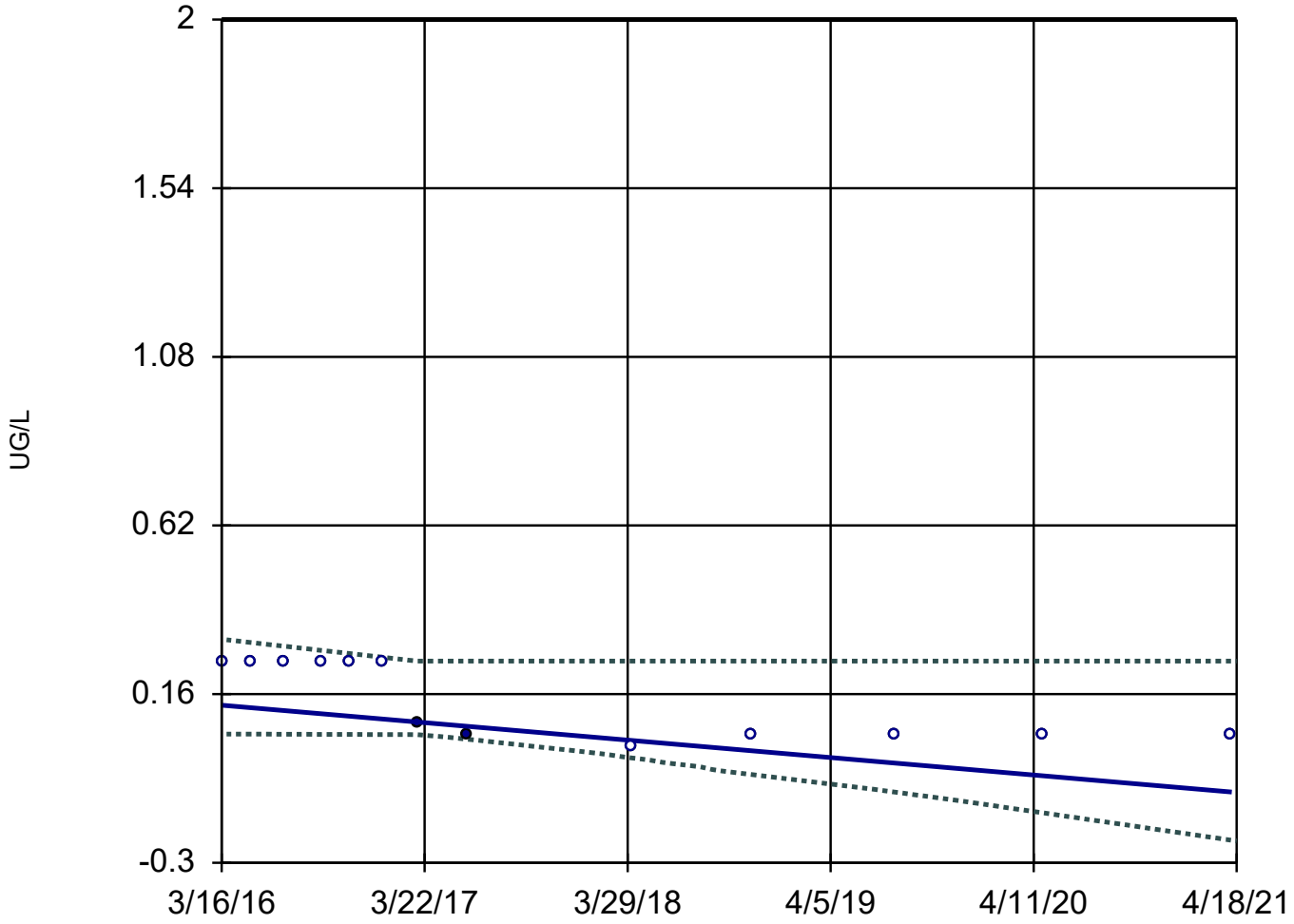
Constituent: THALLIUM, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 13

Slope = -0.04678 units per year.

Mann-Kendall statistic = -52
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 2.

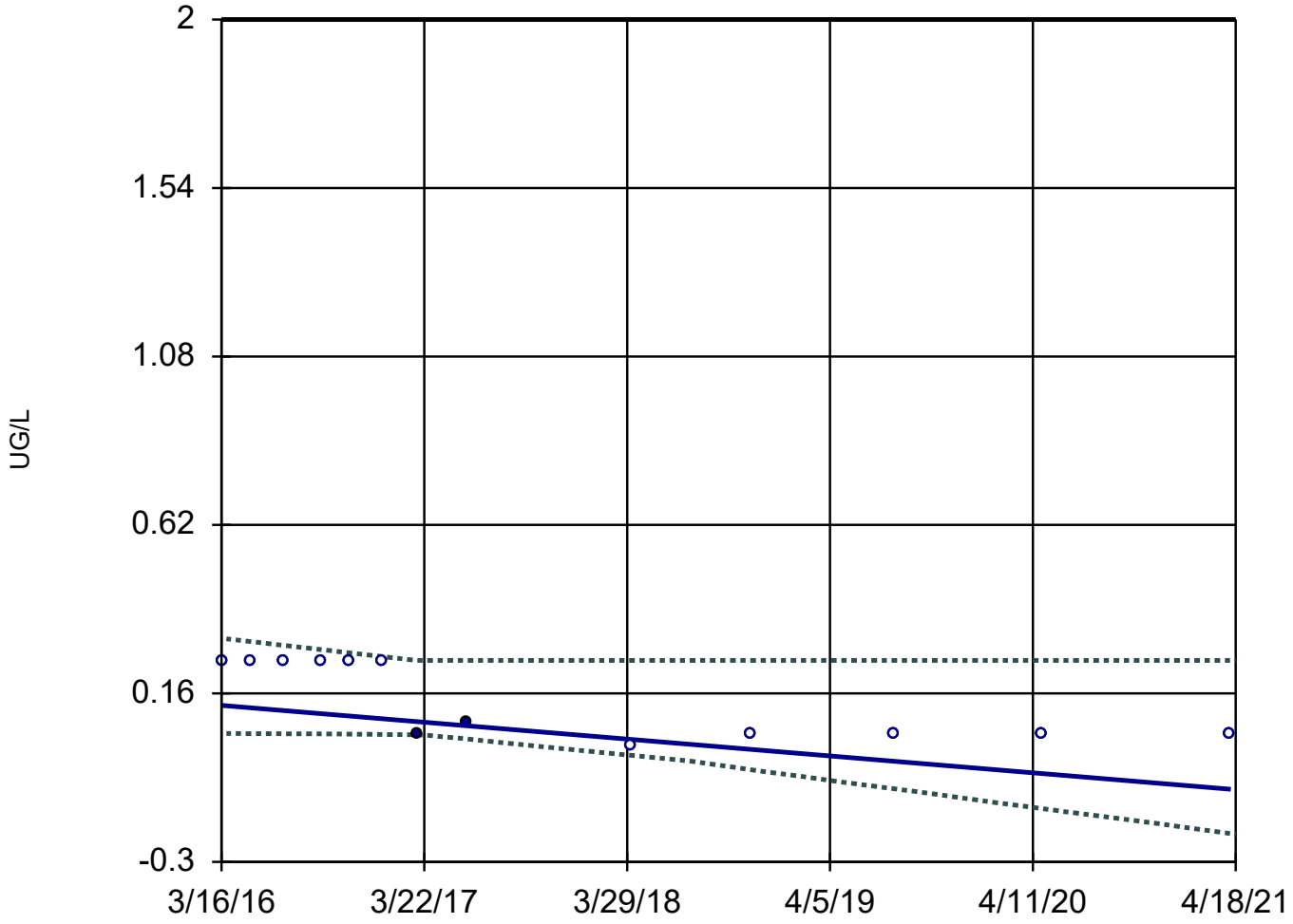
Constituent: THALLIUM, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 13

Slope = -0.04516 units per year.

Mann-Kendall statistic = -42
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

GWPS = 2.

Constituent: THALLIUM, TOTAL Analysis Run 3/2/2022 4:35 PM

Sioux E.C. Client: Ameren Data: SEC_DATA

Trend Test

Sioux E.C. Client: Ameren Data: SEC_DATA Printed 3/2/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	S-UMW-1D	-0.00428	-7	-39	No	13	38.46	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-2D	0.000...	11	39	No	13	61.54	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-3D	0.000...	8	39	No	13	76.92	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-4D	0.003567	31	39	No	13	92.31	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-5D	0.003027	23	39	No	13	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-6D	0.003028	23	39	No	13	100	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**S-UMW-1D**	**0.1962**	**97**	**58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	**S-UMW-2D**	**0.4901**	**106**	**58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	S-UMW-3D	0.01581	7	58	No	17	5.882	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	S-UMW-4D	0.01832	17	58	No	17	17.65	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	S-UMW-5D	-0.03497	-35	-58	No	17	5.882	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	S-UMW-6D	0.03544	48	58	No	17	5.882	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	S-UMW-1D	-1.877	-10	-58	No	17	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**S-UMW-2D**	**-9.597**	**-60**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	S-UMW-3D	-0.7071	-26	-58	No	17	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	S-UMW-4D	-3.963	-58	-58	No	17	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	S-UMW-5D	-1.652	-3	-58	No	17	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	S-UMW-6D	-0.6199	-14	-58	No	17	0	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-1D	0	5	44	No	14	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-2D	0	5	44	No	14	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-3D	0	10	44	No	14	92.86	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-4D	0	5	44	No	14	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-5D	0	5	44	No	14	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-6D	0	5	44	No	14	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	S-UMW-1D	0.003262	49	53	No	16	75	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	**S-UMW-2D**	**0.06439**	**70**	**53**	**Yes**	**16**	**37.5**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**S-UMW-3D**	**0.2027**	**59**	**53**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**S-UMW-4D**	**0.3955**	**66**	**53**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**S-UMW-5D**	**0.06884**	**65**	**53**	**Yes**	**16**	**43.75**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	S-UMW-6D	0.003219	49	53	No	16	75	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-1D	0	2	44	No	14	42.86	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-2D	-0.03253	-24	-44	No	14	42.86	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-3D	-0.01657	-10	-44	No	14	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-4D	-0.0293	-19	-44	No	14	57.14	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-5D	-0.03812	-18	-44	No	14	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-6D	-0.02829	-13	-44	No	14	57.14	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	**S-UMW-1D**	**0.02332**	**74**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-2D**	**0.02335**	**74**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-3D**	**0.02335**	**74**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-4D**	**0.02335**	**74**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-5D**	**0.02332**	**74**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-6D**	**0.02332**	**74**	**48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	S-UMW-1D	0	-13	-68	No	19	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**S-UMW-2D**	**-0.1669**	**-124**	**-73**	**Yes**	**20**	**5**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	S-UMW-3D	-0.06208	-59	-73	No	20	5	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**S-UMW-4D**	**-0.07231**	**-94**	**-78**	**Yes**	**21**	**4.762**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	S-UMW-5D	0.01561	31	68	No	19	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	S-UMW-6D	0.01466	58	73	No	20	0	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-1D	0.1609	36	44	No	14	85.71	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-2D	0.1647	38	44	No	14	71.43	n/a	n/a	0.02	NP

Trend Test

Sioux E.C. Client: Ameren Data: SEC_DATA Printed 3/2/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
LEAD, TOTAL (UG/L)	S-UMW-3D	0	2	44	No	14	57.14	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-4D	0.1465	15	44	No	14	50	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-5D	0	-1	-44	No	14	78.57	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-6D	0.1609	36	44	No	14	92.86	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-1D	-0.3092	-31	-58	No	17	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-2D	-0.224	-9	-63	No	18	5.556	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-3D	-0.06667	-5	-63	No	18	11.11	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-4D	-0.8924	-48	-63	No	18	5.556	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-5D	-0.5657	-23	-58	No	17	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-6D	-0.4727	-19	-58	No	17	0	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	S-UMW-1D	0.003054	31	35	No	12	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	S-UMW-2D	0.003051	31	35	No	12	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	S-UMW-3D	0.003051	31	35	No	12	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	S-UMW-4D	0.003051	31	35	No	12	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	S-UMW-5D	0.003051	31	35	No	12	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	S-UMW-6D	0.003062	31	35	No	12	100	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	S-UMW-1D	-0.8214	-16	-58	No	17	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	S-UMW-2D	-35.74	-13	-58	No	17	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-3D**	**-130**	**-61**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	S-UMW-4D	29.27	2	58	No	17	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	S-UMW-5D	205.5	34	58	No	17	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-6D**	**-8.566**	**-64**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
RADIUM [226 + 228] (PCI/L)	S-UMW-1D	0.02913	13	44	No	14	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-2D	0.02466	15	44	No	14	92.86	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-3D	0.02968	13	44	No	14	78.57	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-4D	0.0277	21	44	No	14	92.86	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-5D	0.03137	13	44	No	14	78.57	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	**S-UMW-6D**	**0.06577**	**52**	**44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
SELENIUM, TOTAL (UG/L)	S-UMW-1D	0	23	48	No	15	73.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-2D	0	6	48	No	15	73.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-3D	-0.00...	-9	-48	No	15	13.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-4D	-0.00...	-13	-48	No	15	26.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-5D	0	5	48	No	15	26.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-6D	0	-16	-48	No	15	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	**S-UMW-1D**	**-0.04981**	**-43**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
THALLIUM, TOTAL (UG/L)	**S-UMW-2D**	**-0.04516**	**-46**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
THALLIUM, TOTAL (UG/L)	**S-UMW-3D**	**-0.04678**	**-52**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
THALLIUM, TOTAL (UG/L)	**S-UMW-4D**	**-0.04516**	**-42**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
THALLIUM, TOTAL (UG/L)	S-UMW-5D	-0.04357	-33	-39	No	13	92.31	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	S-UMW-6D	-0.04357	-33	-39	No	13	100	n/a	n/a	0.02	NP

APPENDIX C

March/April 2022 Assessment Monitoring Statistical Evaluation

TECHNICAL MEMORANDUM

DATE August 3, 2022 **Project No.** 153140604

TO Bill Kutosky
Ameren Missouri

CC Susan Knowles, Craig Giesmann, Charlie Henderson

FROM Jeffrey Ingram, Sean Paulsen, Mark Haddock **EMAIL** **Jeffrey.Ingram@wsp.com**

ASSESSMENT MONITORING STATISTICAL EVALUATION SCPA SURFACE IMPOUNDMENT SIOUX ENERGY CENTER, ST. CHARLES COUNTY, MISSOURI

This Technical Memorandum provides the results of the Assessment Monitoring Statistical Evaluation for the March/April 2022 sampling event at the SCPA Surface Impoundment of the Sioux Energy Center located in St. Charles County, Missouri. Included in this 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) and no new outliers were removed prior to the calculation of confidence limits. An analysis of the outliers removed to date was completed and the statistical outliers that were previously removed are all considered outliers and remain excluded from the statistical dataset used for analysis.

No new SSLs were identified in the March/April 2022 sampling event. The SSLs reported for the March/April 2022 monitoring event are as follows:

- Molybdenum at UMW-2D, UMW-3D, UMW-4D, and UMW-5D

Golder appreciates this opportunity to provide hydrogeological and engineering support services to Ameren. If you have any questions or comments regarding the information provided, please call our office at (314) 984-8800.

Jeffrey Ingram

Senior Consultant, Geologist

Sean Paulsen

Senior Lead Consultant, Geologist

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EMS/JSI/SCP/MNH

Attachments Table 1 – SCPA Groundwater Protection Standards
Appendix A – Sanitas Confidence Intervals Statistical Output
Appendix B – Sanitas Trending Confidence Bands Statistical Output

Table 1 - SCPA Groundwater Protection Standards
SCPA Surface Impoundment
Sioux Energy Center, St. Charles County, MO

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	10	0.6933
Barium	µg/L	2000	2000	699
Beryllium	µg/L	4	4	DQR
Cadmium	µg/L	5	5	DQR
Chromium	µg/L	100	100	DQR
Cobalt	µg/L	6	6	DQR
Fluoride	mg/L	4	4	0.403
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	40	28.86
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	2.537
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Prepared by: EMS
Checked by: LMS
Reviewed by: SCP

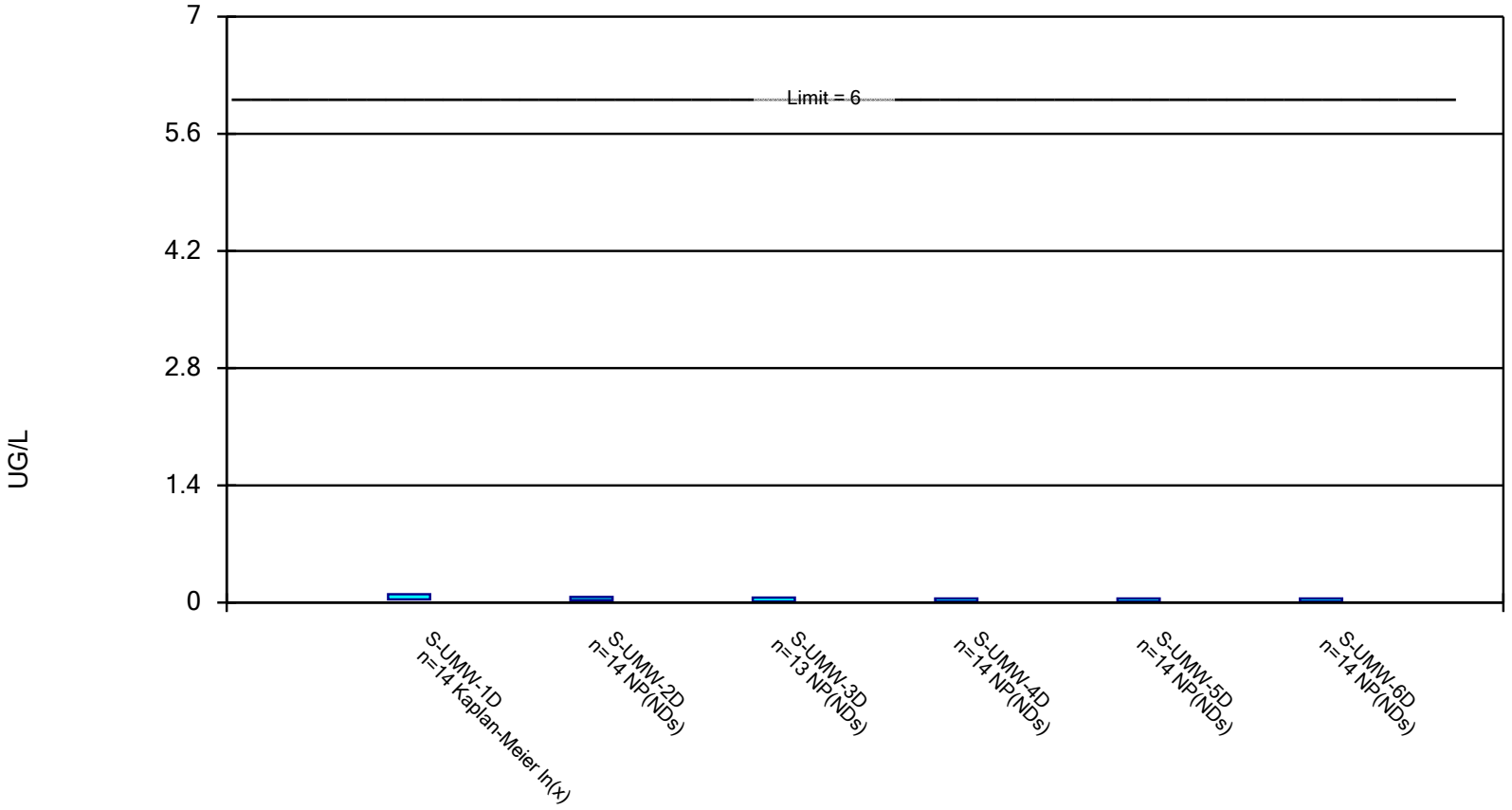
Notes:
1. µg/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.
4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) Drinking Water Standards and Health Advisories.
5. Health Based Groundwater Protection Standards (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 2021 from monitoring wells BMW-1D and BMW-3D.

APPENDIX A

Sanitas Confidence Interval Statistical Output

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 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Parametric Confidence Interval

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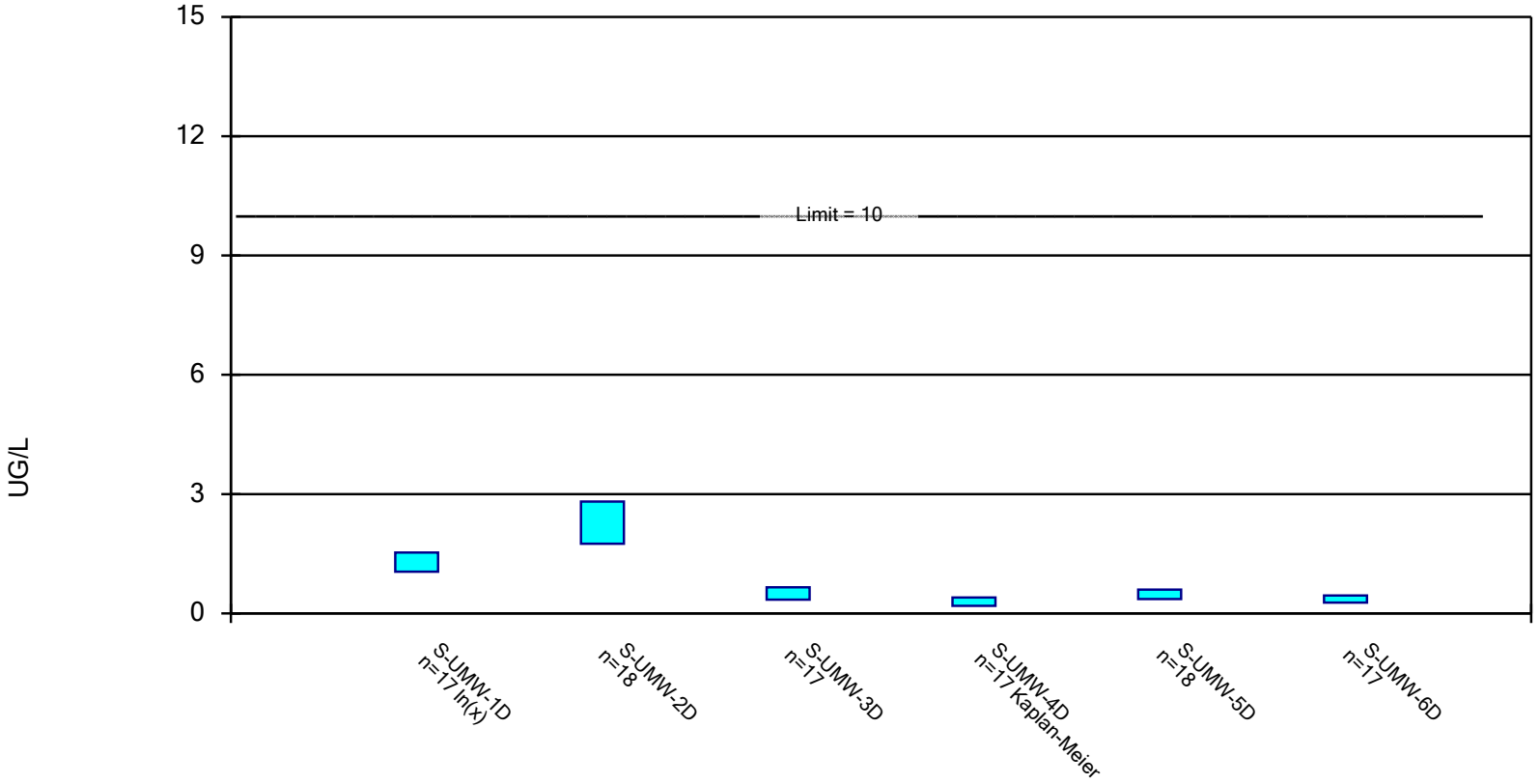

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Sioux E.C. Client: Ameren Data: SEC DATA

Parametric and Non-Parametric (NP) Confidence Interval

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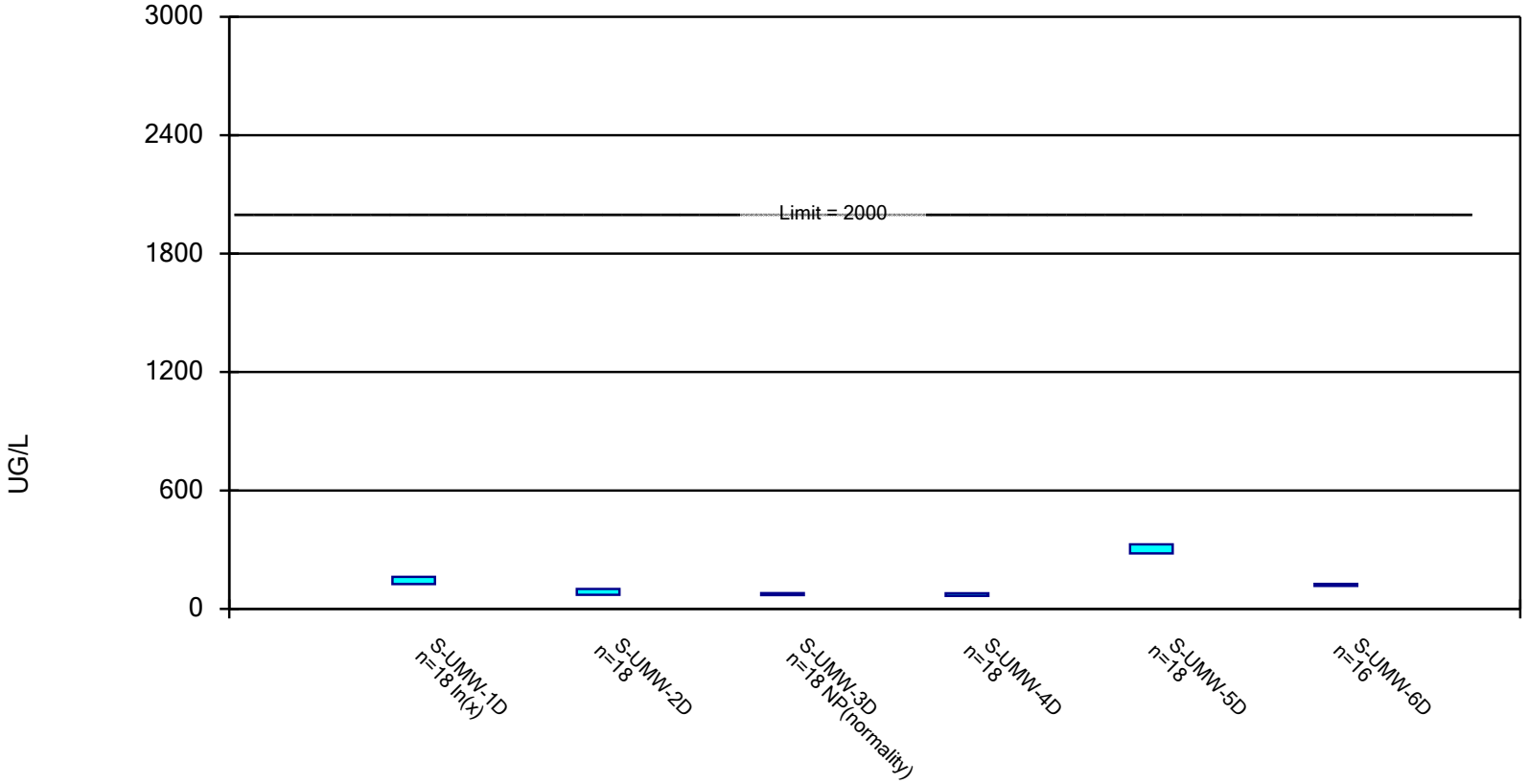

Constituent: BARIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Non-Parametric Confidence Interval

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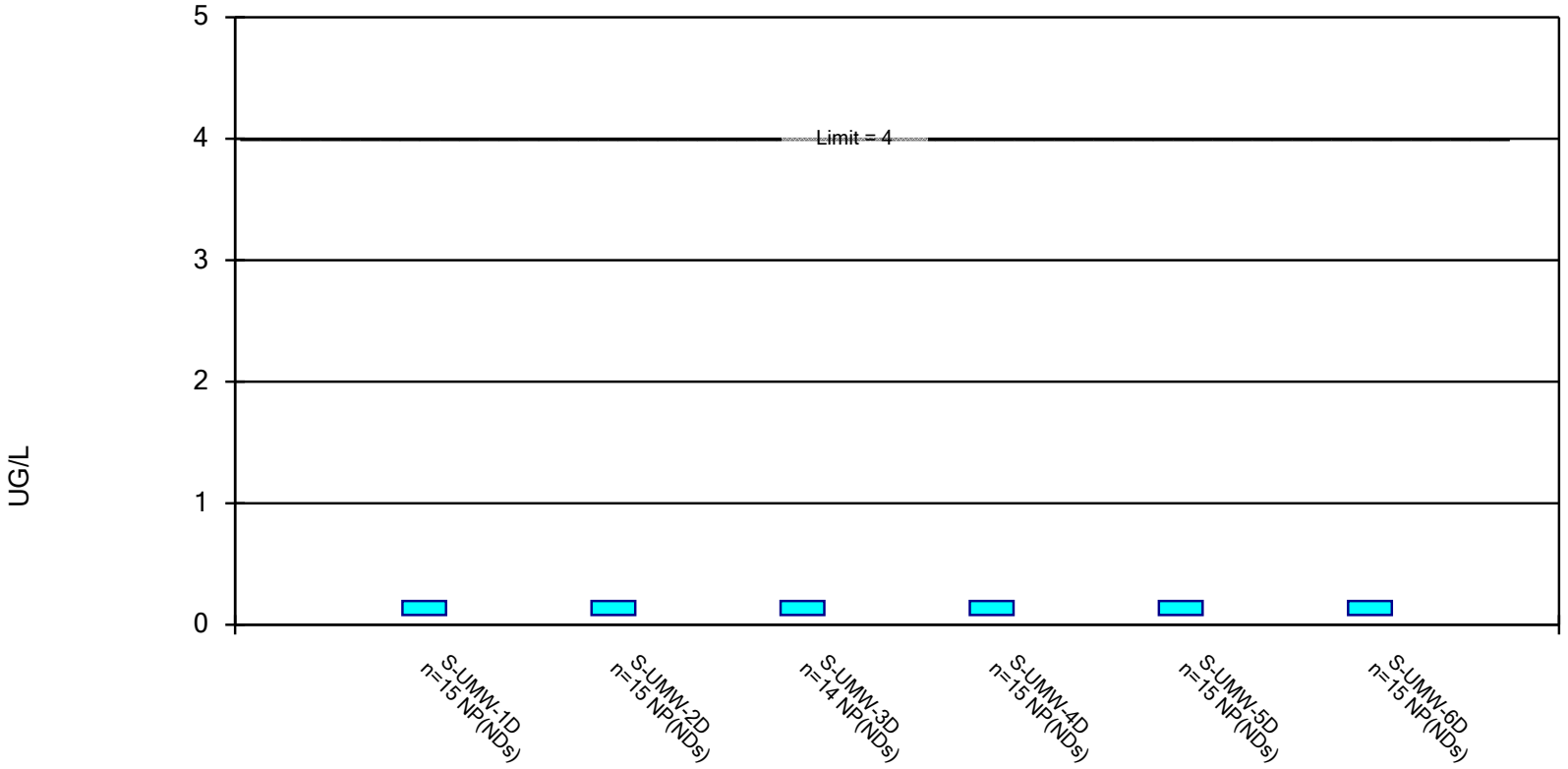
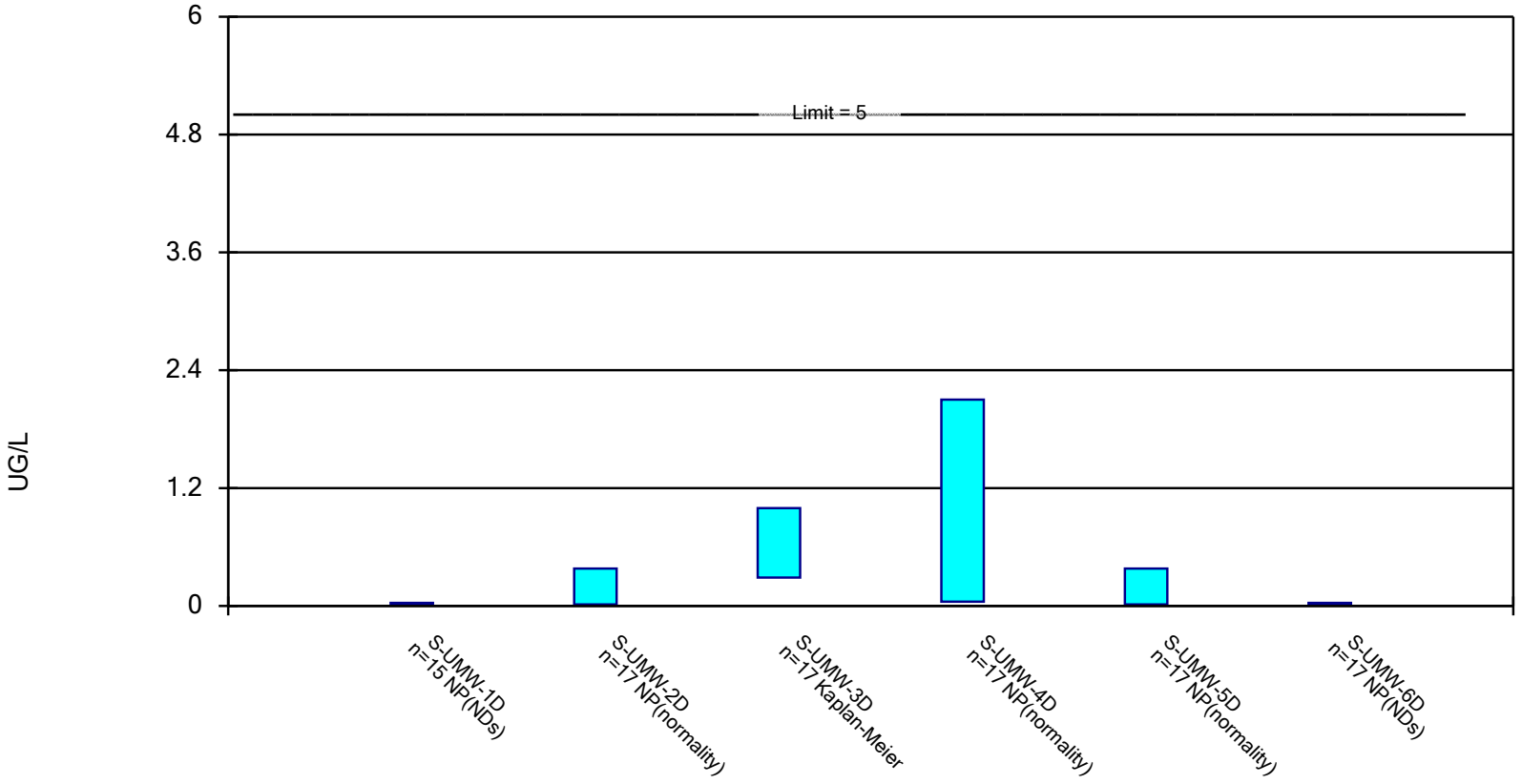


Constituent: BERYLLIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC 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: CADMIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Parametric and Non-Parametric (NP) Confidence Interval

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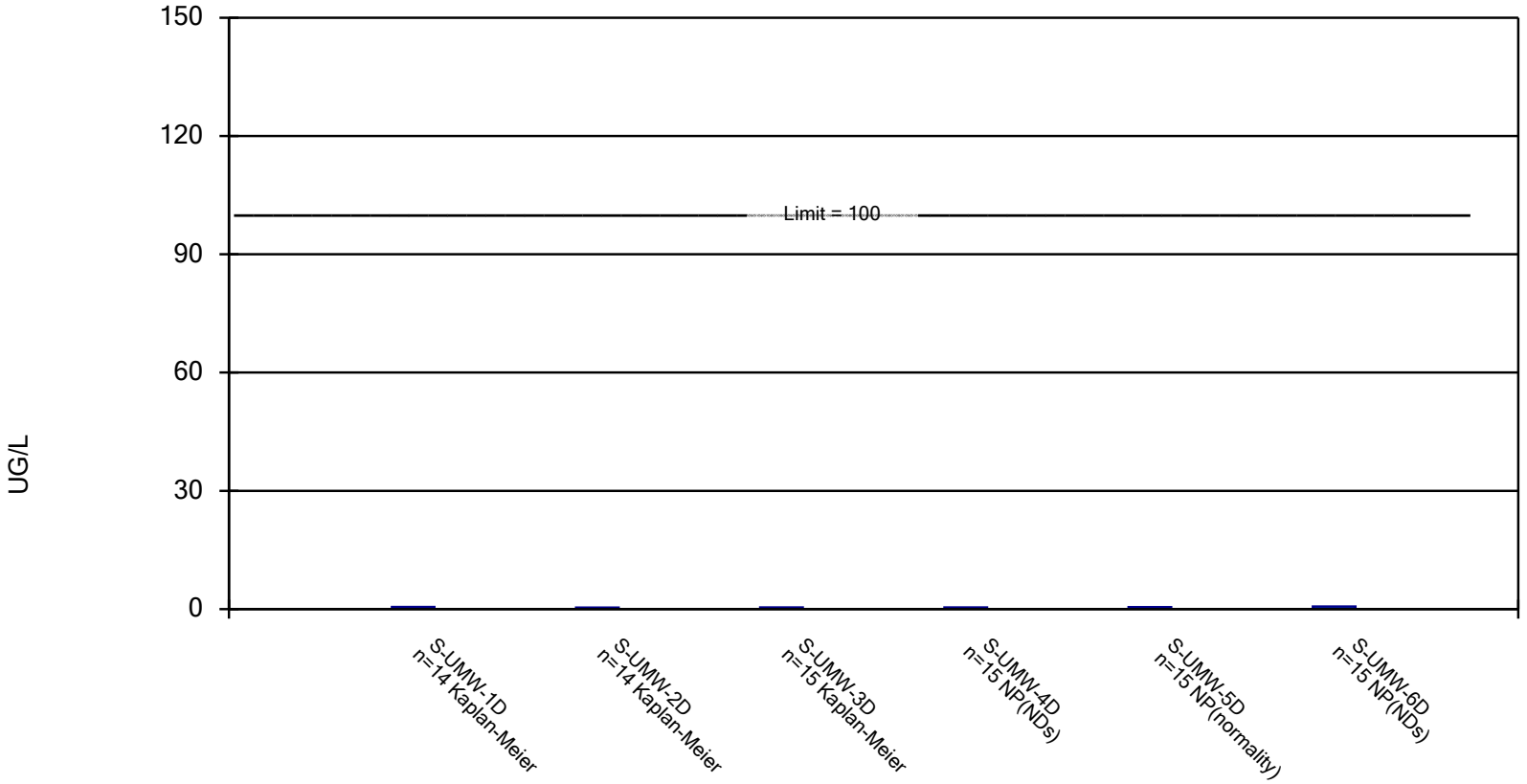

Constituent: CHROMIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Non-Parametric Confidence Interval

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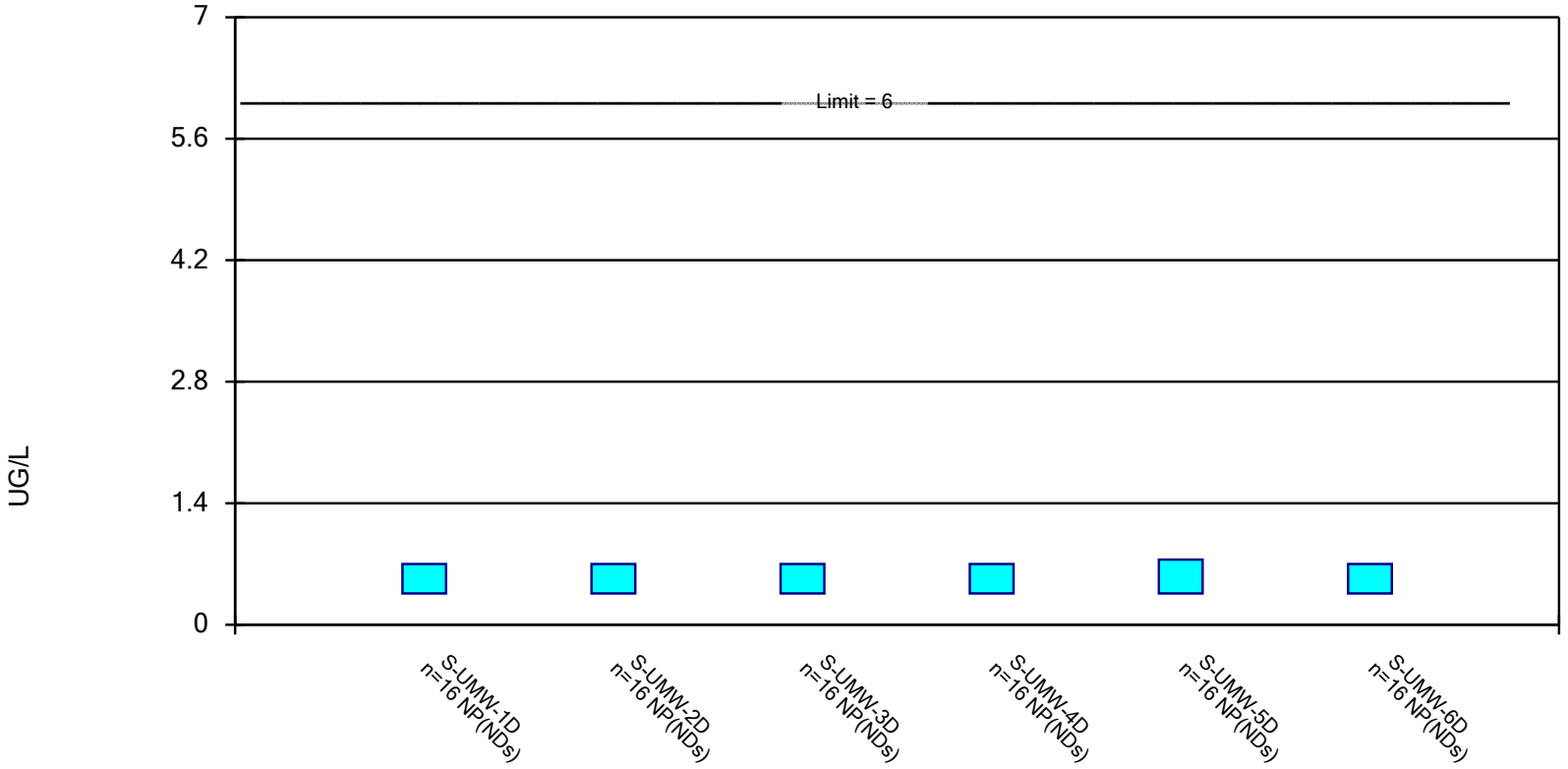

Constituent: COBALT, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Parametric and Non-Parametric (NP) Confidence Interval

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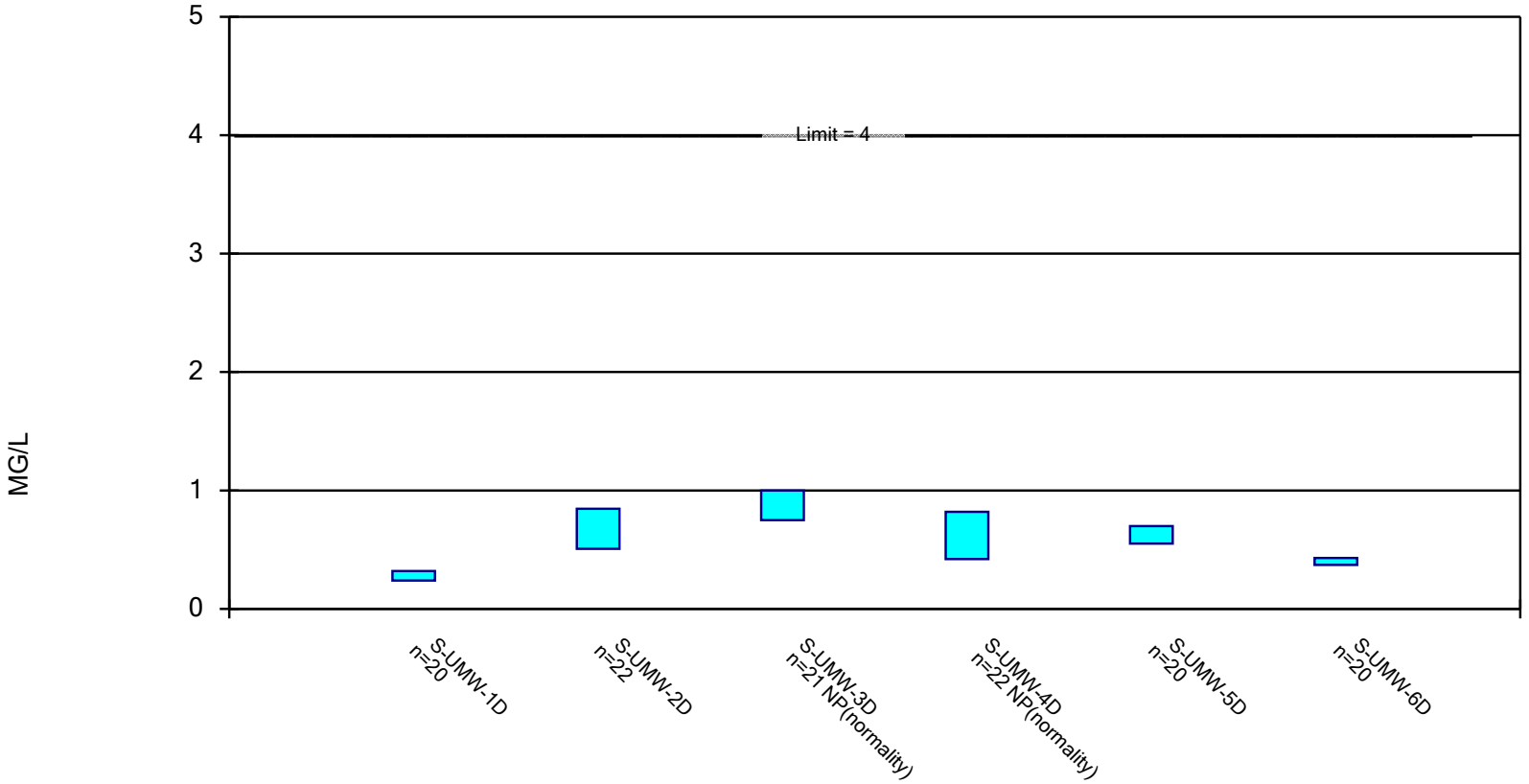

Constituent: FLUORIDE, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Non-Parametric Confidence Interval

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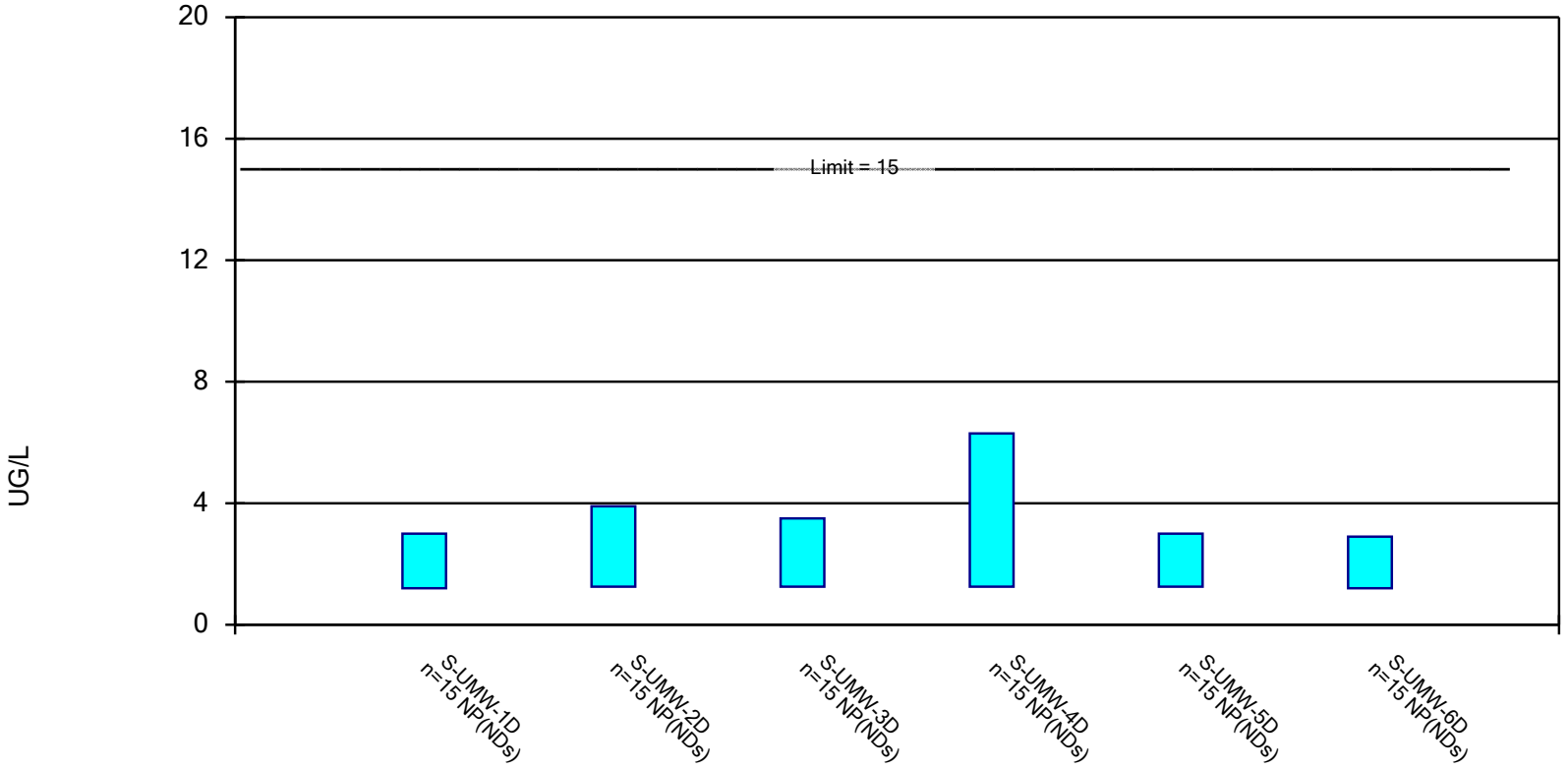

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Sioux E.C. Client: Ameren Data: SEC DATA

Parametric Confidence Interval

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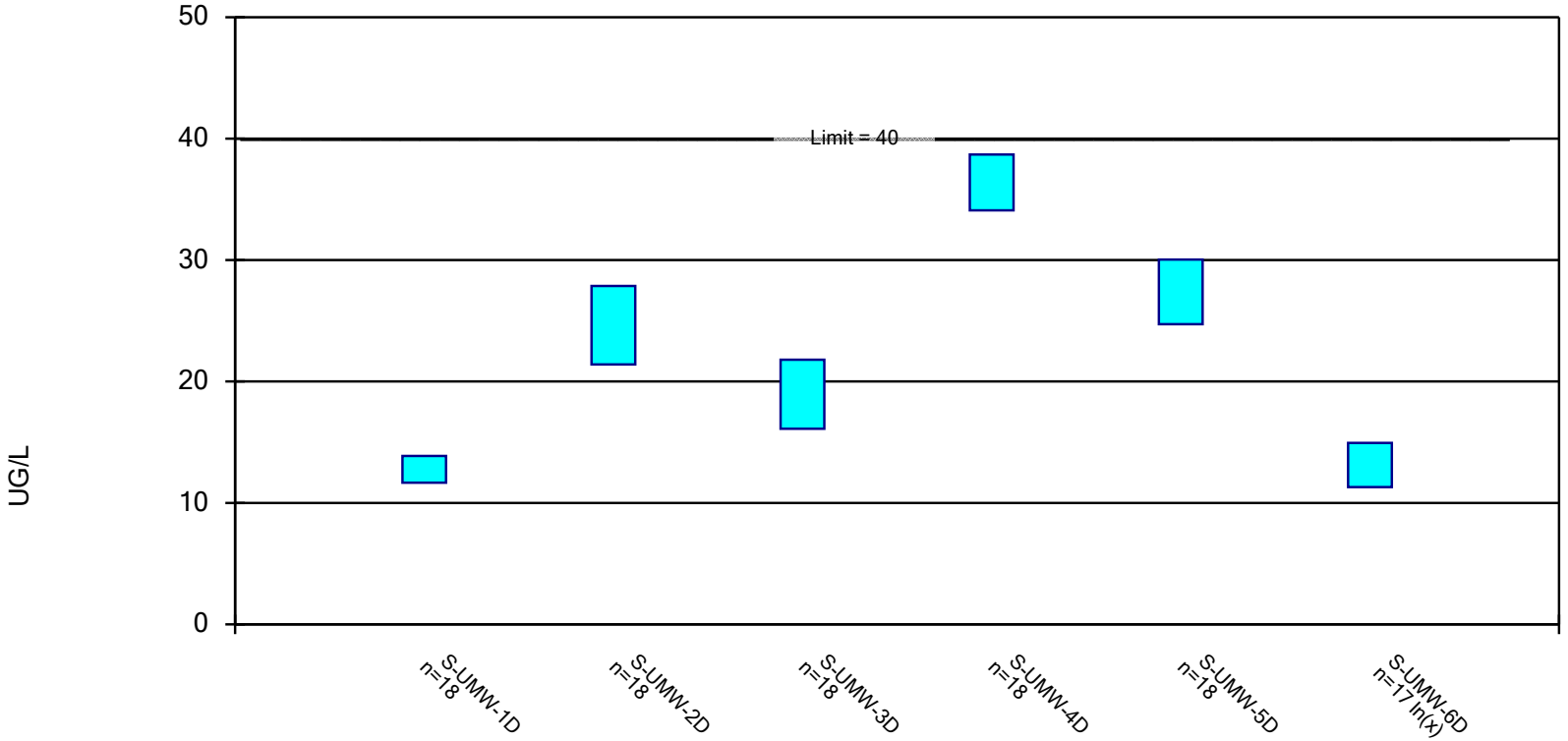
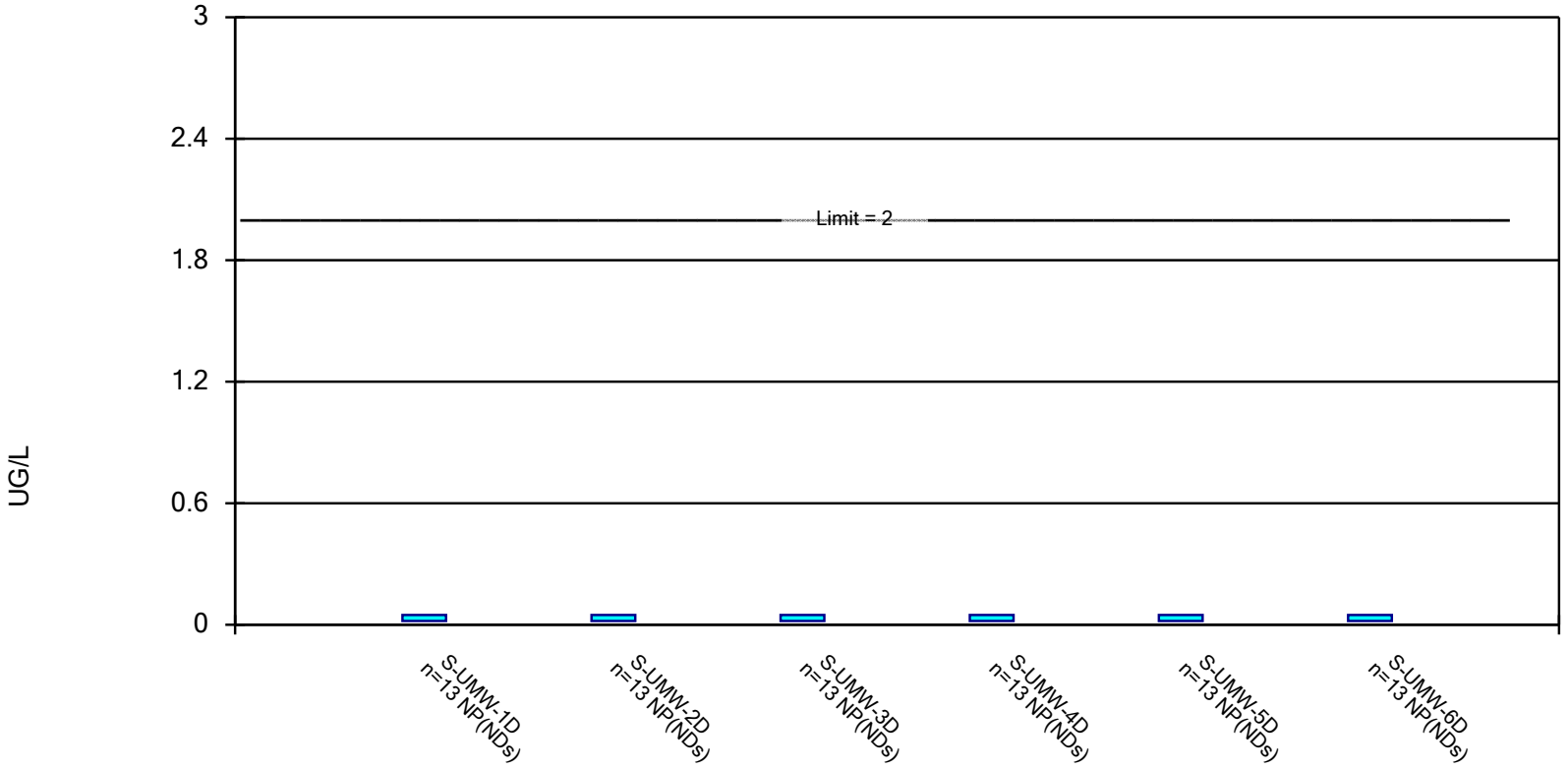


Constituent: LITHIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

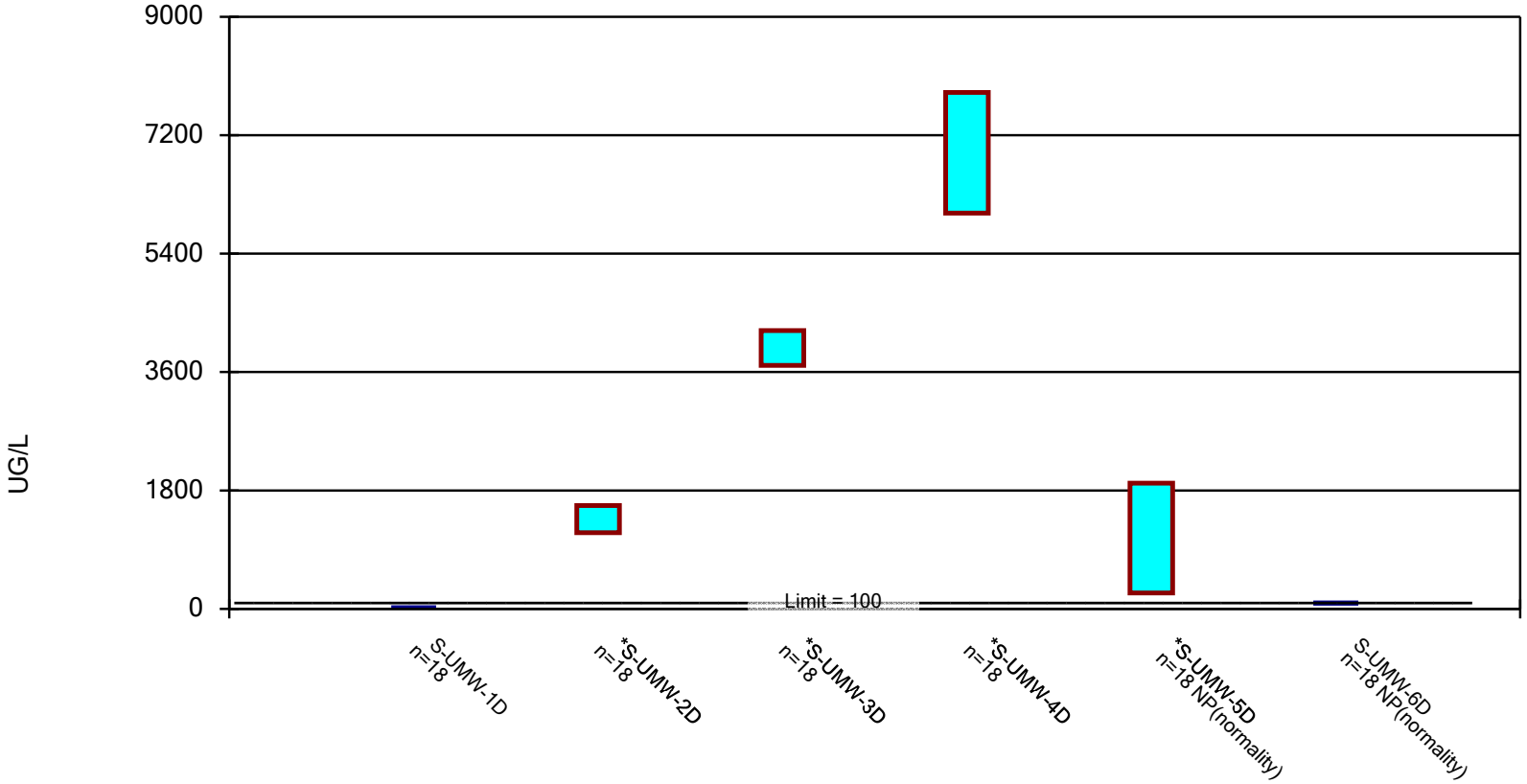


Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

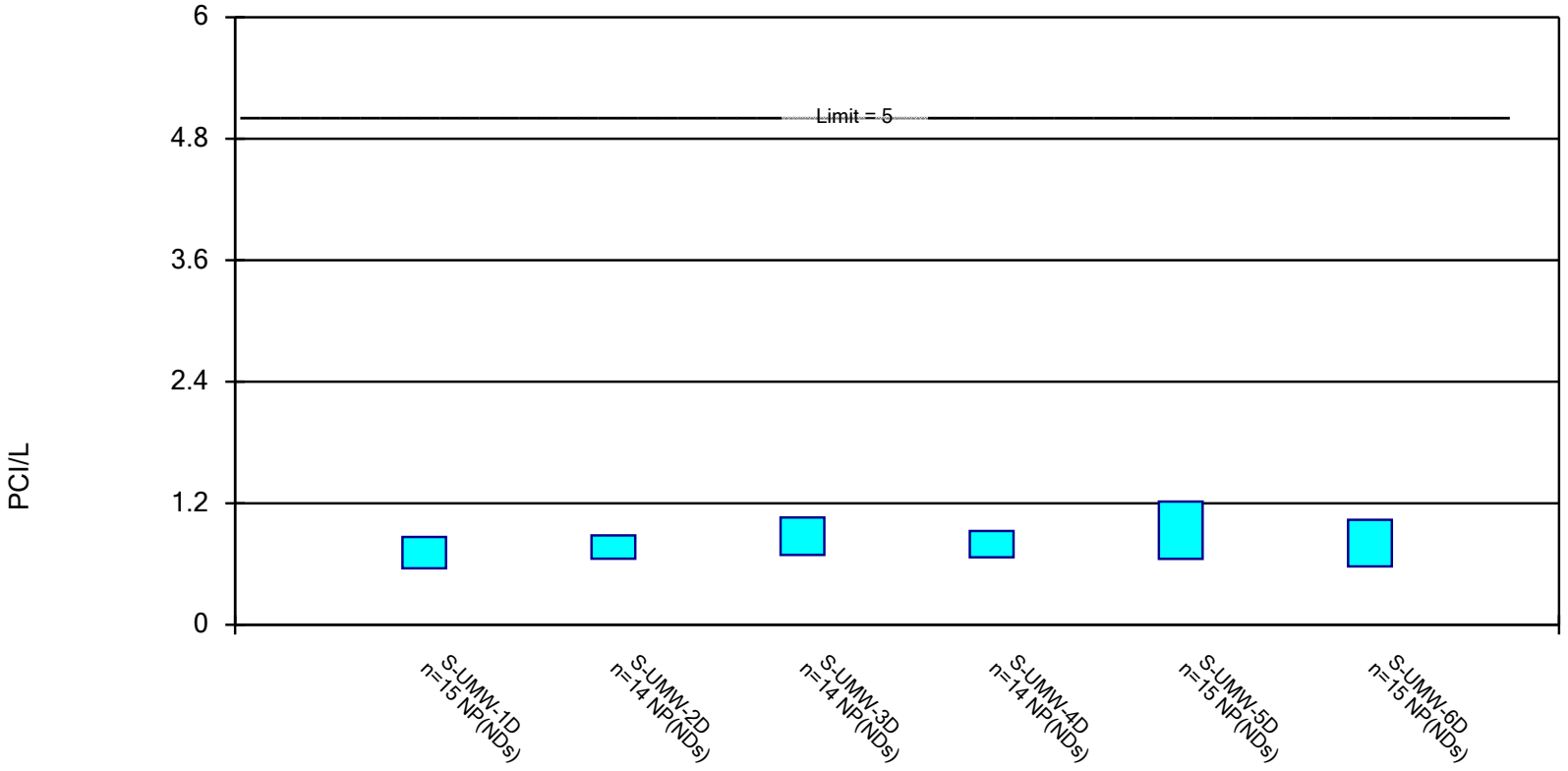


Constituent: MOLYBDENUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

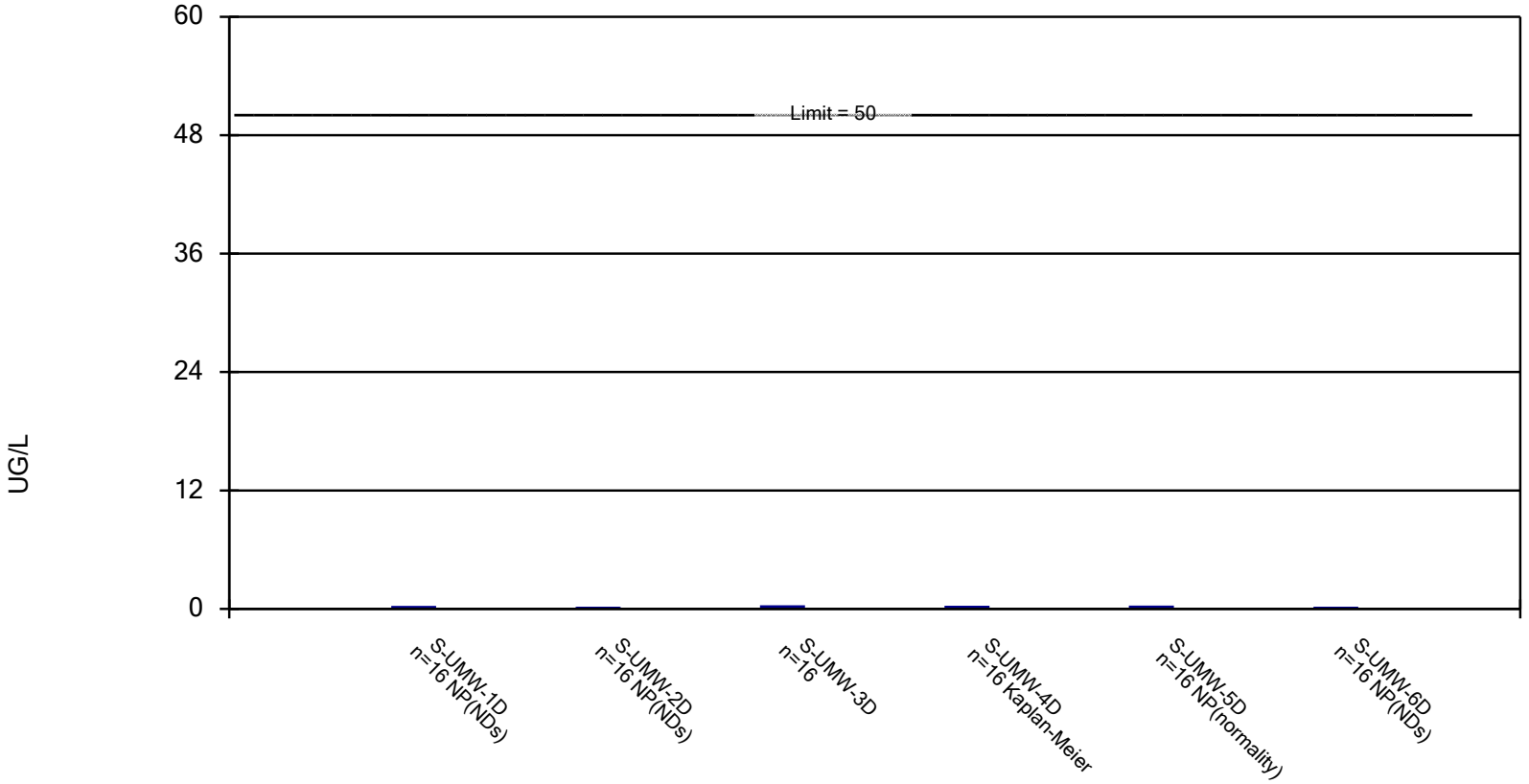


Constituent: RADIUM [226 + 228] Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC 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.

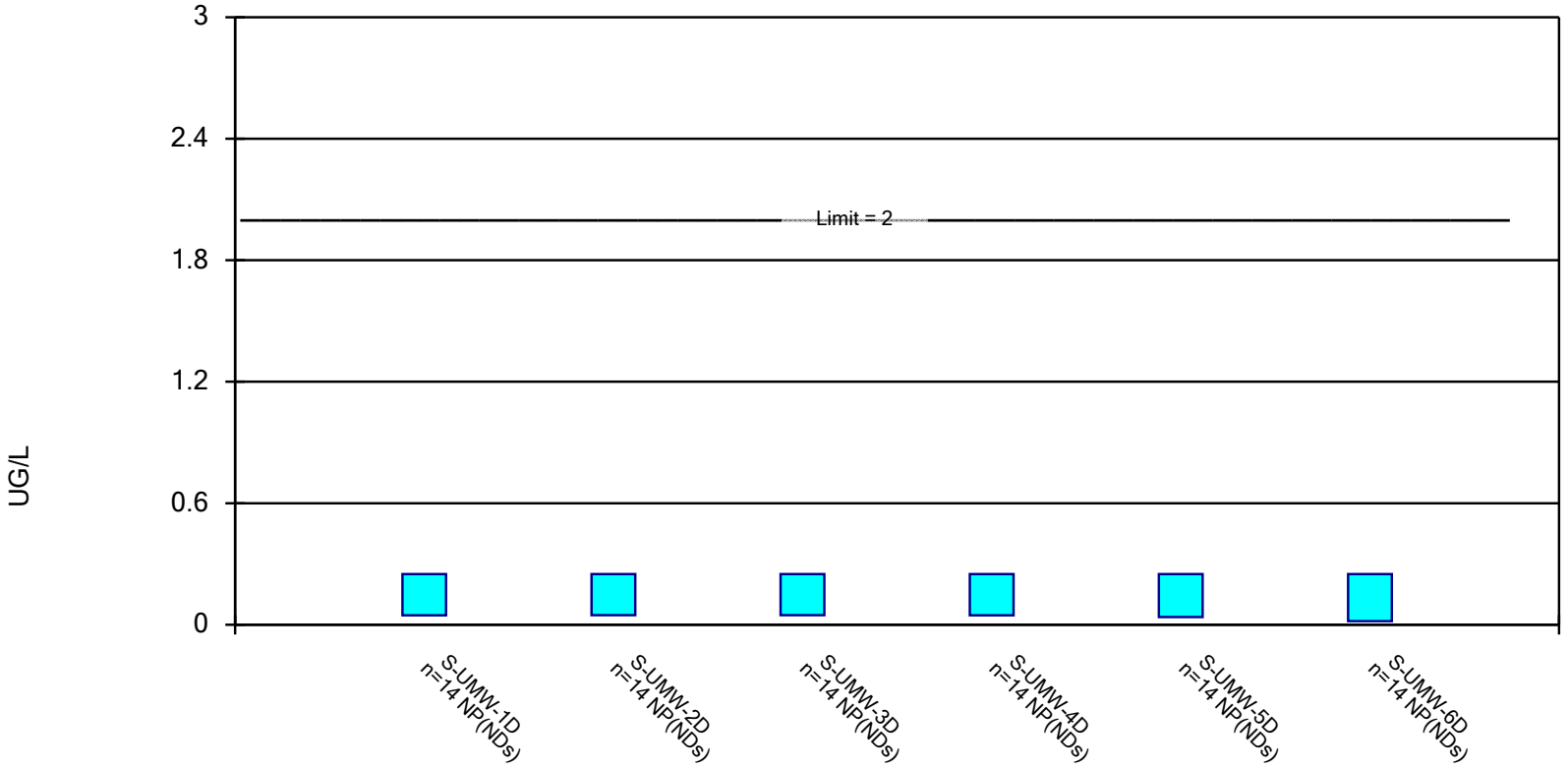


Constituent: SELENIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: THALLIUM, TOTAL Analysis Run 6/13/2022 8:29 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Confidence Interval

Sioux E.C. Client: Ameren Data: SEC DATA Printed 6/13/2022, 8:31 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	S-UMW-1D	0.09862	0.03729	6	No	14	42.86	ln(x)	0.01	Param.
ANTIMONY, TOTAL (UG/L)	S-UMW-2D	0.067	0.029	6	No	14	64.29	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-3D	0.06	0.013	6	No	13	84.62	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-4D	0.0485	0.013	6	No	14	92.86	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-5D	0.0485	0.013	6	No	14	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	S-UMW-6D	0.0485	0.013	6	No	14	100	No	0.01	NP (NDs)
ARSENIC, TOTAL (UG/L)	S-UMW-1D	1.528	1.049	10	No	17	0	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-2D	2.813	1.75	10	No	18	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-3D	0.6561	0.3458	10	No	17	5.882	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-4D	0.4006	0.1884	10	No	17	17.65	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-5D	0.5979	0.3606	10	No	18	5.556	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	S-UMW-6D	0.4488	0.2724	10	No	17	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-1D	162	125.5	2000	No	18	0	ln(x)	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-2D	101.1	71.43	2000	No	18	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-3D	79.8	70.1	2000	No	18	0	No	0.01	NP (normality)
BARIUM, TOTAL (UG/L)	S-UMW-4D	79.36	65.91	2000	No	18	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-5D	326.6	281.1	2000	No	18	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	S-UMW-6D	126.2	116.5	2000	No	16	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	S-UMW-1D	0.195	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-2D	0.195	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-3D	0.195	0.08	4	No	14	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-4D	0.195	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-5D	0.195	0.08	4	No	15	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	S-UMW-6D	0.195	0.08	4	No	15	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	S-UMW-1D	0.031	0.009	5	No	15	86.67	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	S-UMW-2D	0.38	0.0145	5	No	17	35.29	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	S-UMW-3D	0.9963	0.2886	5	No	17	23.53	No	0.01	Param.
CADMIUM, TOTAL (UG/L)	S-UMW-4D	2.1	0.0435	5	No	17	23.53	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	S-UMW-5D	0.38	0.0145	5	No	17	41.18	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	S-UMW-6D	0.031	0.0145	5	No	17	76.47	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	S-UMW-1D	0.537	0.1291	100	No	14	42.86	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	S-UMW-2D	0.363	0.08889	100	No	14	50	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	S-UMW-3D	0.4177	0.1283	100	No	15	46.67	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	S-UMW-4D	0.4	0.039	100	No	15	53.33	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	S-UMW-5D	0.5	0.027	100	No	15	46.67	No	0.01	NP (normality)
CHROMIUM, TOTAL (UG/L)	S-UMW-6D	0.67	0.039	100	No	15	53.33	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-1D	0.7	0.36	6	No	16	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-2D	0.7	0.36	6	No	16	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-3D	0.7	0.36	6	No	16	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-4D	0.7	0.36	6	No	16	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-5D	0.75	0.36	6	No	16	93.75	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	S-UMW-6D	0.7	0.36	6	No	16	100	No	0.01	NP (NDs)
FLUORIDE, TOTAL (MG/L)	S-UMW-1D	0.3201	0.2389	4	No	20	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	S-UMW-2D	0.8455	0.5075	4	No	22	4.545	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	S-UMW-3D	1	0.75	4	No	21	4.762	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	S-UMW-4D	0.82	0.42	4	No	22	9.091	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	S-UMW-5D	0.6985	0.5515	4	No	20	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	S-UMW-6D	0.4293	0.3717	4	No	20	0	No	0.01	Param.
LEAD, TOTAL (UG/L)	S-UMW-1D	3	1.2	15	No	15	86.67	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-2D	3.9	1.25	15	No	15	73.33	No	0.01	NP (NDs)

Confidence Interval

Sioux E.C. Client: Ameren Data: SEC DATA Printed 6/13/2022, 8:31 AM

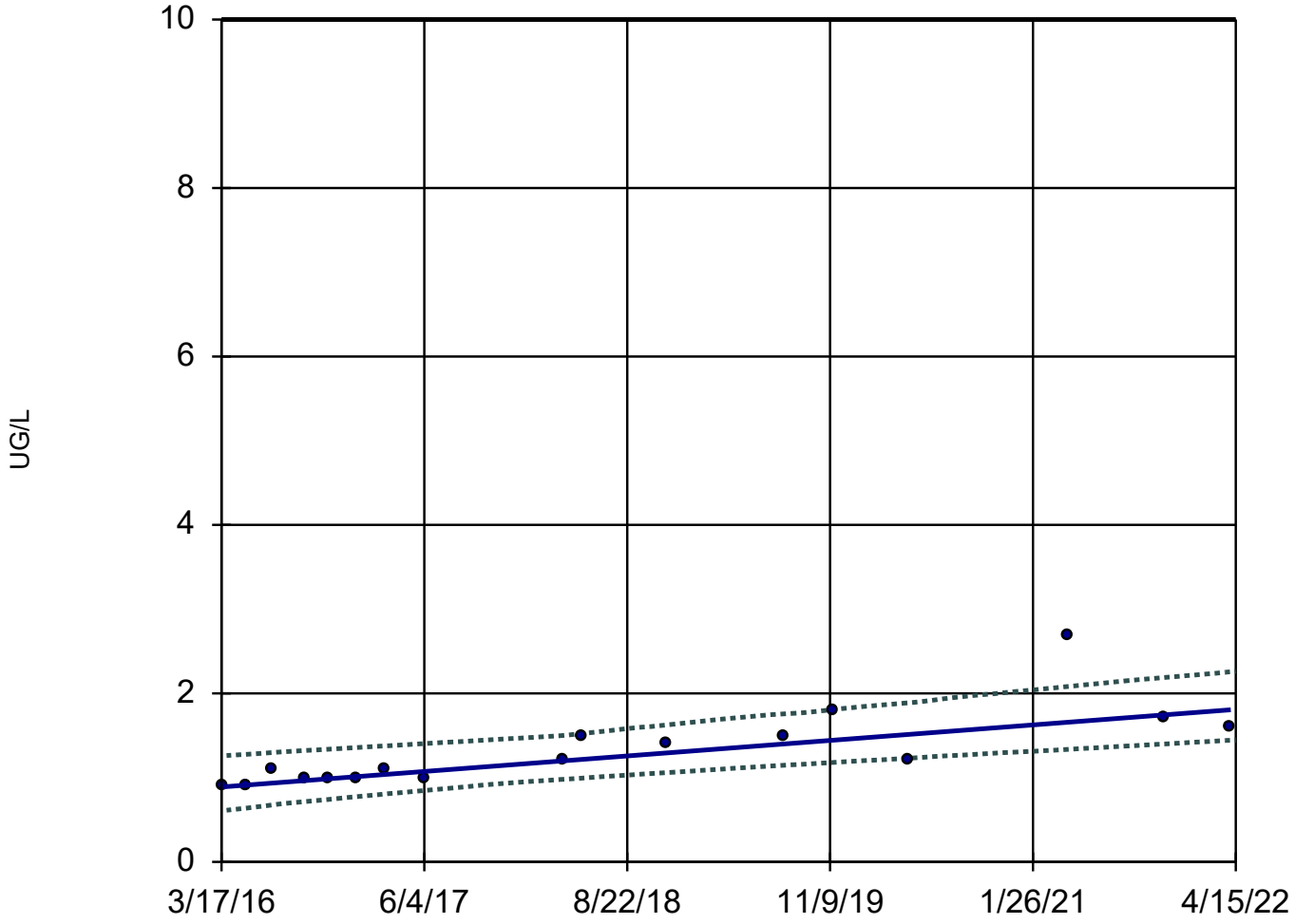
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
LEAD, TOTAL (UG/L)	S-UMW-3D	3.5	1.25	15	No	15	60	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-4D	6.3	1.25	15	No	15	53.33	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-5D	3	1.25	15	No	15	80	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	S-UMW-6D	2.9	1.2	15	No	15	93.33	No	0.01	NP (NDs)
LITHIUM, TOTAL (UG/L)	S-UMW-1D	13.86	11.66	40	No	18	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-2D	27.86	21.41	40	No	18	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-3D	21.79	16.11	40	No	18	5.556	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-4D	38.7	34.09	40	No	18	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-5D	30.04	24.72	40	No	18	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	S-UMW-6D	14.94	11.3	40	No	17	0	ln(x)	0.01	Param.
MERCURY, TOTAL (UG/L)	S-UMW-1D	0.048	0.0185	2	No	13	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-2D	0.048	0.0185	2	No	13	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-3D	0.048	0.0185	2	No	13	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-4D	0.048	0.0185	2	No	13	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-5D	0.048	0.0185	2	No	13	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	S-UMW-6D	0.048	0.0185	2	No	13	100	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	S-UMW-1D	37.3	27.78	100	No	18	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-2D**	**1571**	**1159**	**100**	**Yes**	**18**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-3D**	**4230**	**3701**	**100**	**Yes**	**18**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-4D**	**7850**	**6015**	**100**	**Yes**	**18**	**0**	**No**	**0.01**	**Param.**
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-5D**	**1910**	**242**	**100**	**Yes**	**18**	**0**	**No**	**0.01**	**NP (normality)**
MOLYBDENUM, TOTAL (UG/L)	S-UMW-6D	110	66.1	100	No	18	0	No	0.01	NP (normality)
RADIUM [226 + 228] (PCI/L)	S-UMW-1D	0.8665	0.557	5	No	15	100	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-2D	0.8825	0.652	5	No	14	100	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-3D	1.059	0.689	5	No	14	85.71	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-4D	0.9255	0.667	5	No	14	100	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-5D	1.216	0.6505	5	No	15	80	No	0.01	NP (NDs)
RADIUM [226 + 228] (PCI/L)	S-UMW-6D	1.036	0.576	5	No	15	93.33	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	S-UMW-1D	0.19	0.043	50	No	16	75	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	S-UMW-2D	0.096	0.043	50	No	16	75	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	S-UMW-3D	0.2518	0.1657	50	No	16	12.5	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	S-UMW-4D	0.2026	0.1442	50	No	16	25	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	S-UMW-5D	0.22	0.09	50	No	16	25	No	0.01	NP (normality)
SELENIUM, TOTAL (UG/L)	S-UMW-6D	0.09	0.043	50	No	16	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-1D	0.25	0.0465	2	No	14	92.86	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-2D	0.25	0.047	2	No	14	85.71	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-3D	0.25	0.047	2	No	14	85.71	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-4D	0.25	0.0465	2	No	14	85.71	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-5D	0.25	0.038	2	No	14	92.86	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	S-UMW-6D	0.25	0.018	2	No	14	100	No	0.01	NP (NDs)

APPENDIX B

Sanitas Trending Confidence Bands Statistical Output

Sen's Slope and 95% Confidence Band

S-UMW-1D



n = 17

Slope = 0.1515 units per year.

Mann-Kendall statistic = 95
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

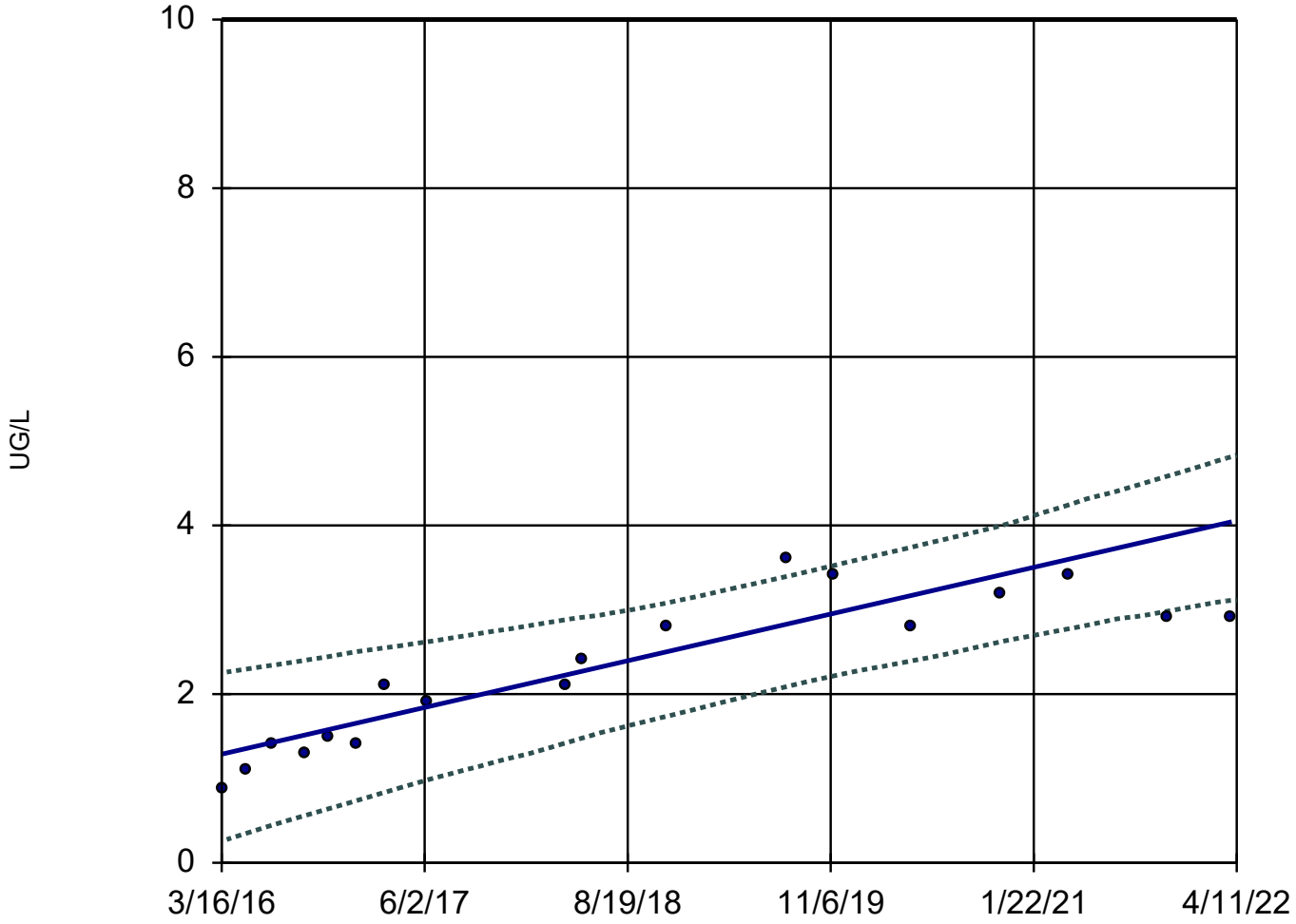
Confidence band is below GWPS (10).

Constituent: ARSENIC, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 18

Slope = 0.456 units per year.

Mann-Kendall statistic = 114
critical = 63

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

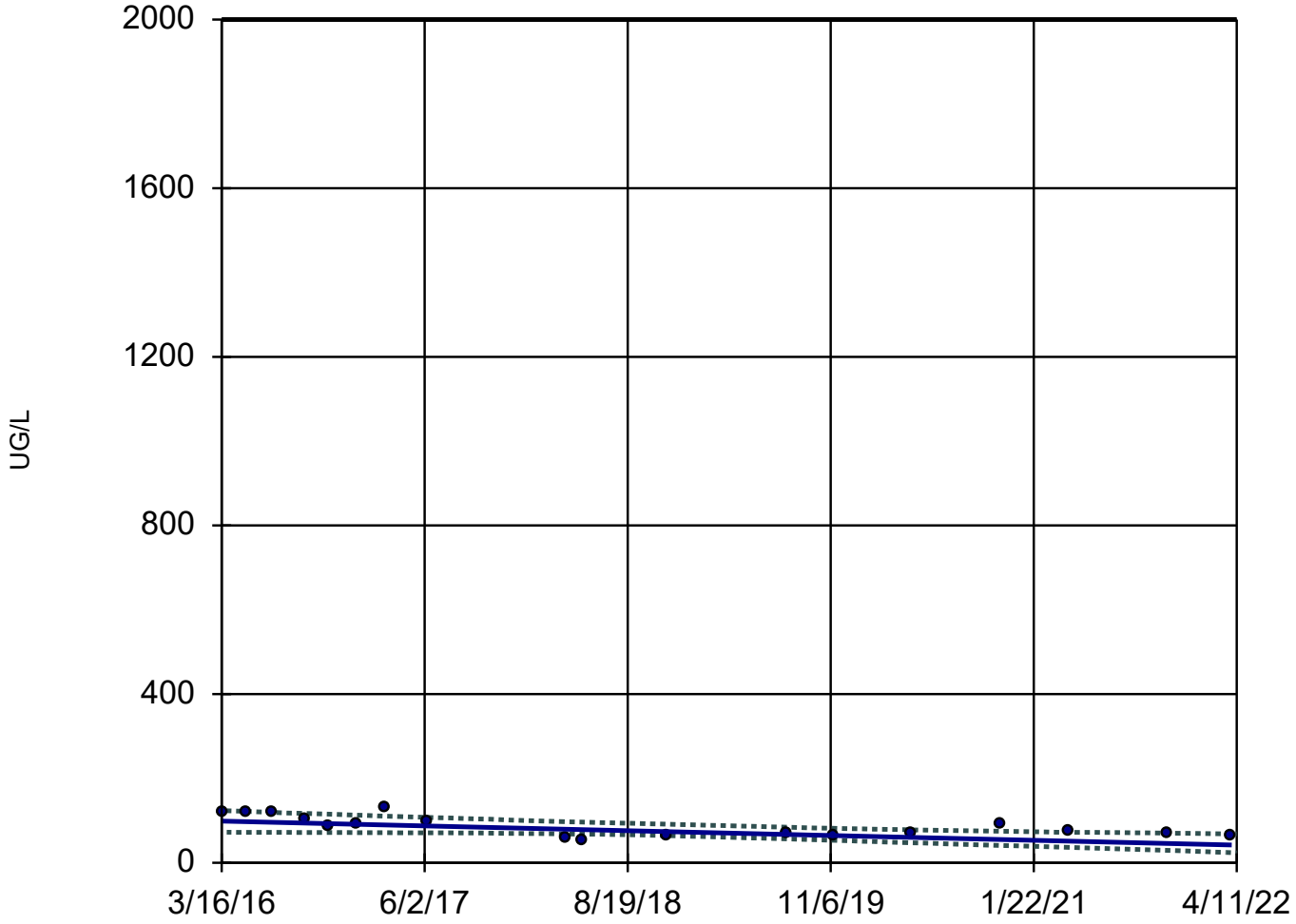
Confidence band is below GWPS (10).

Constituent: ARSENIC, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 18

Slope = -9.365 units per year.

Mann-Kendall statistic = -73 critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

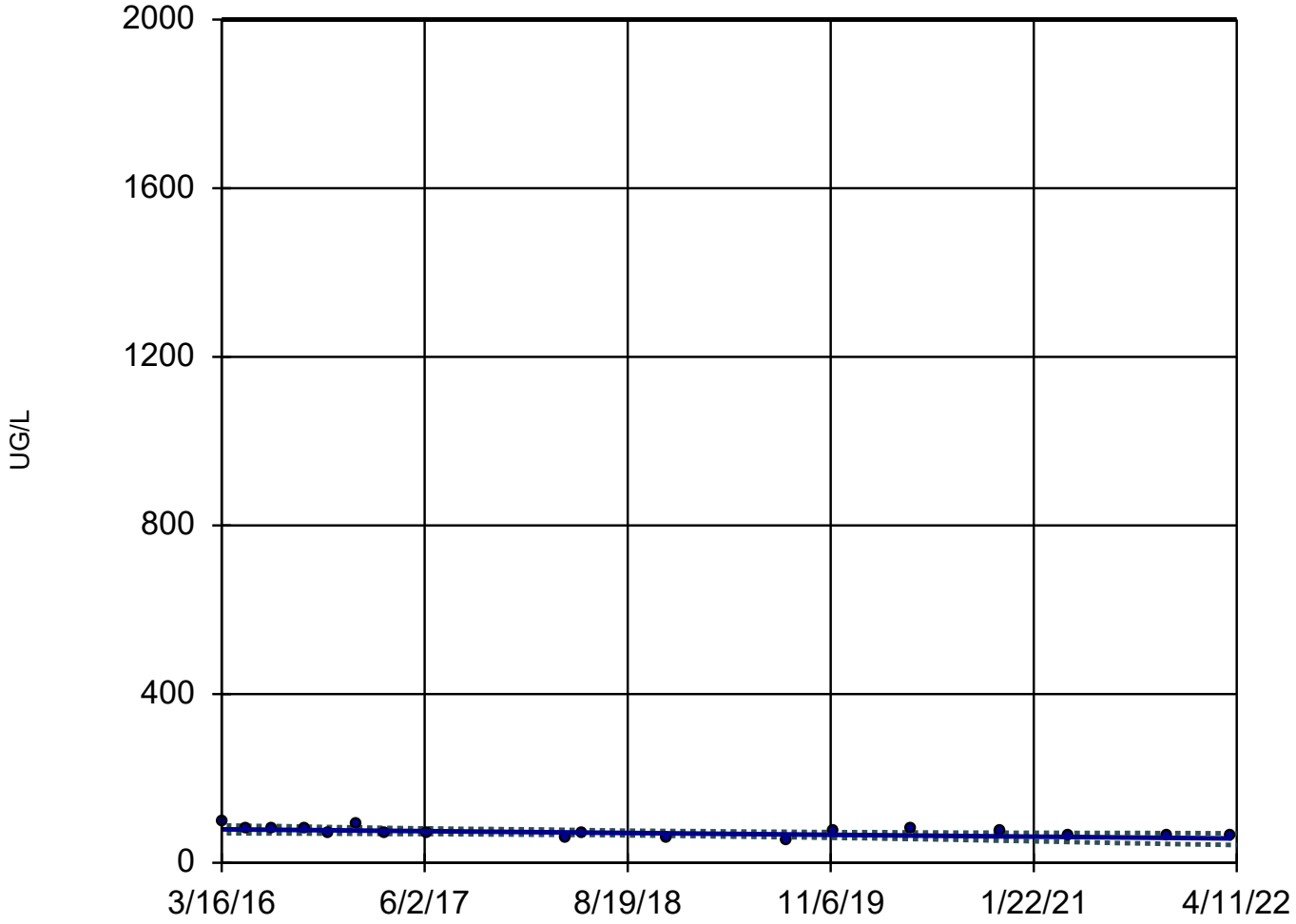
Confidence band is below GWPS (2000).

Constituent: BARIUM, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 18

Slope = -3.549 units per year.

Mann-Kendall statistic = -69
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2000).

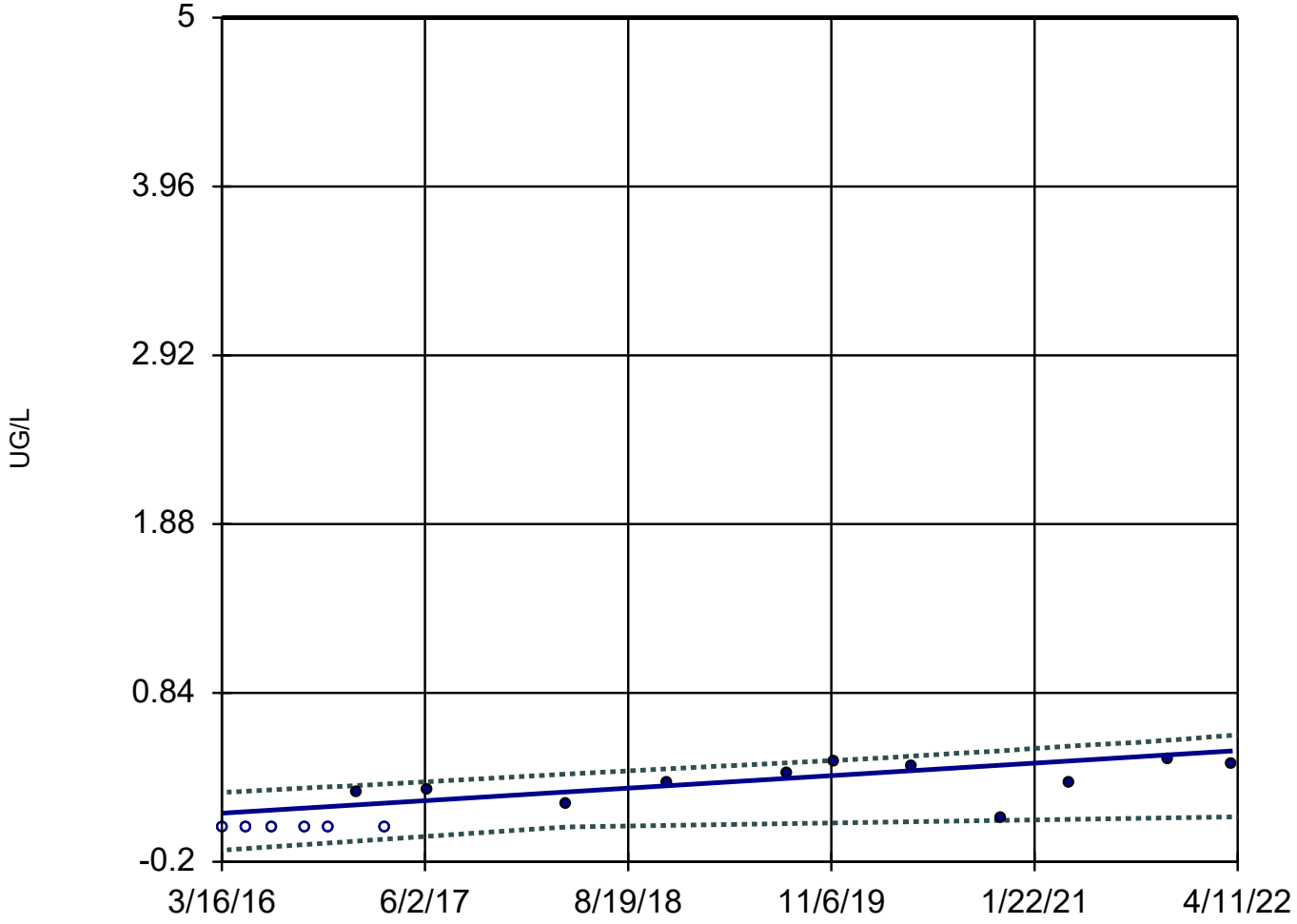
Constituent: BARIUM, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 17

Slope = 0.06336 units per year.

Mann-Kendall statistic = 82
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

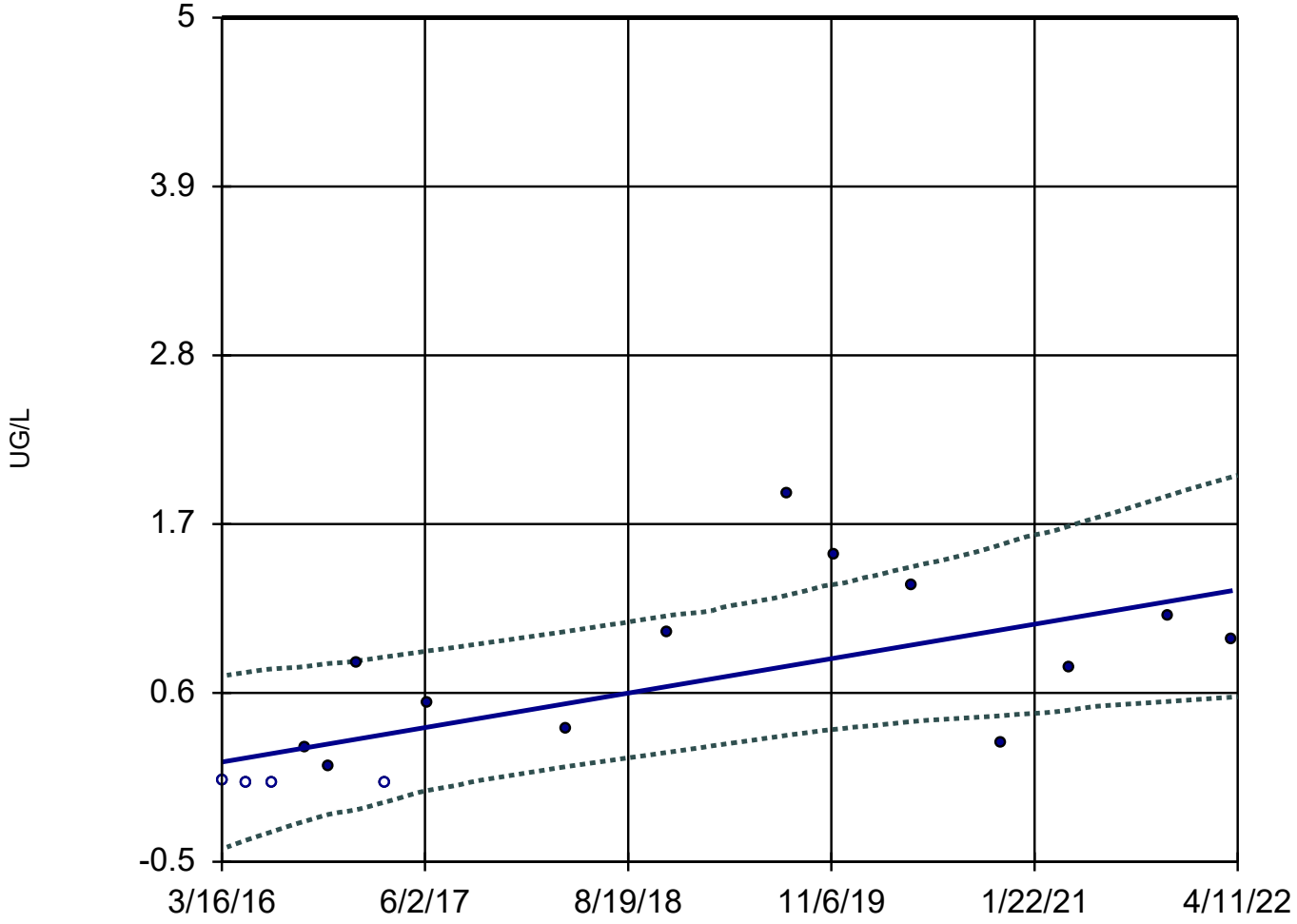
Constituent: CADMIUM, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 17

Slope = 0.1848 units per year.

Mann-Kendall statistic = 65
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

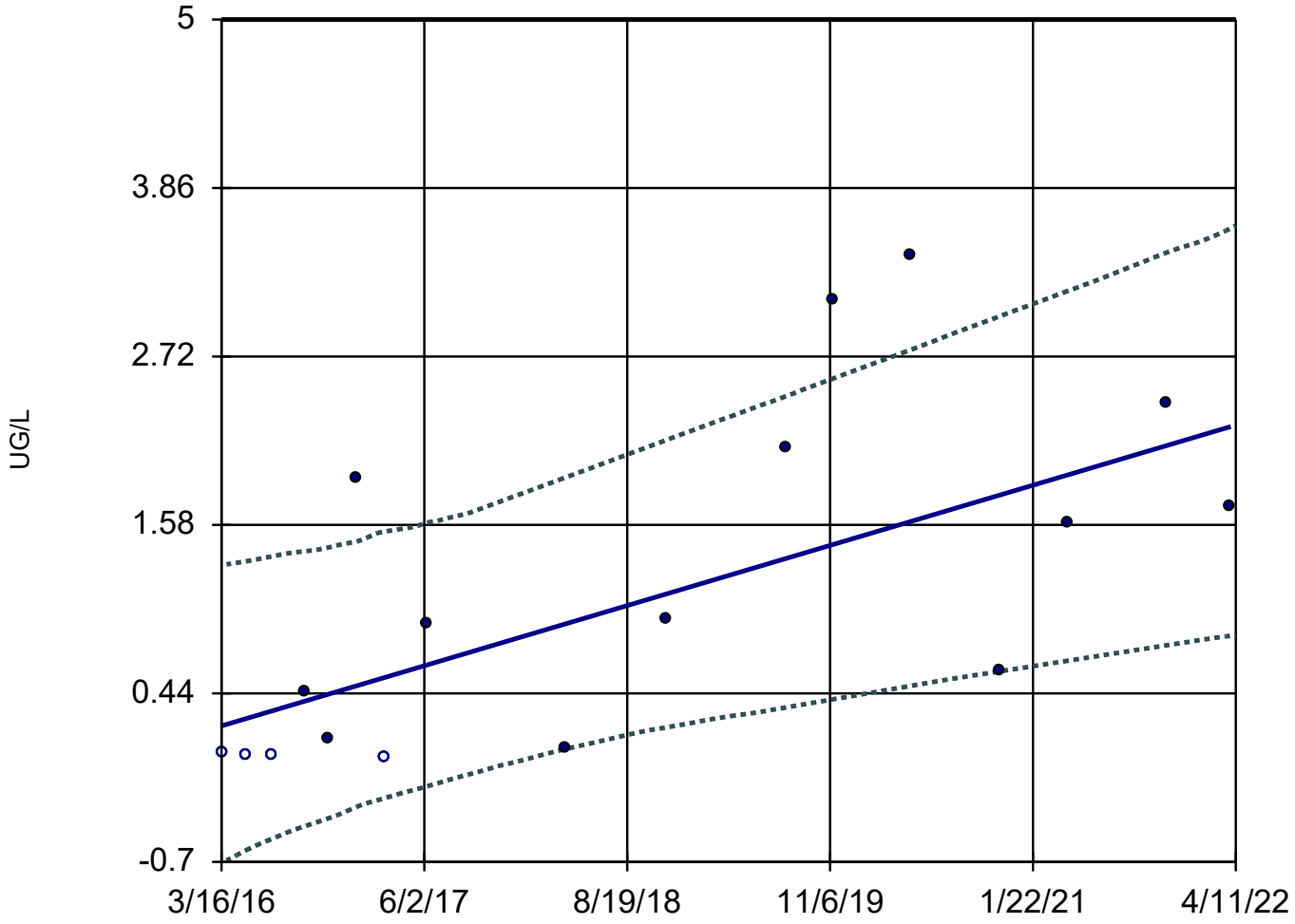
Constituent: CADMIUM, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 17

Slope = 0.3351 units per year.

Mann-Kendall statistic = 72
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

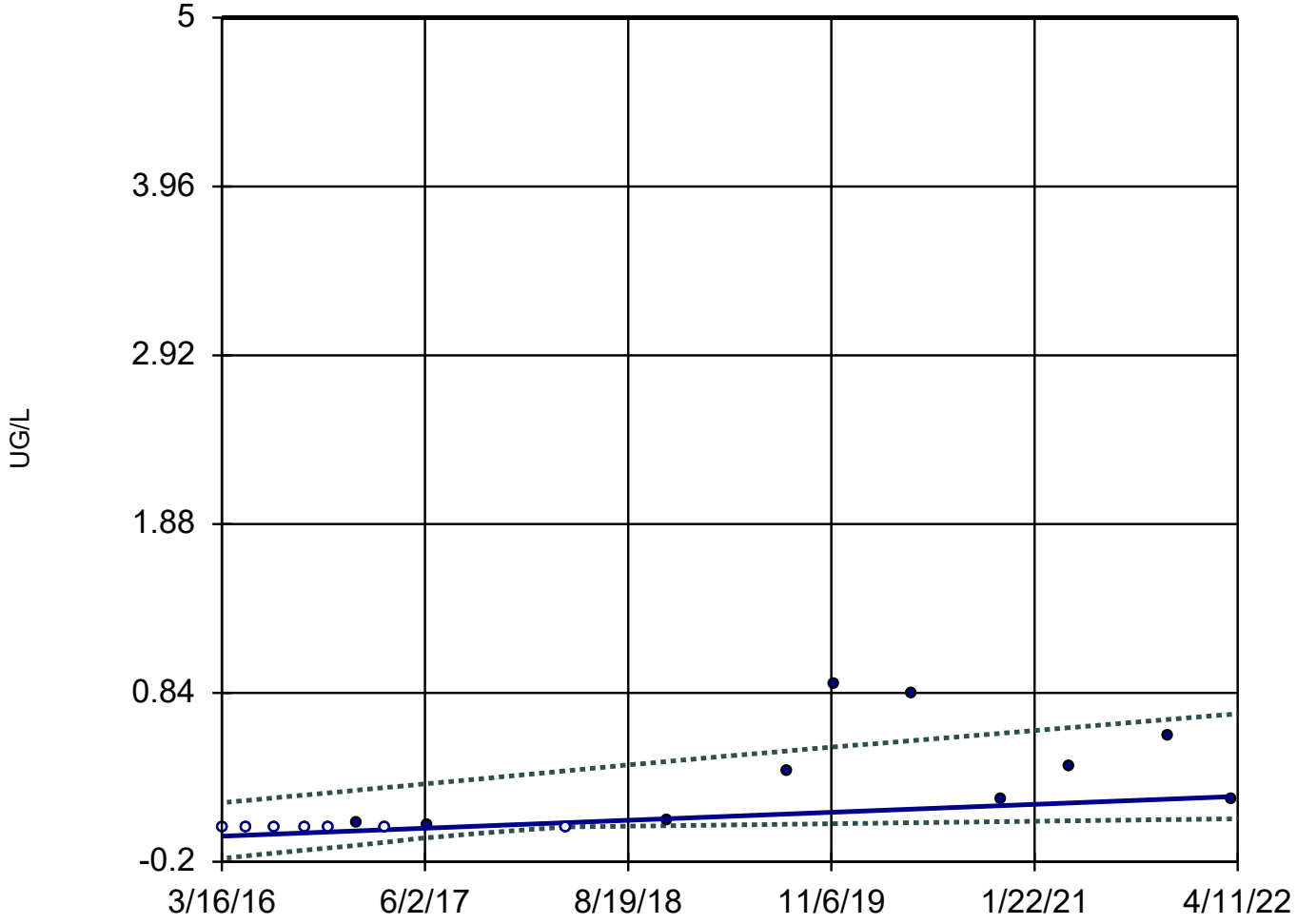
Constituent: CADMIUM, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-5D



n = 17

Slope = 0.04026 units per year.

Mann-Kendall statistic = 71
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (5).

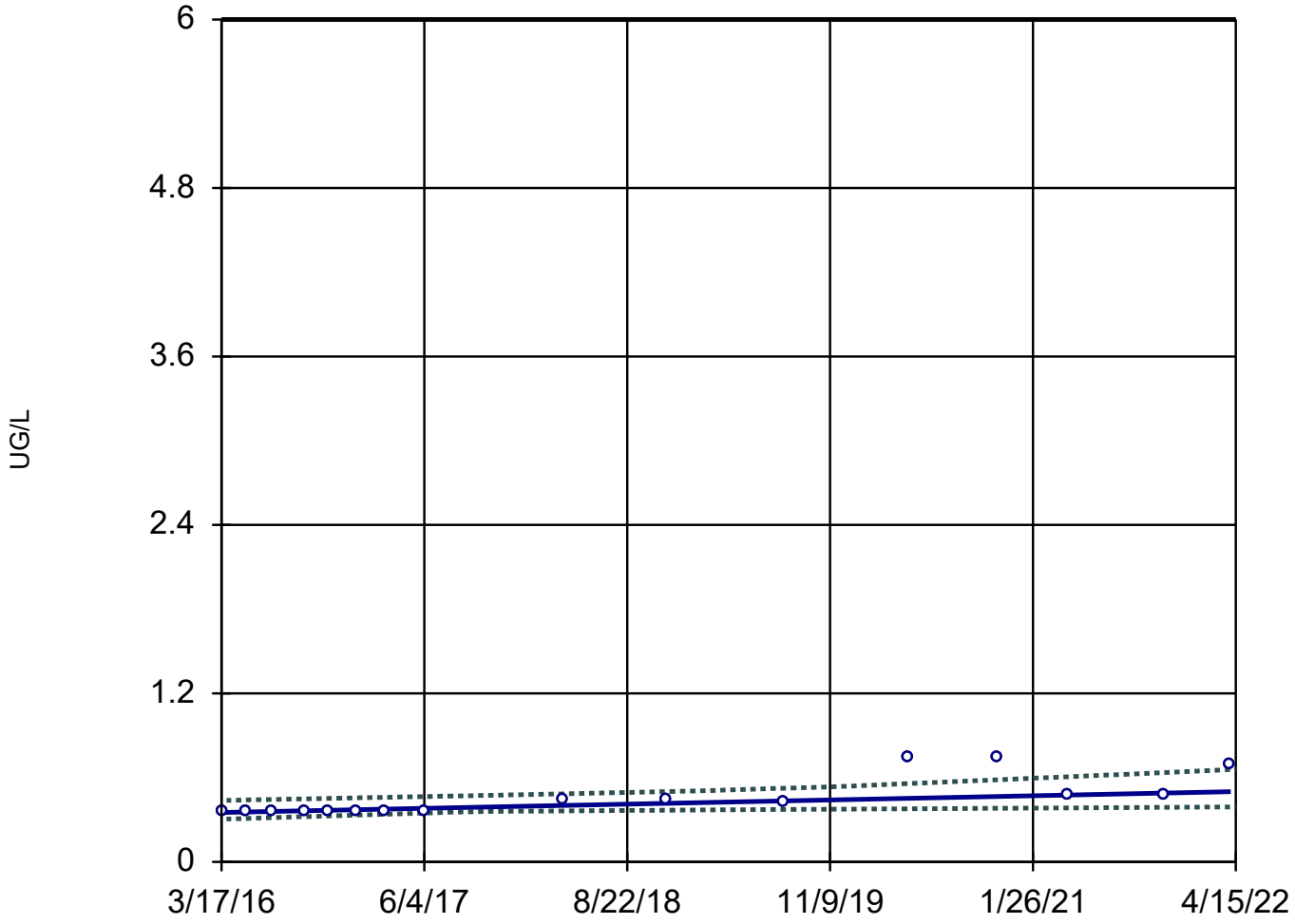
Constituent: CADMIUM, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-1D



n = 16

Slope = 0.02447 units per year.

Mann-Kendall statistic = 85
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

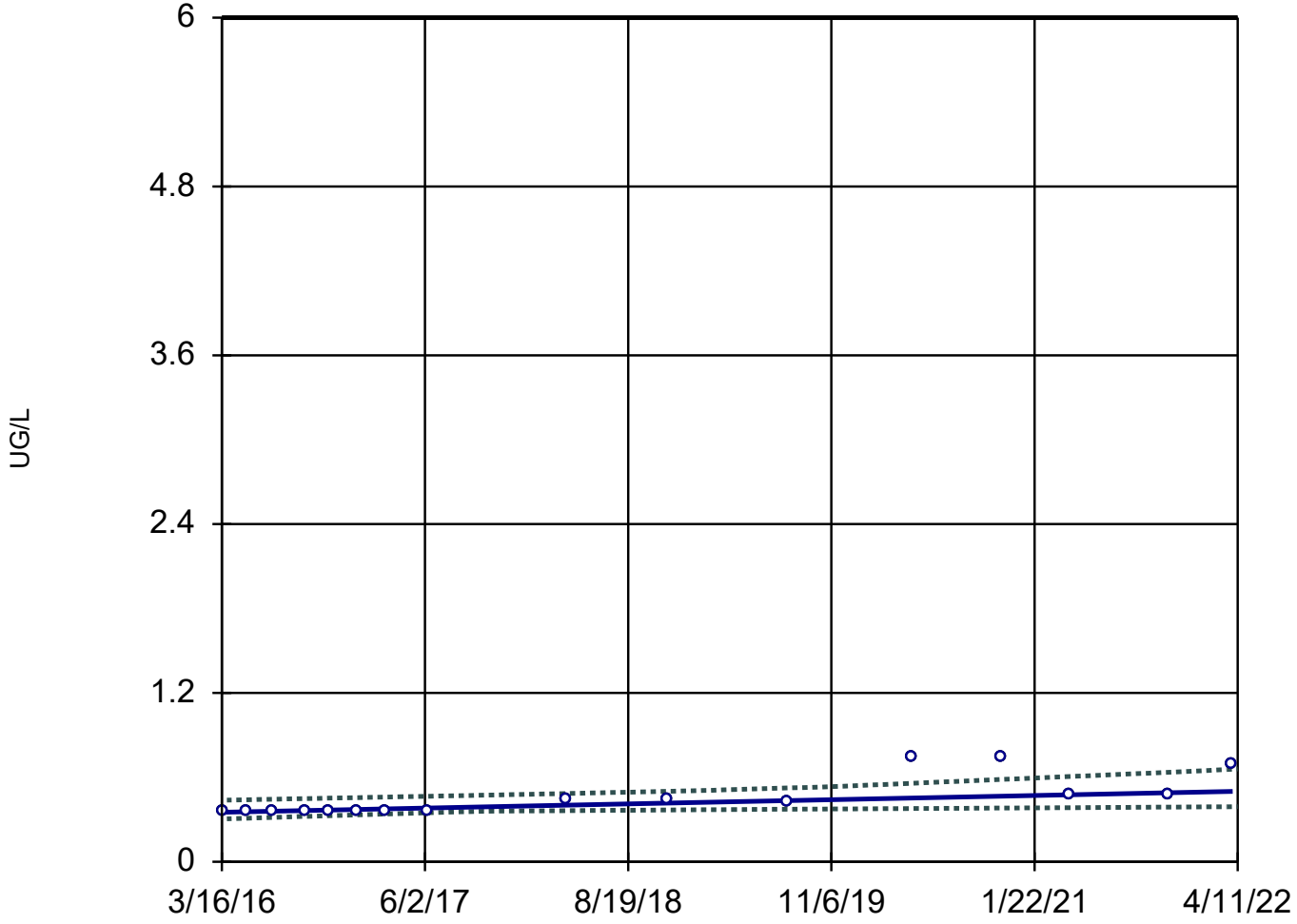
Constituent: COBALT, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 16

Slope = 0.02448 units per year.

Mann-Kendall statistic = 85
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

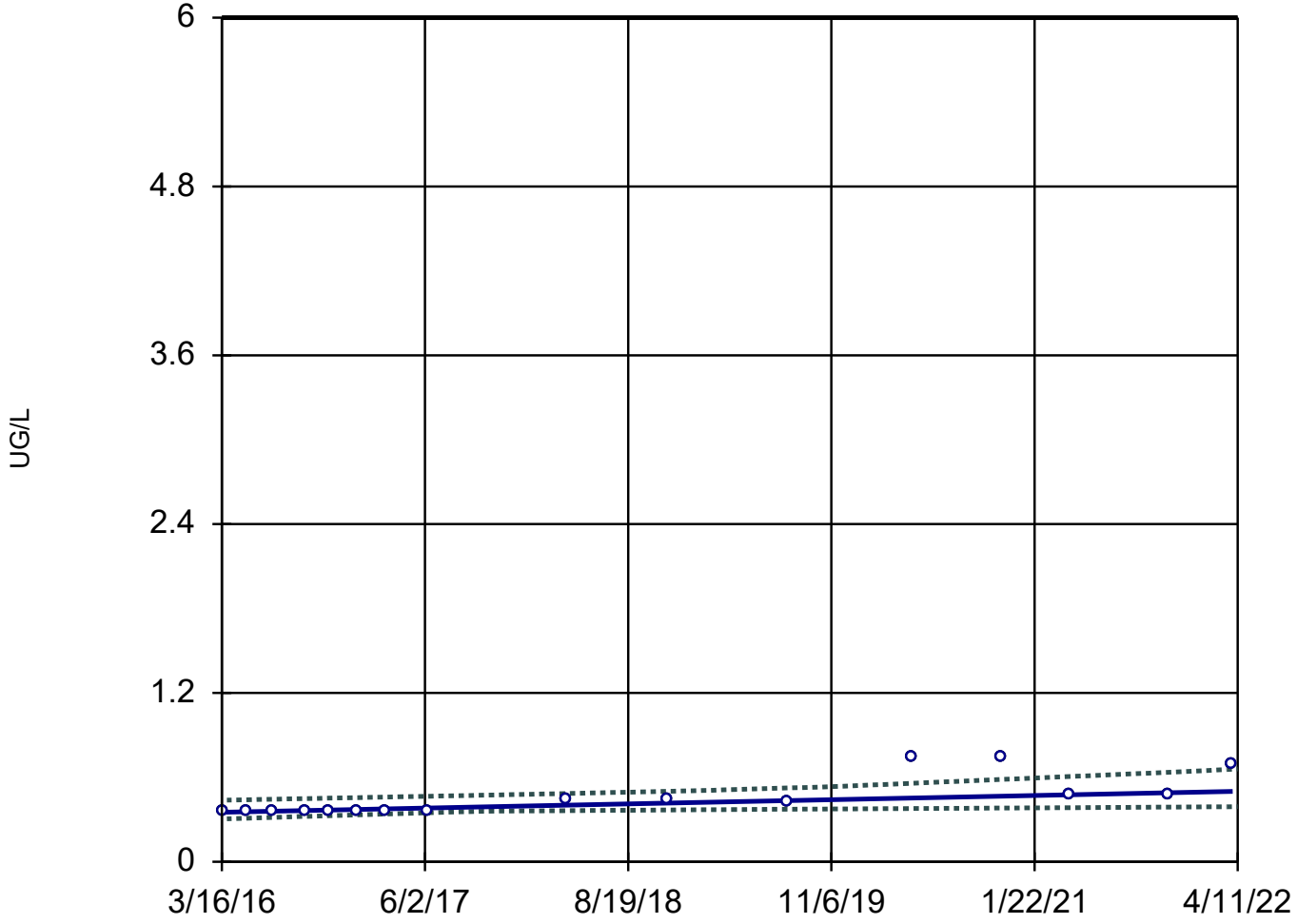
Constituent: COBALT, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 16

Slope = 0.02448 units per year.

Mann-Kendall statistic = 85
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

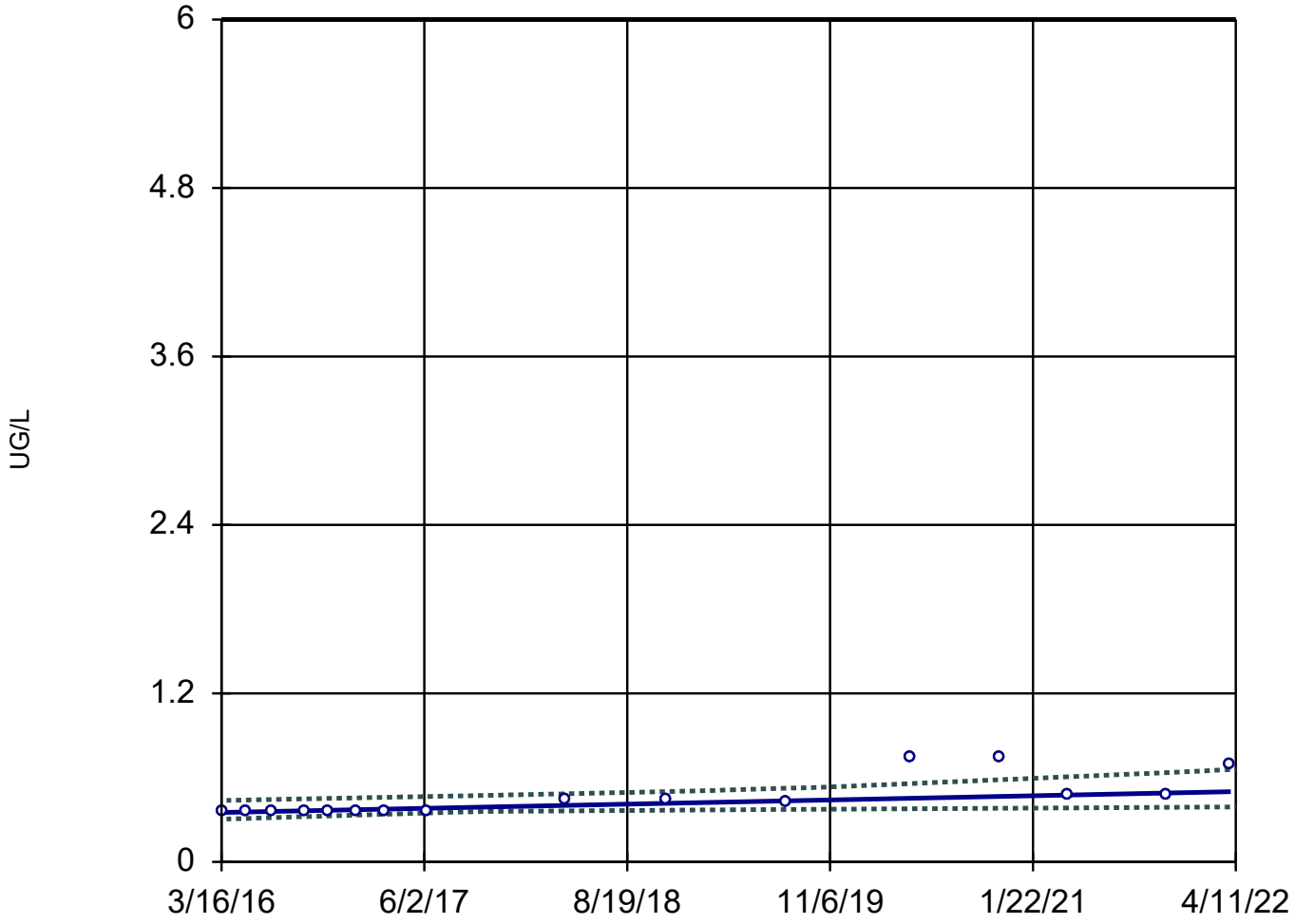
Constituent: COBALT, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 16

Slope = 0.02448 units per year.

Mann-Kendall statistic = 85
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

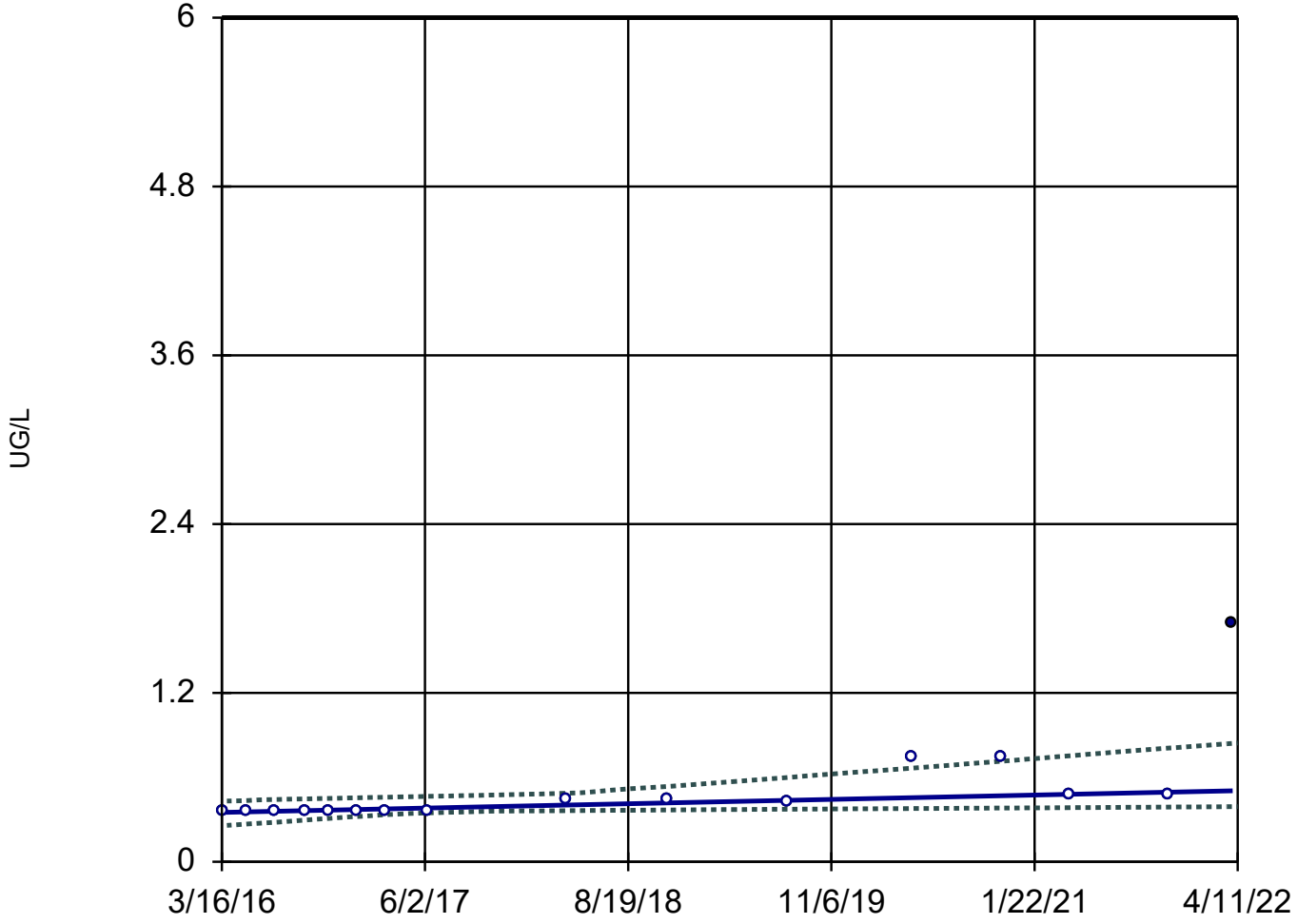
Constituent: COBALT, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-5D



n = 16

Slope = 0.02537 units per year.

Mann-Kendall statistic = 89
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (6).

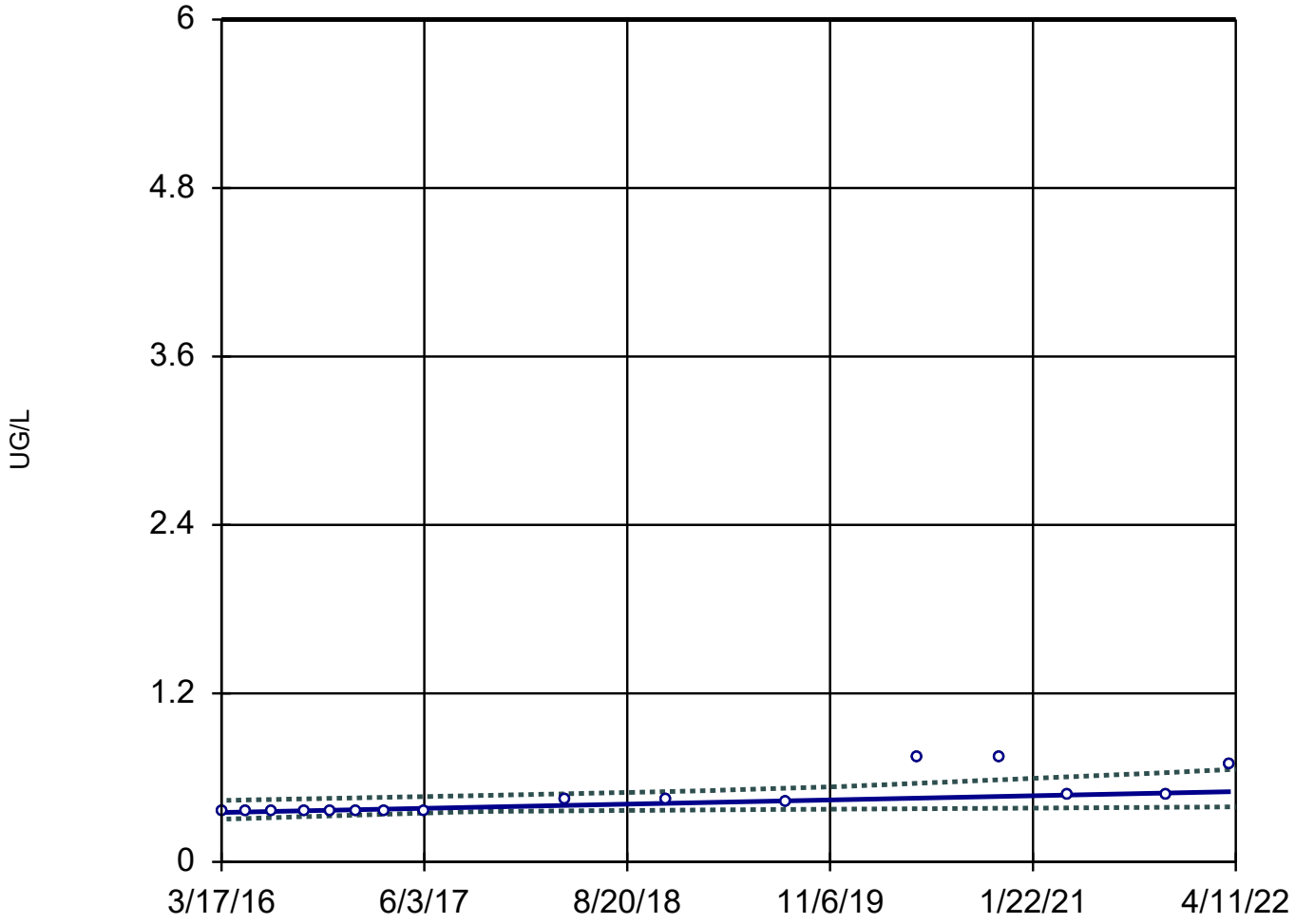
Constituent: COBALT, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-6D



n = 16

Slope = 0.02449 units per year.

Mann-Kendall statistic = 85
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 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

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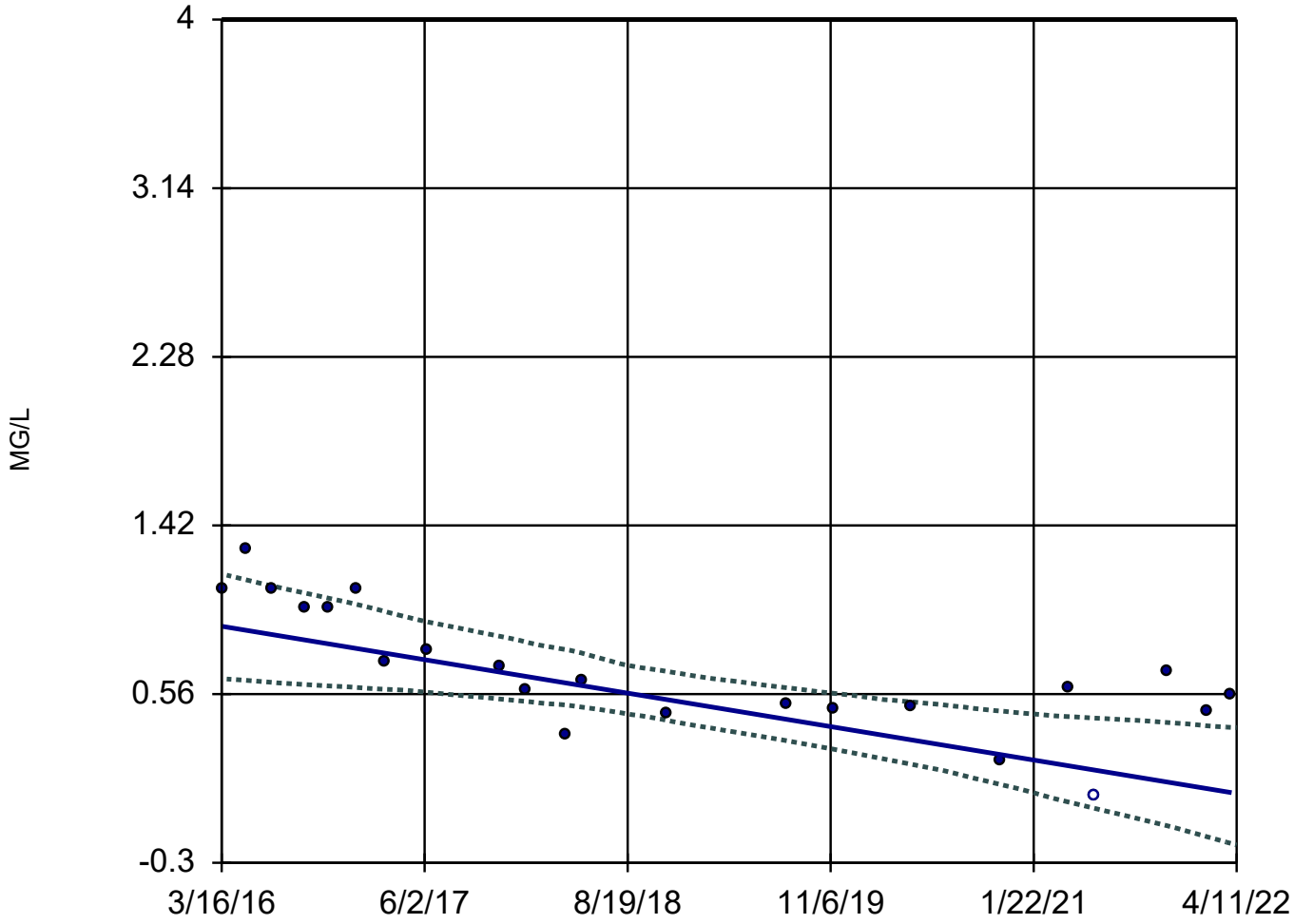
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 22

Slope = -0.1404 units per year.

Mann-Kendall statistic = -141
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

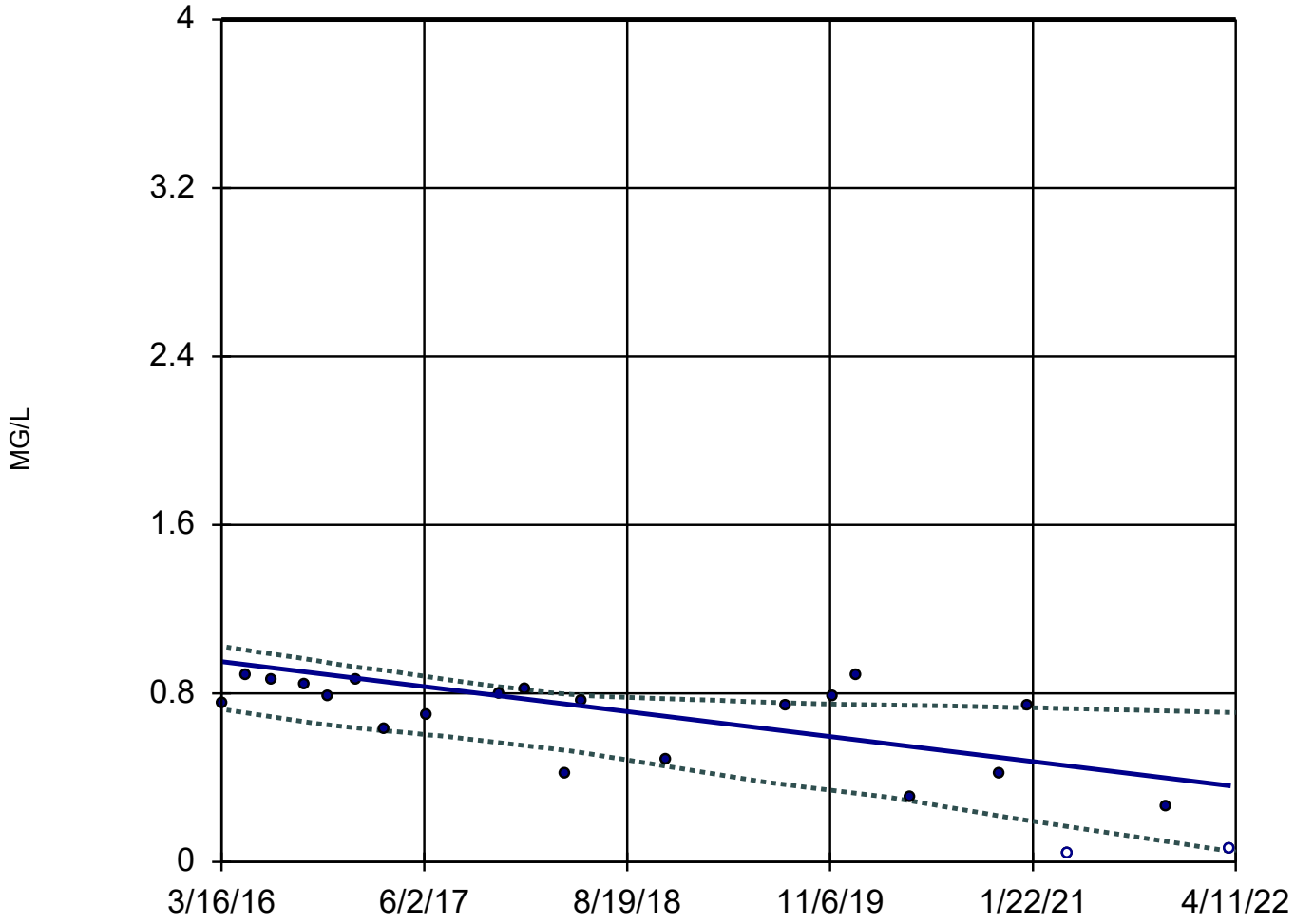
Constituent: FLUORIDE, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 22

Slope = -0.09763 units per year.

Mann-Kendall statistic = -113
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (4).

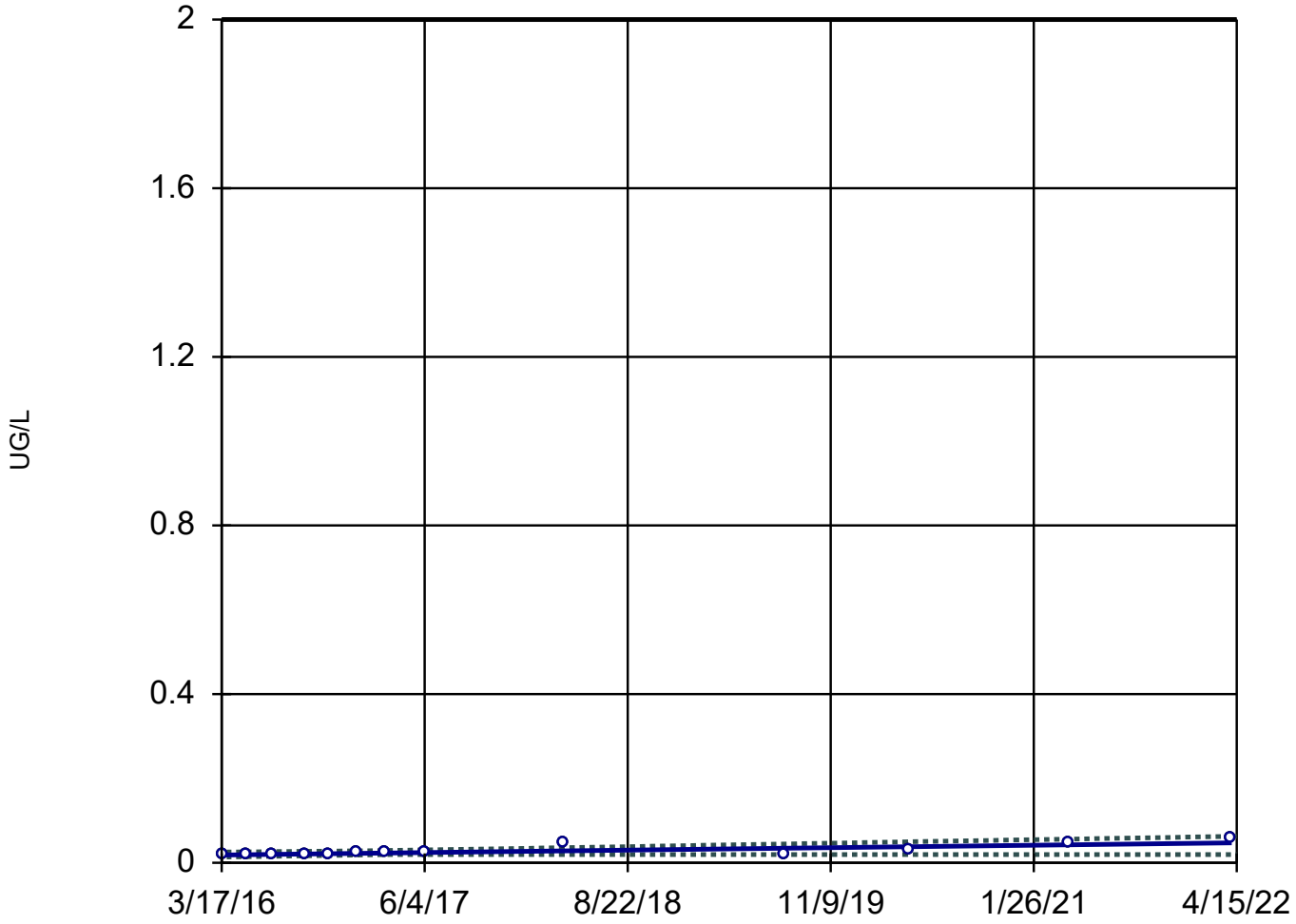
Constituent: FLUORIDE, TOTAL Analysis Run 6/13/2022 8:32 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-1D



n = 13

Slope = 0.004809 units per year.

Mann-Kendall statistic = 43
critical = 39

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

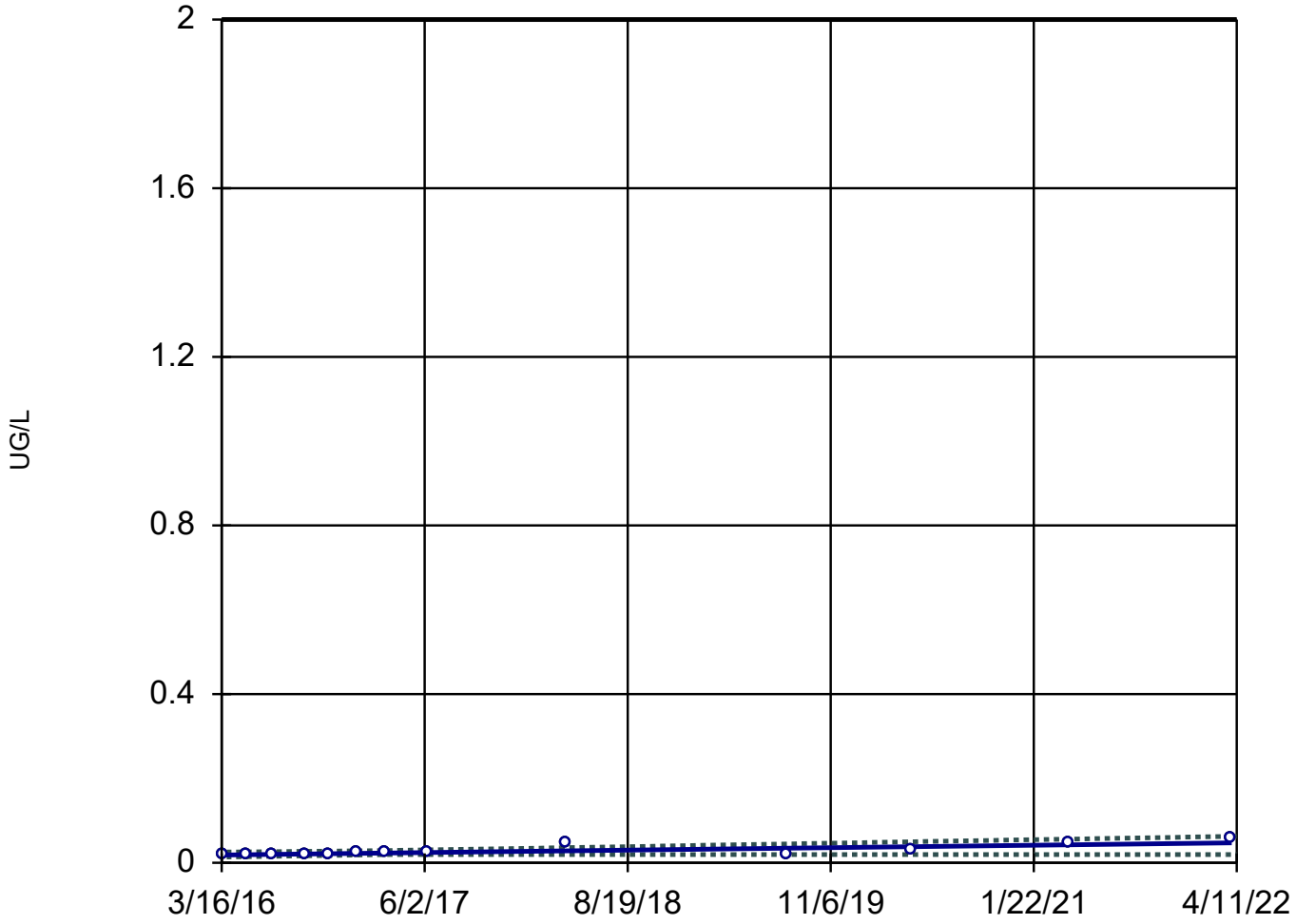
Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 13

Slope = 0.004807 units per year.

Mann-Kendall statistic = 43
critical = 39

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

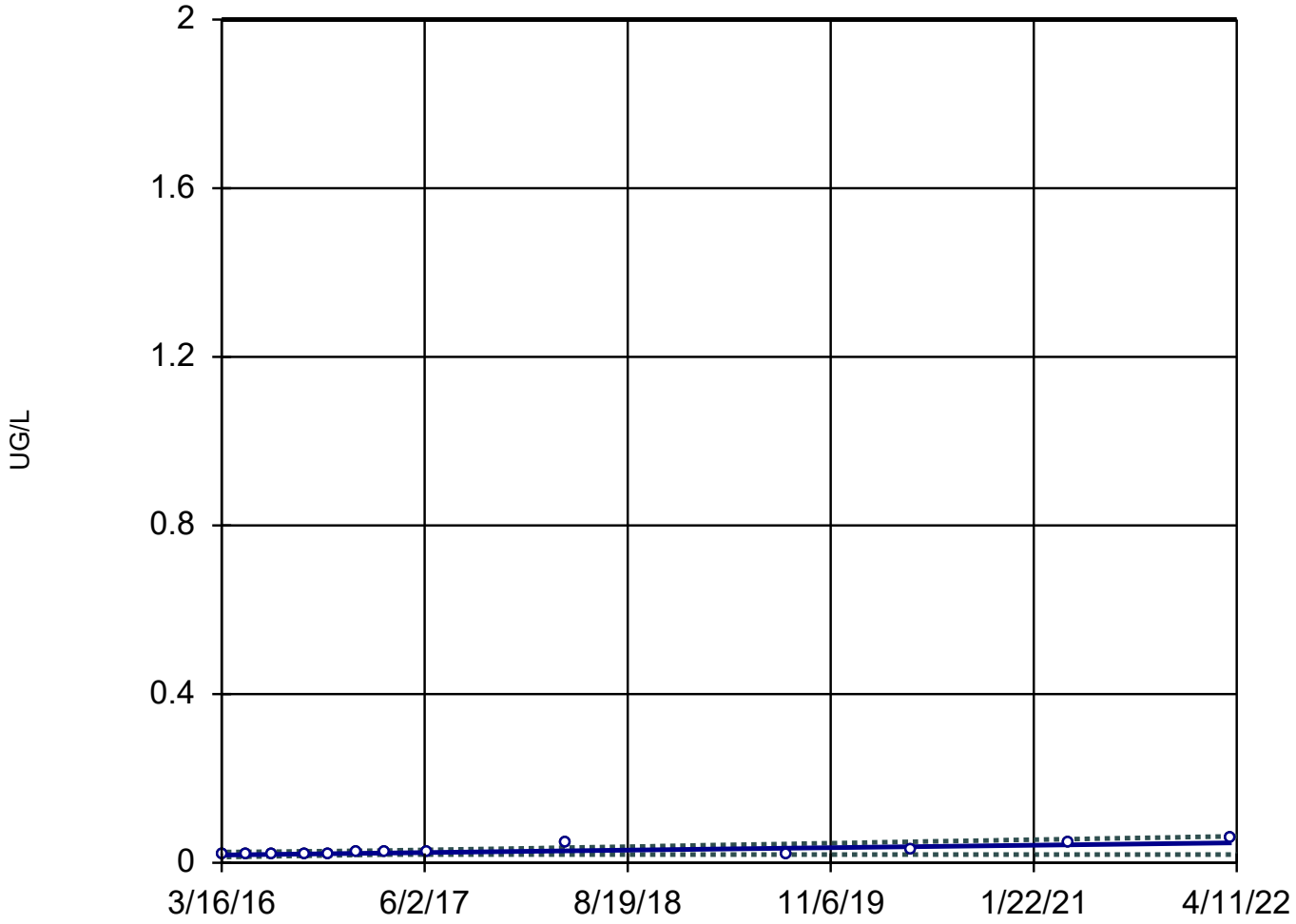
Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 13

Slope = 0.004807 units per year.

Mann-Kendall statistic = 43
critical = 39

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

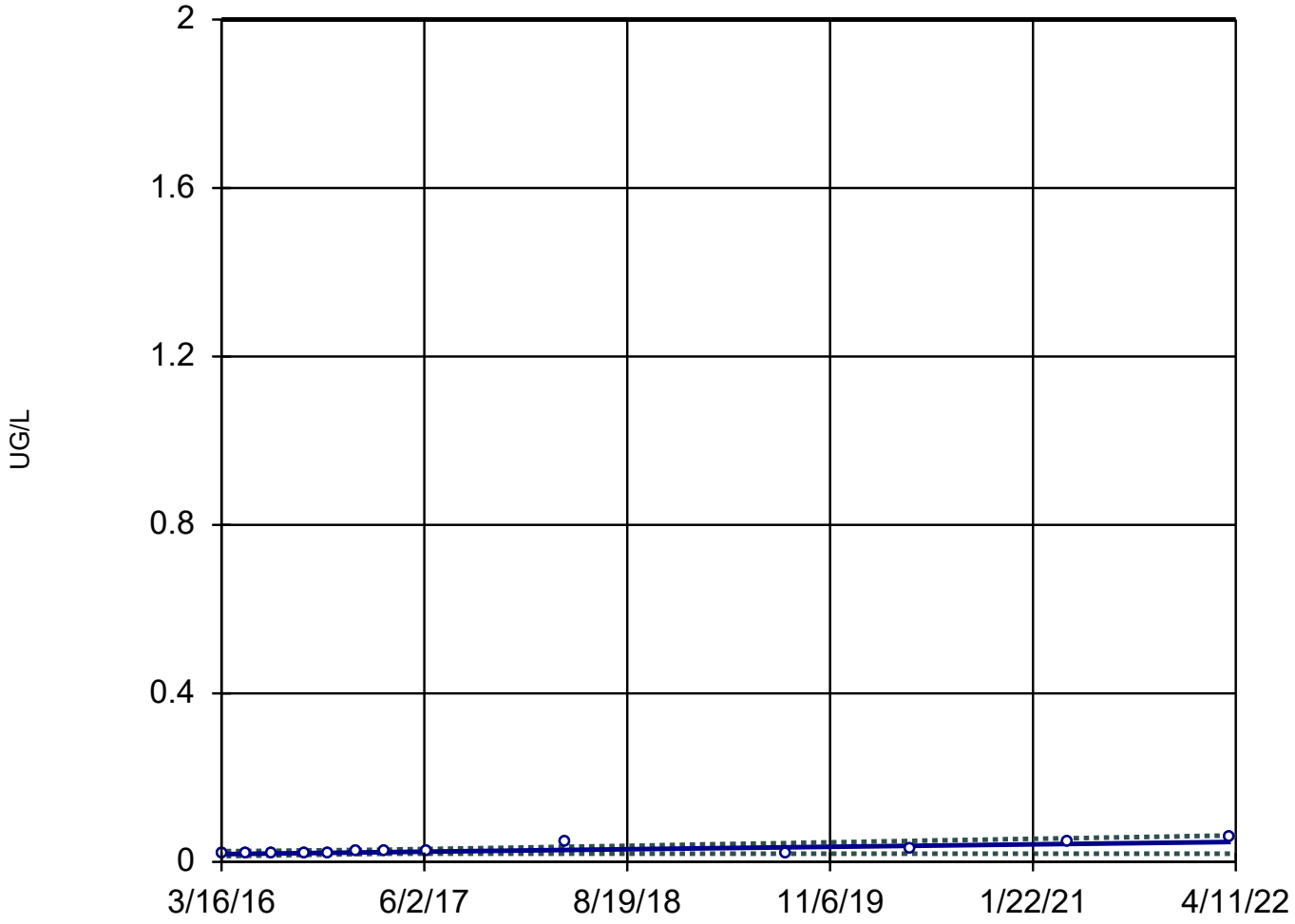
Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-4D



n = 13

Slope = 0.004807 units per year.

Mann-Kendall statistic = 43
critical = 39

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

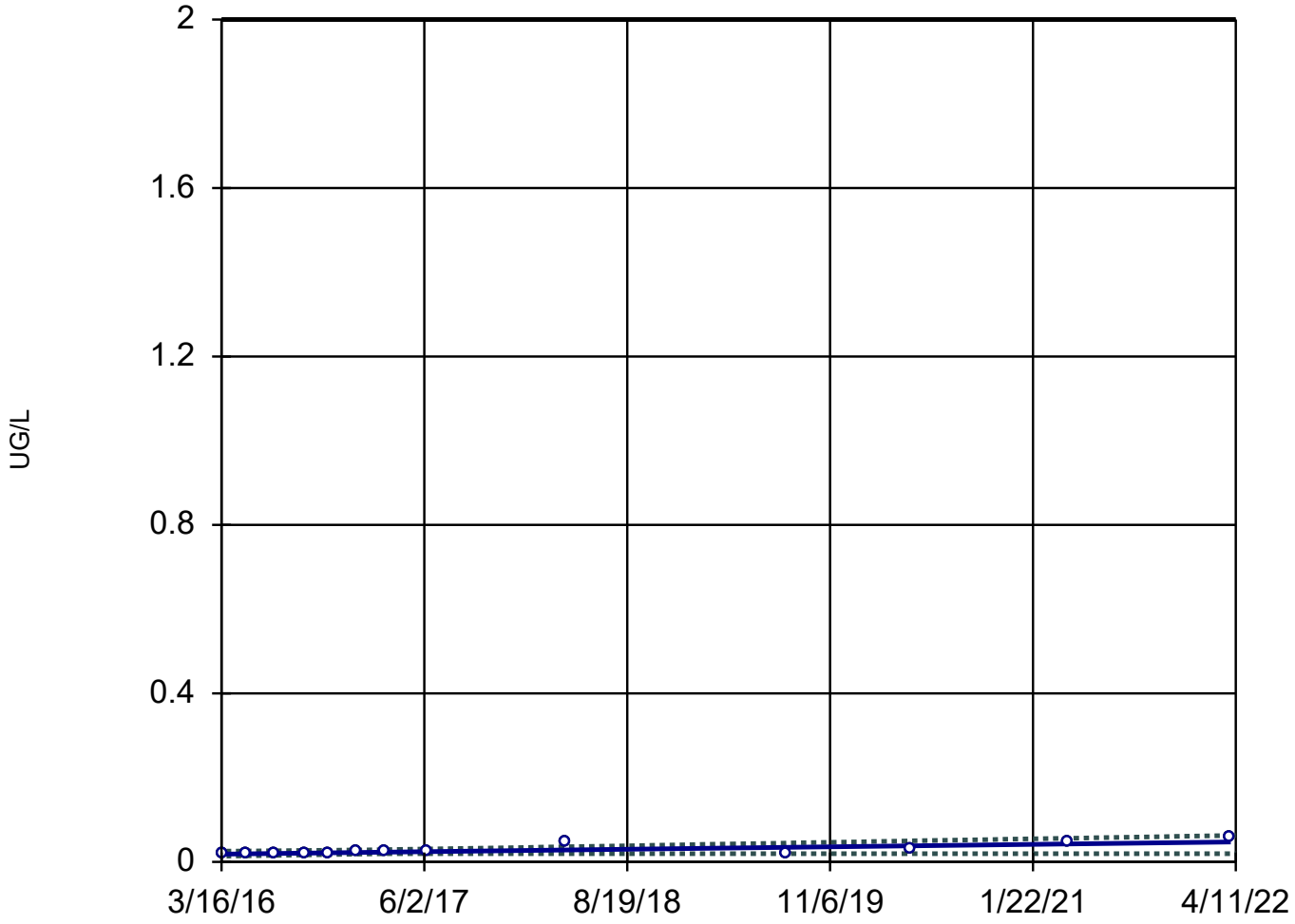
Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-5D



n = 13

Slope = 0.004825 units per year.

Mann-Kendall statistic = 43
critical = 39

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

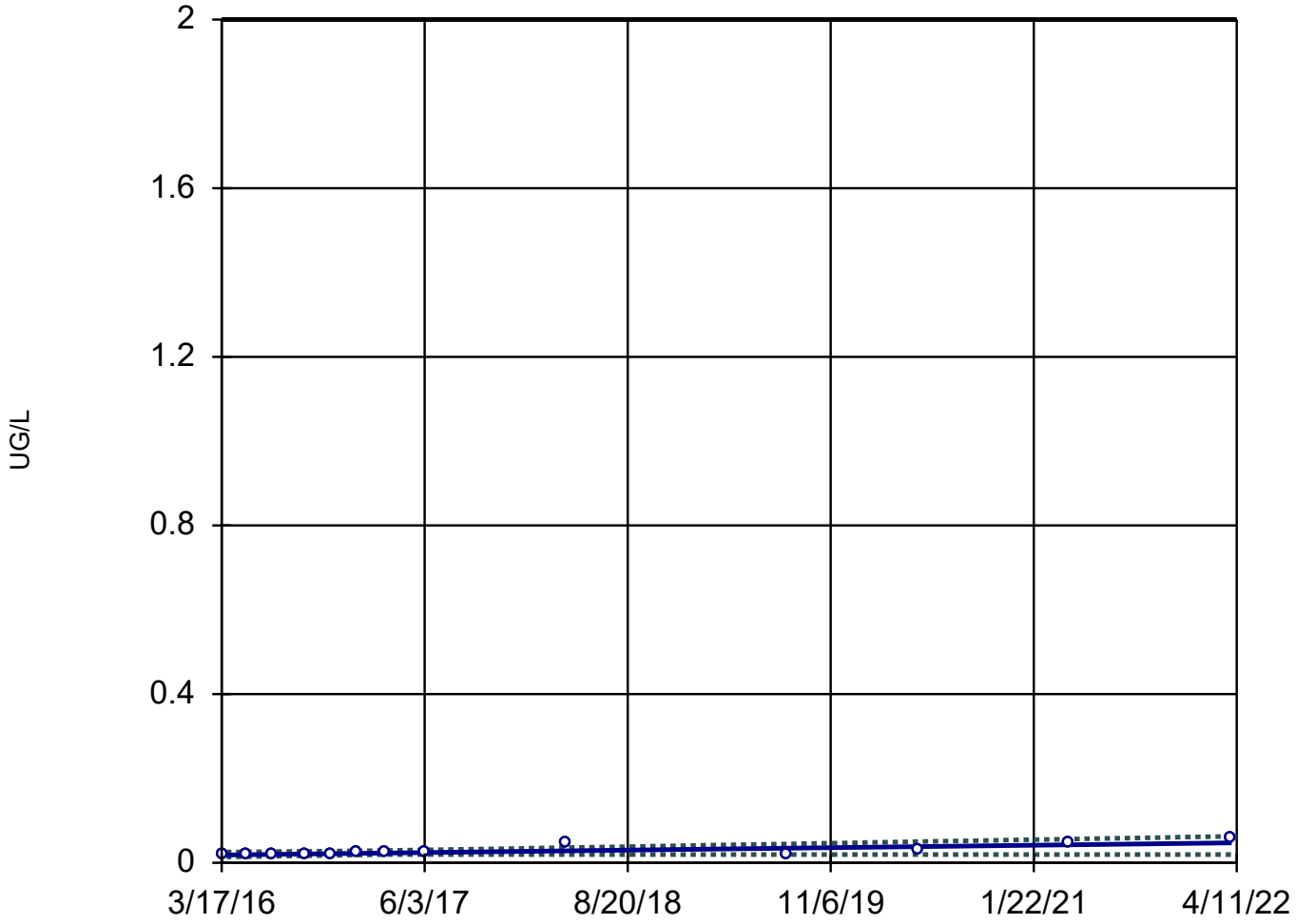
Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-6D



n = 13

Slope = 0.004835 units per year.

Mann-Kendall statistic = 43
critical = 39

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

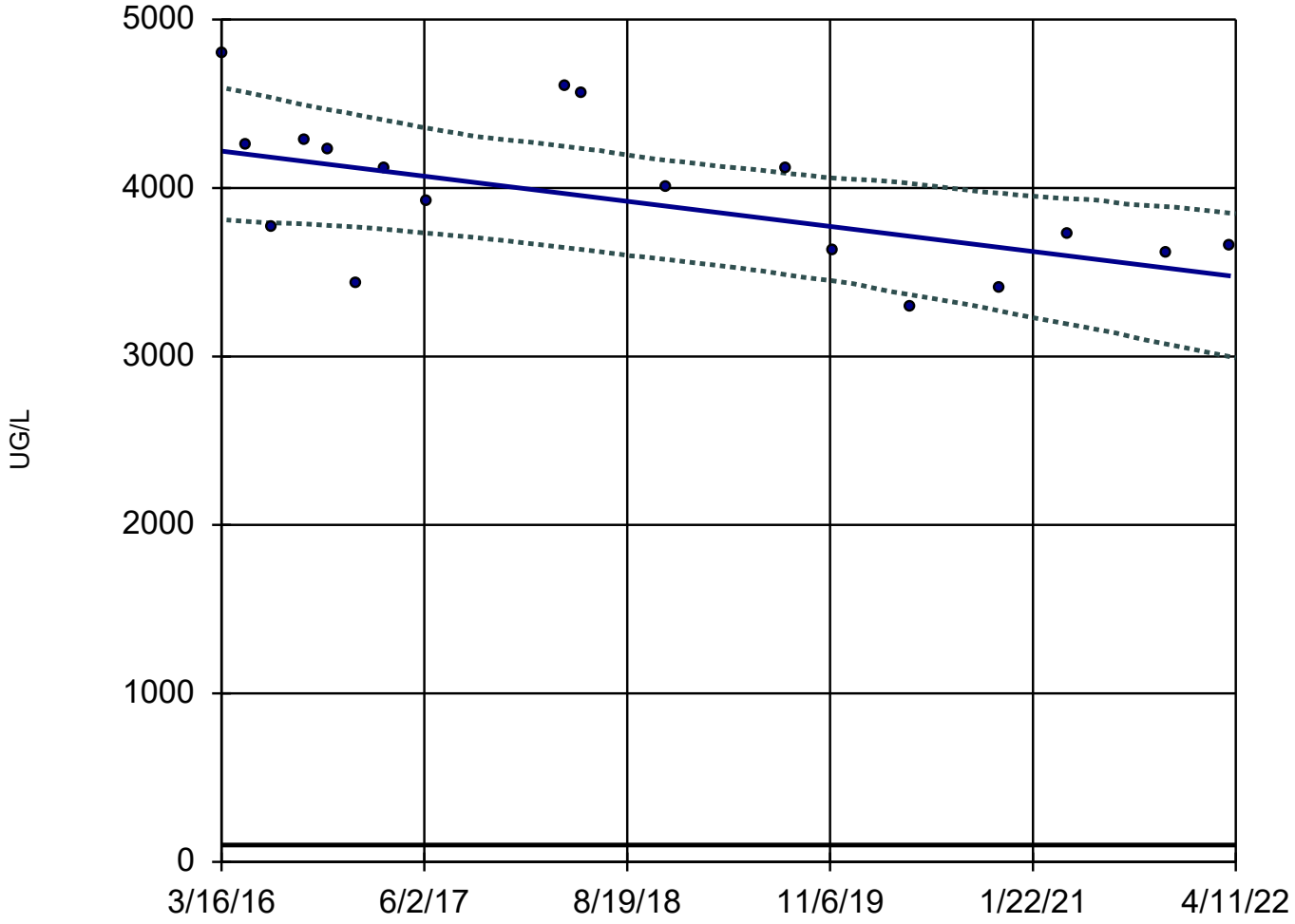
Confidence band is below GWPS (2).

Constituent: MERCURY, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 18

Slope = -122.5 units per year.

Mann-Kendall statistic = -68
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

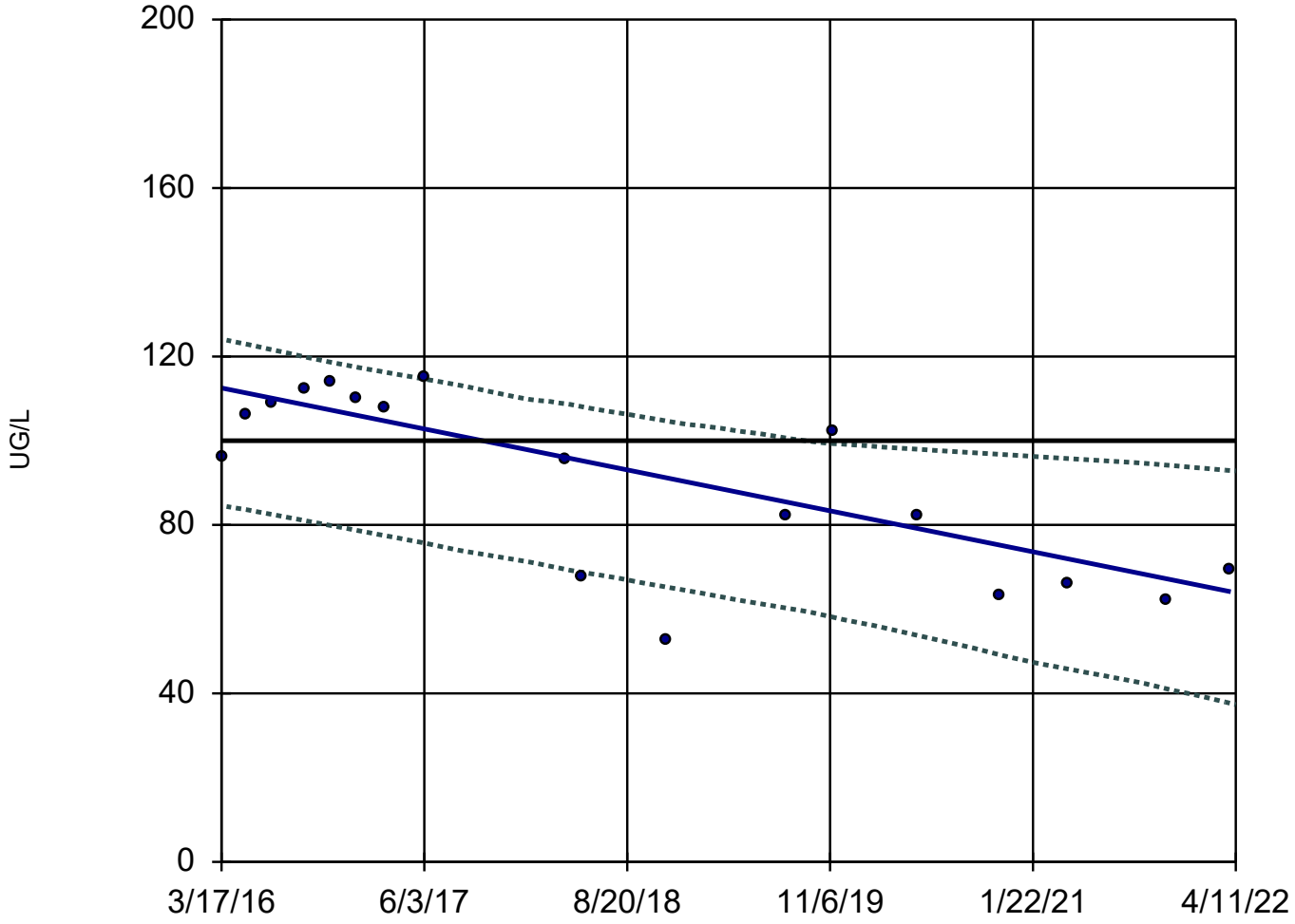
Confidence band is above GWPS (100).

Constituent: MOLYBDENUM, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Sen's Slope and 95% Confidence Band

S-UMW-6D



n = 18

Slope = -8.007 units per year.

Mann-Kendall statistic = -71
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band intersects GWPS (100) on 09/27/19.

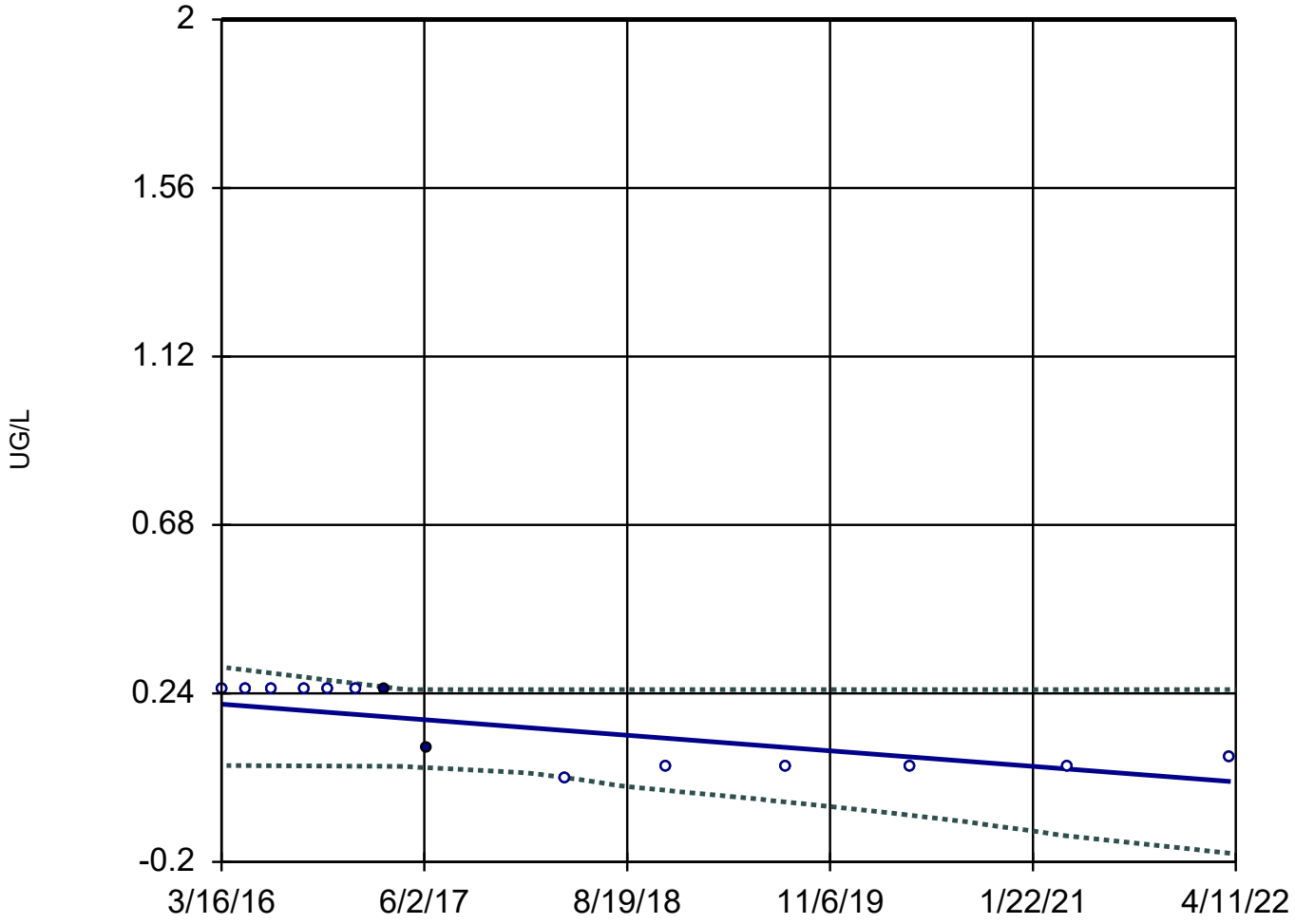
Constituent: MOLYBDENUM, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-2D



n = 14

Slope = -0.03342 units per year.

Mann-Kendall statistic = -49
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

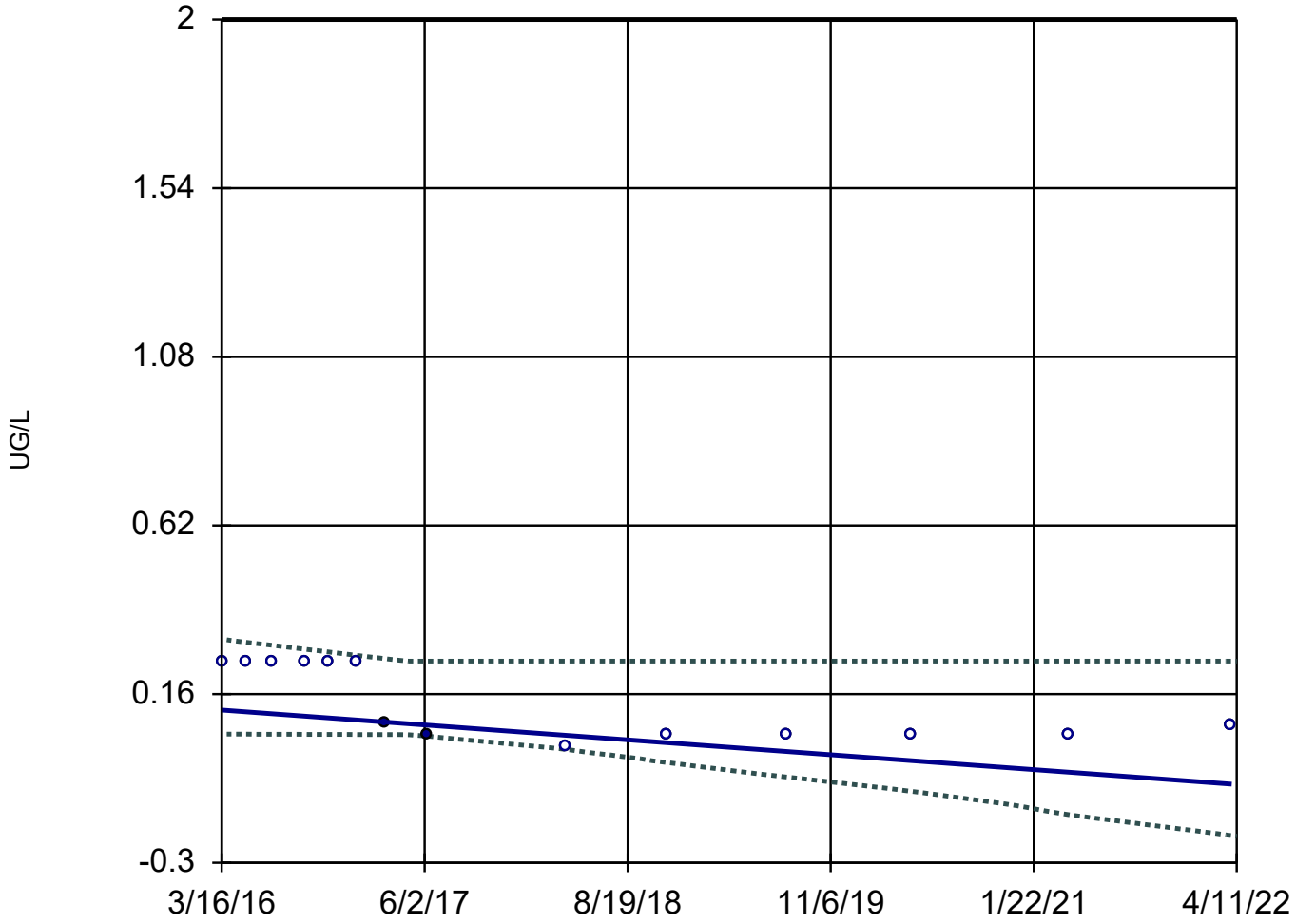
Constituent: THALLIUM, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

S-UMW-3D



n = 14

Slope = -0.03342 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Confidence band is below GWPS (2).

Constituent: THALLIUM, TOTAL Analysis Run 6/13/2022 8:33 AM

Sioux E.C. Client: Ameren Data: SEC DATA

Trend Test

Sioux E.C. Client: Ameren Data: SEC DATA Printed 6/13/2022, 8:34 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	S-UMW-1D	-0.00313	-6	-44	No	14	42.86	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-2D	0.001582	18	44	No	14	64.29	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-3D	0.004214	28	39	No	13	84.62	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-4D	0.004244	44	44	No	14	92.86	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-5D	0.00398	36	44	No	14	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	S-UMW-6D	0.003976	36	44	No	14	100	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	**S-UMW-1D**	**0.1515**	**95**	**58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	**S-UMW-2D**	**0.456**	**114**	**63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
ARSENIC, TOTAL (UG/L)	S-UMW-3D	0.02808	13	58	No	17	5.882	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	S-UMW-4D	0.01496	21	58	No	17	17.65	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	S-UMW-5D	-0.03551	-46	-63	No	18	5.556	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	S-UMW-6D	0.03386	55	58	No	17	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	S-UMW-1D	-0.7441	-3	-63	No	18	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**S-UMW-2D**	**-9.365**	**-73**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	S-UMW-3D	-0.5428	-25	-63	No	18	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	**S-UMW-4D**	**-3.549**	**-69**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
BARIUM, TOTAL (UG/L)	S-UMW-5D	-1.809	-8	-63	No	18	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	S-UMW-6D	-0.8652	-30	-53	No	16	0	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-1D	0	-1	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-2D	0	19	48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-3D	0	0	44	No	14	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-4D	0	-1	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-5D	0	-1	-48	No	15	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	S-UMW-6D	0	-1	-48	No	15	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	S-UMW-1D	0.00222	40	48	No	15	86.67	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	**S-UMW-2D**	**0.06336**	**82**	**58**	**Yes**	**17**	**35.29**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**S-UMW-3D**	**0.1848**	**65**	**58**	**Yes**	**17**	**23.53**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**S-UMW-4D**	**0.3351**	**72**	**58**	**Yes**	**17**	**23.53**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	**S-UMW-5D**	**0.04026**	**71**	**58**	**Yes**	**17**	**41.18**	**n/a**	**n/a**	**0.02**	**NP**
CADMIUM, TOTAL (UG/L)	S-UMW-6D	0.002976	49	58	No	17	76.47	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-1D	0.026	12	44	No	14	42.86	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-2D	-0.01389	-15	-44	No	14	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-3D	-0.00...	-4	-48	No	15	46.67	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-4D	-0.01573	-11	-48	No	15	53.33	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-5D	-0.0181	-15	-48	No	15	46.67	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	S-UMW-6D	0	1	48	No	15	53.33	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	**S-UMW-1D**	**0.02447**	**85**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-2D**	**0.02448**	**85**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-3D**	**0.02448**	**85**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-4D**	**0.02448**	**85**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-5D**	**0.02537**	**89**	**53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
COBALT, TOTAL (UG/L)	**S-UMW-6D**	**0.02449**	**85**	**53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	S-UMW-1D	-0.00...	-24	-73	No	20	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**S-UMW-2D**	**-0.1404**	**-141**	**-84**	**Yes**	**22**	**4.545**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	S-UMW-3D	-0.04546	-71	-78	No	21	4.762	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	**S-UMW-4D**	**-0.09763**	**-113**	**-84**	**Yes**	**22**	**9.091**	**n/a**	**n/a**	**0.02**	**NP**
FLUORIDE, TOTAL (MG/L)	S-UMW-5D	0.01123	26	73	No	20	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	S-UMW-6D	0.01056	50	73	No	20	0	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-1D	0.2005	48	48	No	15	86.67	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-2D	0.1783	46	48	No	15	73.33	n/a	n/a	0.02	NP

Trend Test

Sioux E.C. Client: Ameren Data: SEC DATA Printed 6/13/2022, 8:34 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
LEAD, TOTAL (UG/L)	S-UMW-3D	0.09951	8	48	No	15	60	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-4D	0.1465	15	48	No	15	53.33	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-5D	0.1158	11	48	No	15	80	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	S-UMW-6D	0.2001	48	48	No	15	93.33	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-1D	-0.351	-39	-63	No	18	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-2D	-0.4506	-23	-63	No	18	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-3D	-0.4877	-13	-63	No	18	5.556	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-4D	-0.8484	-42	-63	No	18	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-5D	-0.6152	-30	-63	No	18	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	S-UMW-6D	-0.2951	-17	-58	No	17	0	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	**S-UMW-1D**	**0.004809**	**43**	**39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**S-UMW-2D**	**0.004807**	**43**	**39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**S-UMW-3D**	**0.004807**	**43**	**39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**S-UMW-4D**	**0.004807**	**43**	**39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**S-UMW-5D**	**0.004825**	**43**	**39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MERCURY, TOTAL (UG/L)	**S-UMW-6D**	**0.004835**	**43**	**39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	S-UMW-1D	-0.6007	-15	-63	No	18	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	S-UMW-2D	0	0	63	No	18	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-3D**	**-122.5**	**-68**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
MOLYBDENUM, TOTAL (UG/L)	S-UMW-4D	-57.48	-3	-63	No	18	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	S-UMW-5D	112.3	39	63	No	18	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	**S-UMW-6D**	**-8.007**	**-71**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
RADIUM [226 + 228] (PCI/L)	S-UMW-1D	0.0235	15	48	No	15	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-2D	0.02391	19	44	No	14	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-3D	0.02044	13	44	No	14	85.71	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-4D	0.02724	29	44	No	14	100	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-5D	0.006332	5	48	No	15	80	n/a	n/a	0.02	NP
RADIUM [226 + 228] (PCI/L)	S-UMW-6D	0.05836	44	48	No	15	93.33	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-1D	0	23	53	No	16	75	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-2D	0	3	53	No	16	75	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-3D	-0.00...	-13	-53	No	16	12.5	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-4D	-0.00...	-10	-53	No	16	25	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-5D	0.001432	12	53	No	16	25	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	S-UMW-6D	0	-11	-53	No	16	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	S-UMW-1D	-0.03996	-44	-44	No	14	92.86	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	**S-UMW-2D**	**-0.03342**	**-49**	**-44**	**Yes**	**14**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
THALLIUM, TOTAL (UG/L)	**S-UMW-3D**	**-0.03342**	**-53**	**-44**	**Yes**	**14**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
THALLIUM, TOTAL (UG/L)	S-UMW-4D	-0.03156	-43	-44	No	14	85.71	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	S-UMW-5D	-0.03052	-32	-44	No	14	92.86	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	S-UMW-6D	-0.03052	-32	-44	No	14	100	n/a	n/a	0.02	NP

APPENDIX D

2022 Potentiometric Surface Maps

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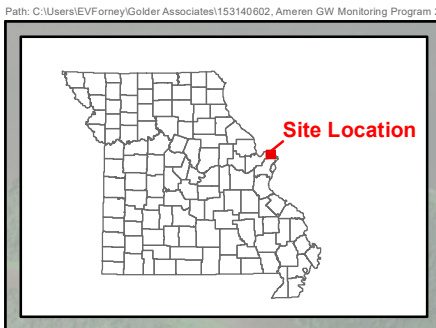

Mississippi River
Mississippi River Level
419.4

Sioux Energy Center

TP-1S (418.44)
TP-1M (418.47)
TP-1D (418.47)

TP-2S (418.44)
TP-2M (418.40)
TP-2D (418.43)

BMW-2S (418.36)
BMW-2D (418.45)

PZ-2S (418.17)
PZ-2D (418.01)

AM-1S (418.10)
AM-1D (418.05)

UMW-6D (418.10)

PZ-3S (418.01)

LMW-9S (417.73)

PZ-3D (417.98)

UMW-5D (417.70)

BMW-3S (417.27)
BMW-3D (417.19)

BMW-1S (417.23)
BMW-1D (417.24)

UMW-1D (417.33)

LMW-1S (417.50)

PZ-1D (417.01)

SCPA

PZ-1S (416.97)

UMW-4D (416.77)

UMW-2D (416.05)

LMW-8S (416.92)

UMW-3D (416.24)

PZ-4S (416.14)
PZ-4D (416.00)

SCPB

LMW-7S (416.34)

TP-3S (416.98)
TP-3M (416.98)
TP-3D (416.99)

LMW-2S (415.22)

LMW-6S (415.87)

LMW-3S (415.01)

PZ-9S (415.78)
PZ-9D (415.90)

TP-6S (417.94)
TP-6M (417.94)
TP-6D (417.91)

LMW-4S (415.09)

LMW-5S (415.09)

UG-2 (414.49)

TP-5D (415.10)

UG-3 (415.05)

UG-1A (414.74)

TP-5S (414.84)
TP-5M (414.90)

TP-4S (413.91)
TP-4M (413.89)
TP-4D (413.90)

SCL4A

SCPD

SCPC

DG-1 (413.12)

TMW-1 (413.22)

TMW-2 (413.24)

TMW-3 (413.29)

DG-2 (412.62)

DG-3 (412.43)

DG-5 (412.37)

DG-12 (413.55)

DG-4 (412.32)

DG-7 (412.61)

DG-6 (412.49)

DG-9 (412.82)

TP-7S (411.79)
TP-7M (411.81)
TP-7D (411.80)

TP-8S (411.60)
TP-8M (411.61)
TP-8D (411.59)

Estimated Missouri River Level
413.9

Missouri River

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- Sioux Energy Center Property Boundary

CCR Units

- SCPA - Bottom Ash Surface Impoundment
- SCPB - Fly Ash Surface Impoundment
- SCPC - WFGD Surface Impoundment
- SCL4A - Dry CCR Disposal Area
- Proposed SCPD - WFGD Surface Impoundment

Groundwater Elevation Contour (FT MSL)

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)

Ground/Surface Water Measurement Locations

- River Gauge Location
- Monitoring Well or Piezometer
- Groundwater Flow Direction

NOTES

1.) ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2.) GROUNDWATER AND SURFACE WATER ELEVATIONS DISPLAYED IN FEET ABOVE MEAN SEA LEVEL (FT MSL).
3.) GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
4.) MISSOURI RIVER ELEVATION ESTIMATED BASED ON NEARBY UNITED STATES GEOLOGICAL SURVEY (USGS) RIVER GAUGING LOCATIONS.
5.) MISSISSIPPI RIVER ELEVATION PROVIDED BY AMEREN MISSOURI.
6.) WFGD - WET FLU GAS DESULFURIZATION.

REFERENCES

1.) AMEREN MISSOURI SIOUX ENERGY CENTER, SIOUX PROPERTY CONTROL MAP, FEBRUARY 2011.
2.) COORDINATE SYSTEM: NAD 1983 STATE PLANE MISSOURI EAST FIPS 2,401 FEET.
3.) USGS NATIONAL WATER INFORMATION SYSTEM, USGS GAUGES 06935965 (ST. CHARLES), 07010000 (ST. LOUIS), 05587498 (ALTON), GRAFTON (05587450).

0 500 1,000 1,500 2,000 Feet

CLIENT
AMEREN MISSOURI
SIOUX ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
FEBRUARY 7, 2022 POTENTIOMETRIC SURFACE MAP

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-12-27
PREPARED	GTM
DESIGN	JSI
REVIEW	SSS
APPROVED	MNH

PROJECT No. 153140604
PHASE 0003
FIGURE **D1**

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

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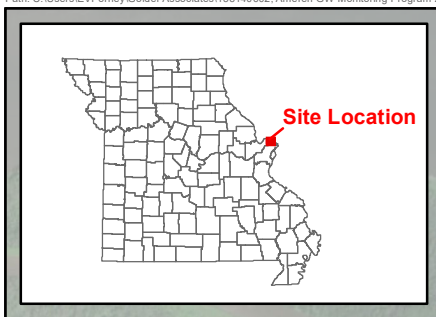

Mississippi River
Mississippi River Level
416.7

Sioux Energy Center

SCPA
SCPB
SCPC
SCPD
SCL4A

TP-2S (416.55)
TP-2M (416.54)
TP-2D (416.54)
TP-1S (416.55)
TP-1M (416.67)
TP-1D (416.67)
BMW-2S (416.74)
BMW-2D (416.63)
PZ-2S (416.95)
PZ-2D (416.96)
AM-1S (416.94)
AM-1D (416.92)
UMW-6D (416.81)
PZ-3S (417.03)
(See Note 7)
PZ-3D (416.99)
LMW-9S (416.86)
UMW-5D
(416.82)
BMW-3S (416.81)
BMW-3D (416.82)
BMW-1S (416.87)
BMW-1D (416.78)
UMW-1D (416.90)
LMW-1S
(416.92)
LMW-8S
(416.68)
PZ-1S (416.62)
PZ-1D (416.58)
UMW-4D (416.46)
PZ-4S (416.18)
PZ-4D (416.21)
UMW-3D (416.13)
UMW-2D
(416.10)
LMW-2S
(416.19)
LMW-7S (416.30)
TP-3S (416.63)
TP-3M (416.63)
TP-3D (416.63)
LMW-6S (416.04)
LMW-3S
(415.38)
LMW-4S
(415.43)
LMW-5S (415.60)
PZ-9S (416.13)
PZ-9D (416.11)
TP-6S (415.32)
TP-6M (415.33)
TP-6D (415.32)
UG-1A (415.26)
TP-5S (415.22)
TP-5M (415.29)
TP-5D (415.27)
UG-2
(414.92)
UG-3
(415.48)
TP-4S (415.35)
TP-4M (415.35)
TP-4D (415.42)
DG-1 (414.12)
TP-7S (413.31)
TP-7M (413.37)
TP-7D (413.38)
DG-2
(413.81)
TMW-1
(414.01)
TMW-2
(414.04)
TMW-3
(414.05)
TMW-4
(413.72)
TMW-5
(413.69)
TMW-6
(413.81)
DG-3
(413.76)
DG-4
(413.76)
DG-5
(413.75)
DG-6
(413.76)
DG-7 (413.79)
DG-9 (413.79)
DG-12
(414.24)
TP-8S (413.00)
TP-8M (413.06)
TP-8D (413.07)

416
415
414
415
416
417
418

Estimated Missouri River Level
418.3
Missouri River

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- Sioux Energy Center Property Boundary

CCR Units

- SCPA - Bottom Ash Surface Impoundment
- SCPB - Fly Ash Surface Impoundment
- SCPC - WFGD Surface Impoundment
- SCL4A - Dry CCR Disposal Area
- Proposed SCPD - WFGD Surface Impoundment

Groundwater Elevation Contour (FT MSL)

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)

Ground/Surface Water Measurement Locations

- River Gauge Location
- Monitoring Well or Piezometer
- Groundwater Flow Direction

0 500 1,000 1,500 2,000 Feet

NOTES

1.) ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2.) GROUNDWATER AND SURFACE WATER ELEVATIONS DISPLAYED IN FEET ABOVE MEAN SEA LEVEL (FT MSL).
3.) GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
4.) MISSOURI RIVER ELEVATION ESTIMATED BASED ON NEARBY UNITED STATES GEOLOGICAL SURVEY (USGS) RIVER GAUGING LOCATIONS.
5.) MISSISSIPPI RIVER ELEVATION PROVIDED BY AMEREN MISSOURI.
6.) WFGD - WET FLUE GAS DESULFURIZATION.
7.) PZ-3S NOT USED IN POTENTIOMETRIC SURFACE MAP.

REFERENCES

1.) AMEREN MISSOURI SIOUX ENERGY CENTER, SIOUX PROPERTY CONTROL MAP, FEBRUARY 2011.
2.) COORDINATE SYSTEM: NAD 1983 STATE PLANE MISSOURI EAST FIPS 2,401 FEET.
3.) USGS NATIONAL WATER INFORMATION SYSTEM, USGS GAUGES 06935965 (ST. CHARLES), 07010000 (ST. LOUIS), 05587498 (ALTON), GRAFTON (05587450).

CLIENT
AMEREN MISSOURI
SIOUX ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
MARCH 28, 2022 POTENTIOMETRIC SURFACE MAP

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-12-27
PREPARED	JSI
DESIGN	JSI
REVIEW	BTT
APPROVED	MNH

PROJECT No. 153140604
PHASE 0003
FIGURE **D2**

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

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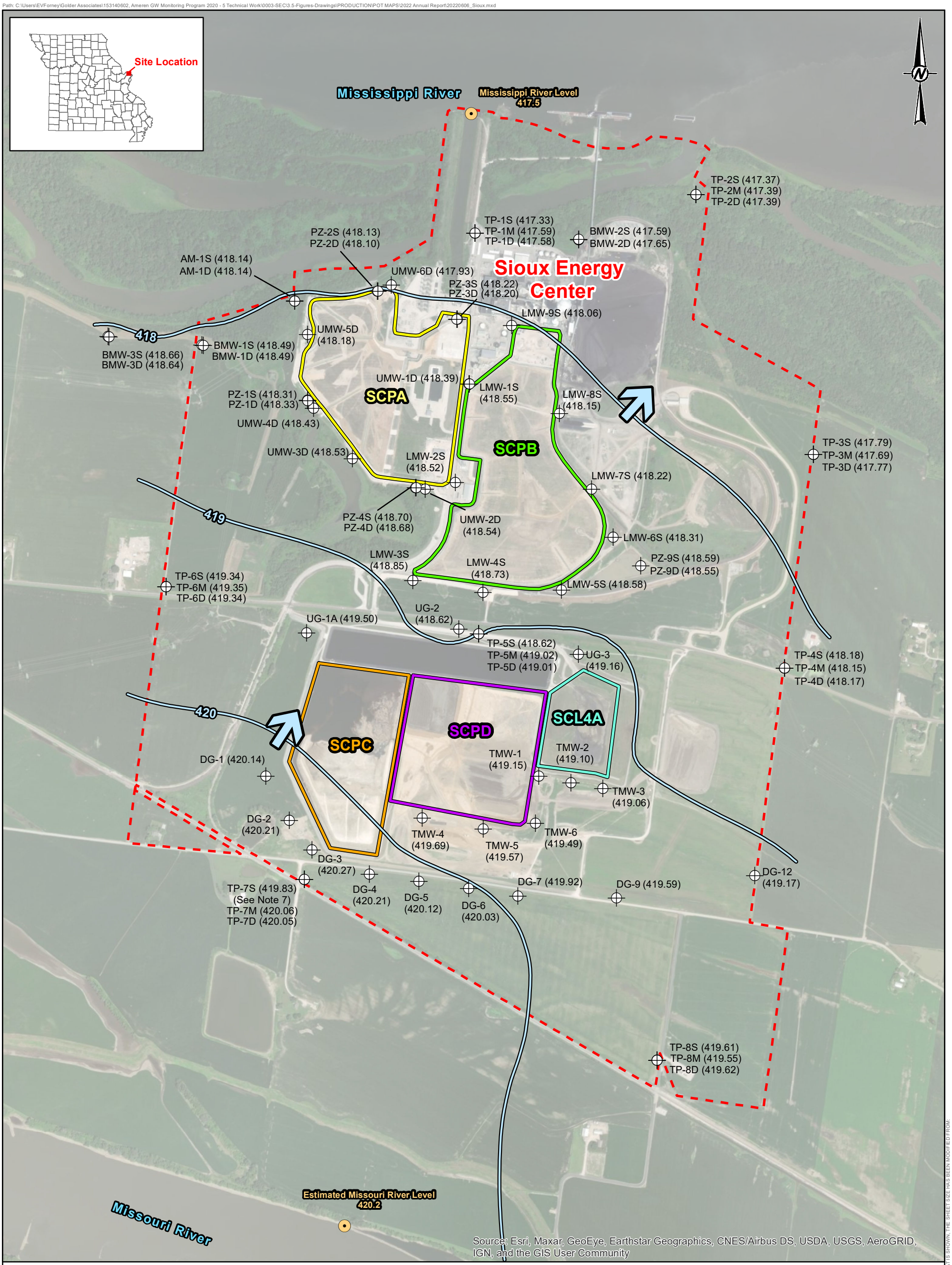

LEGEND

- Sioux Energy Center Property Boundary

CCR Units

- SCPA - Bottom Ash Surface Impoundment
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- SCPC - WFGD Surface Impoundment
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Groundwater Elevation Contour (FT MSL)

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)

Ground/Surface Water Measurement Locations

- River Gauge Location
- Monitoring Well or Piezometer
- Groundwater Flow Direction

0 500 1,000 1,500 2,000 Feet

NOTES

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5.) MISSISSIPPI RIVER ELEVATION PROVIDED BY AMEREN MISSOURI.
6.) WFGD - WET FLUE GAS DESULFURIZATION.
7.) TP-7S NOT USED IN POTENTIOMETRIC SURFACE MAP CONTOURING.

REFERENCES

1.) AMEREN MISSOURI SIOUX ENERGY CENTER, SIOUX PROPERTY CONTROL MAP, FEBRUARY 2011.
2.) COORDINATE SYSTEM: NAD 1983 STATE PLANE MISSOURI EAST FIPS 2,401 FEET.
3.) USGS NATIONAL WATER INFORMATION SYSTEM, USGS GAUGES 06935965 (ST. CHARLES), 07010000 (ST. LOUIS), 05587498 (ALTON), GRAFTON (05587450).

CLIENT
AMEREN MISSOURI
SIOUX ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
JUNE 6, 2022 POTENTIOMETRIC SURFACE MAP

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-12-27
PREPARED	GTM
DESIGN	JSI
REVIEW	ETF
APPROVED	MNH

PROJECT No. 153140604
PHASE 0003
FIGURE **D3**

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

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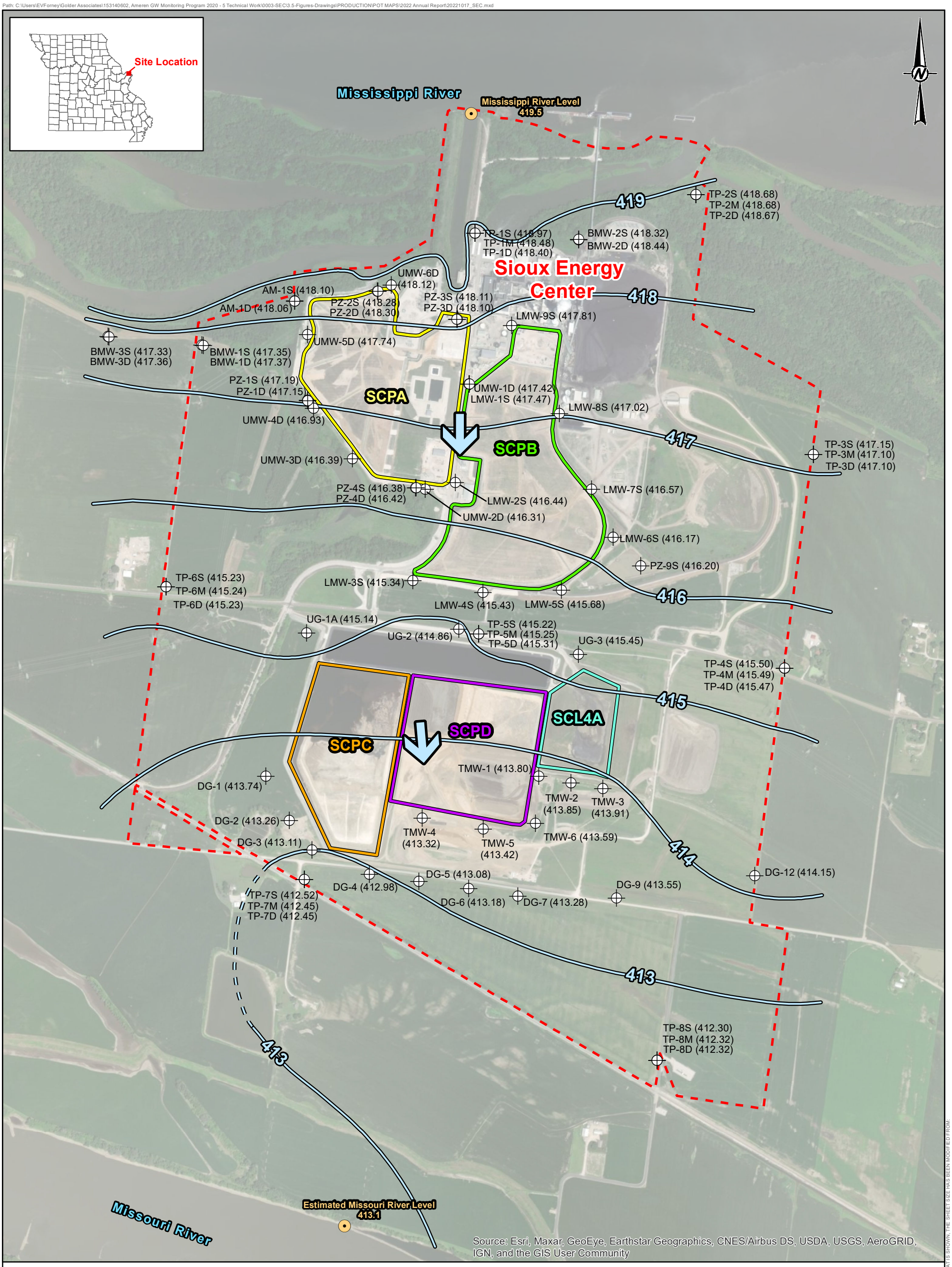

LEGEND

- Sioux Energy Center Property Boundary

CCR Units

- SCPA - Bottom Ash Surface Impoundment
- SCPB - Fly Ash Surface Impoundment
- SCPC - WFGD Surface Impoundment
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- Proposed SCPD - WFGD Surface Impoundment

Groundwater Elevation Contour (FT MSL)

- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)

Ground/Surface Water Measurement Locations

- River Gauge Location
- Monitoring Well or Piezometer
- Groundwater Flow Direction

0 500 1,000 1,500 2,000 Feet

NOTES

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5.) MISSISSIPPI RIVER ELEVATION PROVIDED BY AMEREN MISSOURI.
6.) WFGD - WET FLUE GAS DESULFURIZATION.

REFERENCES

1.) AMEREN MISSOURI SIOUX ENERGY CENTER, SIOUX PROPERTY CONTROL MAP, FEBRUARY 2011.
2.) COORDINATE SYSTEM: NAD 1983 STATE PLANE MISSOURI EAST FIPS 2,401 FEET.
3.) USGS NATIONAL WATER INFORMATION SYSTEM, USGS GAUGES 06935965 (ST. CHARLES), 07010000 (ST. LOUIS), 05587498 (ALTON), GRAFTON (05587450).

CLIENT
AMEREN MISSOURI
SIOUX ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
OCTOBER 17, 2022 POTENTIOMETRIC SURFACE MAP

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-12-27
PREPARED	ETF
DESIGN	JSI
REVIEW	RJF
APPROVED	MNH

PROJECT No. 153140604
PHASE 0003B
FIGURE **D4**

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

wsp.com